

HAKKA VERBS OF REMOVAL: INTEGRATION OF VERBAL MEANINGS AND [VX] CONSTRUCTIONS*

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ABSTRACT

This paper aims to explore verbs of removal in Hakka with respect to the relationship between form and meaning and has the following claims: first, we have analyzed verbs of removal in Hakka through the modified two-level meaning model. The modified model comprises several elements: the L-meaning level, the P-meaning level, frame, and thematic core tiers. Furthermore, the semantic roles display a core-peripheral continuum pattern in the conceptual structure of the verbs, manifested by [V X] constructions.

Key words: Hakka verbs of removal, constructions, L-meaning, P-meaning

1. INTRODUCTION

Neutral verbs, like *put* and *remove*, designate a basic pattern of human activities and experiences (Clark 1978, 1996, Hong et al 2005, Goldberg 2006). Verbs of putting have been studied for decades (see references listed in Levin 1993: 117). However, verbs of removal, a concept opposite to that of putting¹, were less discussed in the past, not

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¹ The notion of putting and removal are like two sides of the same coin. It can be demonstrated from two perspectives. First, from the verbal meaning, verbs like *rake*,

to mention Hakka verbs of removal, which have linguistic manifestations like other languages.

Levin and Rappaport Hovav (1991, 1993, 1998) uncover the lexical characteristics of verbs of removal in English by three subclasses, *remove*, *clear*, and *wipe*, all of which relate to the removal of a substance from a location and share the same types of argument structure: *V NP From NP*. However, they have different syntactic behaviors. Levin and Rappaport Hovav further claim that it is different lexicalized meaning components that determine the semantic class membership and syntactic behaviors of these verbs. Interestingly, Liu (2000) points out that similar pairing patterns hold in Mandarin. Liu examines a larger scope of verbs, verbs of surface contact, and echoes Levin and Rappaport Hovav's claim and states that differentiating the meanings of verbs will help reveal the syntactically-relevant semantic components and allow for characterization of the way they interact with verbal syntax. Lien (2006) also presents the interaction between verb classification and constructions from *Li Jing Ji* (荔鏡記). Among the nine verb classes of Taiwanese Southern Min, the *wipe*-types, such as *soel* 梳 'to comb', *sau2* 掃 'to sweep', *mua5* 磨 'to rub', and *cit4* 拭 'to wipe', comprise the semantic roles like Agent, Theme, Location, and Instrument, and because the Instrument role is conflated in the *wipe*-type verbs, it does not have to be represented in the construction.

Like English (Levin and Rappaport Hovav, 1991), Mandarin (Liu 2000), or Taiwanese Southern Min (Lien 2006), Hakka has a variety of verbs that can be used to express the semantic notion of removal: an animate agent contacting with the surface of a location through a certain motion for the purpose of causing a patient to move away from the source to the goal. As in Table 1, verbs of removal in Hakka² are lexicalized with different semantic elements (i.e., conflated elements) and manifest differently in syntax (i.e., [V. Patient] constructions, etc.)³

shovel, and *siphon* are listed in both *wipe* verbs and *funnel* verbs; that is, these instrument verbs may be used to describe either putting things on surfaces or in containers or to removing things from surfaces or containers. Second, the interaction of agent, theme and goal are ambiguous. For example, in the sentence like *Mary put a book on the desk*, for agent *Mary*, the book is removed from her, but for goal *desk*, the book is put on it.

² Levin (1993) classifies over 3,000 English verbs based on their shared meanings and linguistic behavior. In accordance with Levin's classification of verbs of removing (1993: 122), six corresponding verbs of removal in Hakka are selected for study in this paper.

³ The data of verbs of removal in this study are mainly based on Siisian Hakka (四縣

Table 1 Different syntactic realizations of verbs of removal in Hakka

Lexical items	Conflated elements	[V. Patient] constructions	[V. Source] constructions	[V. Goal] constructions	[V. Result] constructions
<i>Ban1</i> 搬 'to remove'	n/a	<i>ban1 zok4 e2</i> 搬桌仔 'to remove the table'	<i>ban1 vuk4</i> 搬屋 'to move (out of the house)'	<i>ban1 vuk4</i> 搬屋 'to move (into the house)'	<i>ban1 ciang5</i> <i>ciang5</i> 搬淨淨 'to empty out'
<i>Got2</i> 割 'to cut'	Instrument	<i>got4 vo5</i> 割禾 'to cut the rice (to harvest rice)'	<i>got4 tien5 kam1</i> 割田坎 'to cut the grass from the ridge (between rice fields)'	*	<i>got4 ciang5</i> <i>ciang5</i> 割淨淨 'to completely cut (sth)'
<i>Cin1</i> 清 'to clear'	Result	<i>cin1 lep4 sep4</i> 清垃圾 'to clear garbage'	<i>cin1 fong5</i> <i>gien1</i> 清房間 'to clean the room'	*	<i>cin1 kung1</i> 清空 'to clear (sth) off'
<i>Sen3</i> 擤 'to blow one's nose'	Source	<i>sen3 pi3</i> 擤鼻 'to blow one's nose'	*	*	<i>sen3 ciang5</i> <i>ciang5</i> 擤淨淨 'to blow ... clean'
<i>Cut8</i> 搥 'to wipe'	Manner	<i>cut8 hon3</i> 搥汗 'to wipe off perspiration'	<i>cut8 zok4 e2</i> 搥桌仔 'to wipe the table'	*	<i>cut8 ciang5</i> <i>ciang5</i> 搥淨淨 'to wipe clean'
<i>Hal</i> 下 'to unload'	Direction	<i>hal fo2</i> 下貨 'to unload cargo'	*	*	<i>hal kung1</i> <i>kung1</i> 下空空 'to unload completely'

From the various patterns that verbs of removal in Hakka reify, we may assume that first, these verbs of removal might belong to distinct sub-classes; second, the verb itself might be in a truly central place, as different facets of syntactic configurations, where the verb and other

客語) in Miaoli (苗栗), and marked with Tongyong Pinyin phonetic symbols (通用拼音). Most of the corresponding Chinese characters are based on those found in *Hakka Dictionary of Taiwan*. Some of the examples are from Hakka dictionaries, some of them are from the research project NSC 90-2411-H-004-013, and still some are of our own creations. The tone diacritics are represented as 1 for *yinping* (low-high tone), 2 for *yinshang* (high-low tone), 3 for *yinqu* (high tone), 4 for *yinru* (short-low tone), 5 for *yangping* (low tone), and 8 for *yangru* (short-high tone).

argument-taking elements are found, are seen to be projections of its lexical properties. These observations accord with Levin and Rappaport Hovav's (1991) claim that the participant roles of the verb determine its semantic class membership and syntactic structures.

However, if we observe the syntactic patterns in a larger scope, this predicate-centered claim might meet a potential challenge which violates the argument realization principle (ARP) or the sub-event identification condition (SIC) offered by Rappaport Hovav and Levin (1998). Consider the following Hakka example.

- (1) a. 佢 搬 桌仔 到 別間 教室。
Gi5 ban1 zok4-e2 do3 pet8-gien1 gau3-siit4
He remove desk to another-CL classroom
'He removed the desk to another classroom.'
- b. *gi1*佢 ACT <*ban1*搬>
BECOME [*zok4-e2* 桌仔 <*do3 pet8-gien1gau3-siit4* 到別
間教室>]

SIC requires that the ACT sub-event, *zok4-e2* 桌仔 'the desk', is identified by *ban1*搬 'remove' and the BECOME sub-event, *gau3-siit4* 教室 'the classroom', is identified by *do3*到, but there is a third sub-event, the CAUSE sub-event, which is not identified by any lexical predicate.

This case can be easily solved if we treat the whole construction as a form-meaning pattern, as advocated by Goldberg (1995, 2006); that is, the construction in (1) itself brings out the causal meaning, which is considered as a caused motion construction. Although Goldberg's constructional approach may explain grammatical constructions, it faces two challenges: the ruling out of ungrammatical constructions and a low emphasis on fine-grained nuances among verbal meanings. Accordingly, Iwata (2005a, b) proposes a two-level-meaning model to display the fusion of verbal meanings and constructions.

Based on the previous studies, this study will explore the extent to which the syntactic properties of verbs can be derived from their lexical semantic properties from verbs of removal in Hakka by use of examples. The foundations are built on modifications of Iwata's model, incorporating both the lexical approach and the constructional approach. To be more specific, this thesis aims to investigate the nature of the lexical knowledge that a speaker of Hakka possesses with respect to

semantically related verbs that might be classified as verbs of removal on first approximation, but that turn out to diverge in various ways when their syntactic properties are further examined. Furthermore, the study will provide a detailed lexical analysis of these verbs and their proliferous integration with [V X] constructions.

This paper is organized as follows. In addition to the introduction, Section 2 will introduce the framework used in analyzing the data. Section 3 provides the analysis, and Section 4 makes a brief conclusion.

2. THEORETICAL FOUNDATIONS

To lay the groundwork for our analysis, we will review some related theories in this section. In Section 2.1, the lexical approach is first discussed, including event conceptual structure (2.1.1), lexicalization (2.1.2), and frame and perspective (2.1.3). Then, complementing the lexical approach, the constructional approach will be reviewed in Section 2.2.

2.1 The Lexical Approach

2.1.1 Event conceptual structure

Ray Jackendoff (1972, 1983, 1987, 1990, 1992) has developed a decompositional theory of meaning which he calls conceptual semantics. The central principle of this approach is to describe meaning in terms of mental representations. Jackendoff's work identifies an inventory of universal semantic concepts, including Event, State, Material Thing (or Object), Path, Place, and Property. At the level of conceptual structure a sentence is built up of these semantic concepts, as illustrated in (2) (Jackendoff 1992: 13):

- (2) Bill went into the house.
[Event GO ([Thing Bill], [Path TO] ([Place IN ([Thing HOUSE]])))]

The structure in (2) concentrates on the semantic of motion and thus the entity (or Thing) *the house* is given as an un-analyzed atom of meaning. More complicated examples of an Event are given in Sentence (3) below, where we see the semantic function CAUSE mapping an event into a further event.

(3) John emptied the pool.

[Event CAUSE ([Thing JOHN], [Event INCH ([State BEIdent ([Thing POOL], [Place AT ([Property EMPTY])]])])])]

Jackendoff believes that sentence meaning is constructed from word meaning, and the semantic decomposition can be used to investigate the mapping between lexical items and grammatical processes.

2.1.2 Lexicalization

From the other side of the same coin, semantic components can be integrated together to characterize the syntax-semantics interface as claimed by Leonard Talmy (1985), who has studied how semantic elements are combined both in single words and across phrases. For example, he has identified several semantic components associated with verbs of motion, including the following (Talmy 1985: 60f):

- (4) a. internal components of a motion event:
 - i. the Figure: an object moving or located with respect to another object (the Ground);
 - ii. the Motion: the presence *per se* of motion.
 - iii. the Location: the location of the movement involves the Source, the Path, and the Goal;
 - iv. the Path: the course followed or the site occupied by the Figure object with respect to the Ground object.
- b. external components of a motion event:
 - i. the Manner/Cause: the type of motion.

Talmy has pointed out differences in languages in terms of how these semantic components are typically combined or conflated in verbs and verb phrases. Three patterns are discussed in particular in relation to the nature of the components expressed by the main verb root and the additional elements:

- (5) a. the **Motion + Manner/Cause** pattern
 - e.g., English:
*He **ran** up the stairs.*

b. the **Motion + Path** pattern

e.g., Spanish:

Subio las *escaleras* *corriendo*
went-up the stairs running
'He ran up the stairs.'

c. the **Motion + Figure** pattern

e.g., Atsugewi:

-lup- 'for a small shiny spherical object to
move/be-located'
-caq- 'for a slimy lumpish object to
move/be-located'
-qput- 'for loose dry dirt to move/be-located'

Talmy's work has led to a number of cross-linguistic studies of how semantic components are conflated into lexical and grammatical structures.

Further, we also observe that Levin and Rappaport's (1991) study, in practice, referring to the process of decomposition and lexicalization, applies these two concepts to analyze verbs of removal and their sub-classes in English, although they do not point that out explicitly.

2.1.3 Frame and perspective

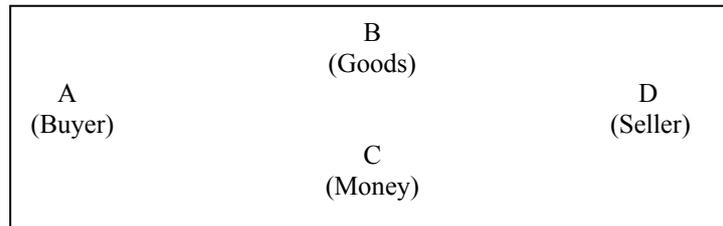
Semantic concepts do not simply float around randomly in the mind (Fillmore 1985: 223). There are semantic relations between words and their corresponding concepts. These concepts belong together because they are associated in experience. The need for another means to organize concepts has led to a variety of similar proposals, each with its own name, such as frame, schema, script, cognitive model, experiential gestalt, base, scene.

Frame semantics⁴ holds that a lexical meaning cannot be understood without reference to a particular background frame or scene, which designates a coherent individuatable perception, memory, experience, action, or object (Fillmore 1977, 1982, Fillmore and Atkins 1992, 2000).

⁴ Langacker (1987) illustrates his approach to the question with the meaning of the word *radius*. He describes the relationship between RADIUS and CIRCLE as one of a profile and a base, which is identical to Fillmore's frame. Refer to Langacker (1987) for details.

Take Fillmore's classic frame of BUY for example. The action category BUY includes a reference to at least four other categories, namely a Buyer, a Seller, Goods, and Money. The configuration of interacting categories is summarized in Figure 1.

Figure 1. The BUY frame (Fillmore 1977: 104)



These four components of the BUY frame can be mapped to four syntactic slots in the syntactic pattern as in (6), in which Buyer (Mary) as subject, Goods (a secondhand book) as direct object, Seller (Peter) as the first adverbial, and Money (ten dollars) as the second adverbial.

(6) Mary bought a secondhand book from Peter for ten dollars.

This assignment of syntactic roles, which are to a large extent governed by the choice of the verb *buy*, produces what is called the syntactic perspective of the sentence and the notion of perspective; i.e., perspectivization relies on the principle of prominence.

Using Figure 1 as a basis for a more general COMMERCIAL EVENT frame, we can indicate the difference between the verb *buy* and other three related transaction verbs *sell*, *charge*, *pay* by highlighting the components of the frame that make up the subject and object for each verb, as illustrated in (7-9).

(7) Peter sold a secondhand book to Mary for ten dollars.

SELLER-subject; GOODS-direct object; BUYER; MONEY

(8) Peter charged Mary ten dollars for a secondhand book.

SELLER-subject; BUYER-direct object; MONEY; GOODS

(9) Mary paid ten dollars to Peter for a secondhand book.

BUYER-subject; MONEY-direct object; SELLER; GOODS

The frame approach is also of relevance in that the COMMERCIAL EVENT frame is also able to capture cognitive categories whose prominence is so low that they are not expressed on the linguistic surface at all, as Examples (10-11).

(10) Mary spent ten dollars on a secondhand book.

Buyer -subject; Money-direct object; Goods; [Seller]

(11) The secondhand book cost Mary ten dollars.

Goods -subject; Buyer -direct object; Money; [Seller]

Both verbs imply a Seller who cannot be manifested in the syntactic structure (and is therefore put in the brackets). Instead the perspective directs the attention to the Buyer and the Money when *spend* is used, and to the Goods and the Buyer when the verb *cost* is used.⁵ Therefore, it is claimed that speakers have folk theories about the world, based on their experience and rooted in their culture, that is, conventionalized knowledge (Fillmore 1982, Lakoff 1987). Furthermore, an important insight of Fillmore and Lakoff in their early works on frames/domains is that the knowledge represented in frame is itself a conceptualization of experience that often does not match to the reality.

2.2 The constructional approach

Constructionists, challenging the compositional model of grammar, point out that idiosyncrasy and conventionality of idiomatic constructions cannot be predicted by the general rules of the syntactic and semantic components and their linking rules. Fillmore, Kay and O'Connor (1988), instead of treating idioms as a problematic phenomenon, argue that the proper way to represent speakers' knowledge of idioms is as constructions. That is, some elements of the construction are lexically open, so the idioms fitting the description cannot simply be listed in the lexicon. Many studies following this tenet have discussed various constructions: *let alone* in Fillmore et al (1988), the *There*-construction in Lakoff (1987), *Nominal Extraposition* in

⁵ Talmy's attentional imaging system displays that languages can place a portion of a coherent referent situation into the foreground of attention by the explicit mention of that portion, in his term 'windowing'; while placing the remainder of that situation into the background of attention by not mentioning it, in his term 'gapping'. Refer to Tamly (2000b) for details.

Michaelis and Lambrecht (1996), the ‘time’-away construction in Jackendoff (1997), the *What’s X doing Y?* construction in Kay and Fillmore (1999), and so on. Goldberg (1995) takes a step further and argues that basic sentences are constructions – form-meaning pairings existing independently of any particular verbs. The crucial concern of these studies has been to develop Construction Grammar as a model in which we can describe, analyze, and generate all the linguistic constructs of a language, incorporating both the core and the periphery in a single grammatical system.

Analyzing event structures, Goldberg (2005) observes a potential counter-example to the Argument Realization Principle (ARP), followed by many researchers (Grimshaw & Vikner 1993; Rappaport & Levin 1998) and further modified by Rappaport and Levin (1998) into the Sub-event Identification Condition (SIC). The ARP has been cited in order to account for the unacceptability of example (12a) in which both arguments in boldface in (12b) must be overtly expressed as they are in (12c) (Goldberg 2005: 19).

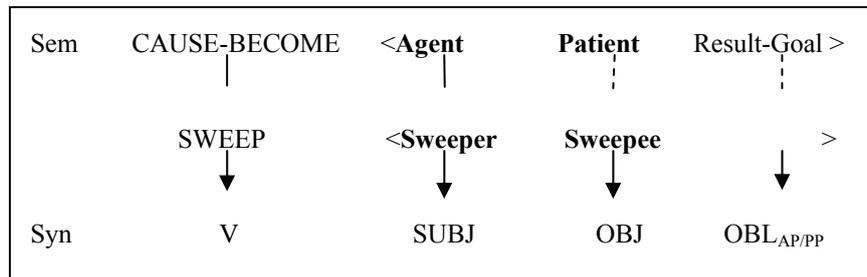
- (12) a. *Phil swept onto the floor.
b. **Phil** ACT <swept>
 BECOME [**dust** <onto the floor>]
c. Phil swept the dust onto the floor.

The SIC can be further used to explain that each of the two sub-events in (12b) is identified by a lexical predicate: the ACT sub-event is identified by *swept* the BECOME sub-event is identified by *onto*. However, there is in fact a third sub-event CAUSE, but there is no lexical predicate that identifies this causing relation. That is, neither *sweep* nor *onto* designates a causal event. This problem can be easily solved if we take constructions as meaning-bearing units. Take the sentence in (12c) for example: the verb *sweep* is integrated with the resultative construction (CAUSE-BECOME construction) (Goldberg 1995: 189) in Figure 2, determined by two principles:

- (13) a. The Semantic Coherence Principle:
 Only roles which are semantically compatible can be fused.

- b. The Correspondence Principle:
 Each participant role that is lexically profiled and expressed must be fused with a profiled argument role of the construction.

Figure 2. Composite Fused Structure: CAUSE-BECOME + *sweep*



The semantic roles associated with the construction (= argument roles) are fused with those associated with the verb (= participant roles). Thus the two participant roles of *sweep*, sweeper and sweeppee, are put in correspondence with the two argument roles, Agent and Patient. The resultative construction therefore contributes a Result-Goal role not associated with a participant role of the verb. And the CAUSE sub-event is incorporated with the BECOME sub-event in the resultative construction. That is, both the causal relation and the oblique argument role can be realized by the constructional meaning.

Further, constructionist theories do not derive one construction from another, as is generally done in mainstream generative theory. They hold that an actual expression typically involves the combination of at least half a dozen different constructions. The sentence in (14) involves the list of constructions given in (15) (Goldberg 2006: 10).

- (14) What did Liza buy Zack?
 (15) a. *Liza, buy, Zach, what, do* constructions
 b. Ditransitive construction
 c. Question construction
 d. Subject-Auxiliary inversion construction
 e. VP construction
 f. NP construction

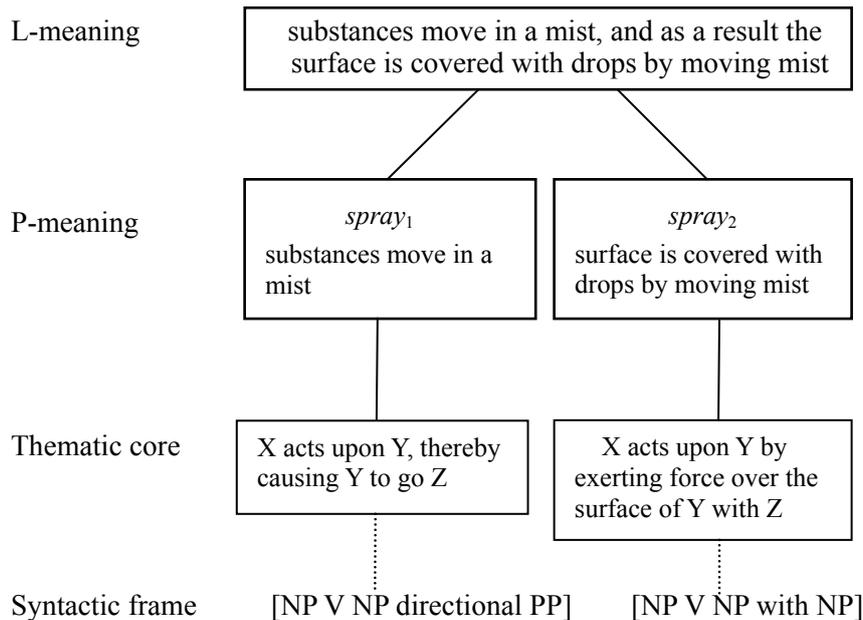
Although very promising in handling cases like this one, the constructional approach in Goldberg's sense does not explicate how to rule out ungrammatical sentences. Consider the sentences in (16-21) below:

- (16) *Monica removed the bag.
- (17) Doug cleared the table.
- (18) Kay wiped the counter.
- (19) *Monica removed the bag of groceries.
- (20) Doug cleared the table of dishes.
- (21) *Kay wiped the counter of fingerprints.

Considered as the same construction, Sentence (16) is ungrammatical whereas (17) and (18) are grammatical. Why does the constructional meaning not contribute to (16)? Likewise, why does the constructional meaning not contribute to (19) and (21), in contrast to (20)? In fact, the unacceptability of these examples is closely related to the event frame of the verbal meaning. Although frame semantics is described as essential in determining verbal meanings, Goldberg's framework does not clearly state how different verbal meanings can influence the different fusions of various constructions. That is, Goldberg's approach might ignore the fine-grained nuances among verbal meanings. In addition, that Goldberg treats constructions as independent form-meaning pairs might overlook the common ground among constructions which have the same verbs in them, as in Sentences (17) and (20). It will be odd if we treat these two sentences as two independent constructions without considering their common verb, *clear*. Hence, Iwata (2005a,b) proposes two levels of verbal meanings, Lexical Head Level Meaning, or L-Meaning, and Phrase Level Meaning, or P-meaning, to explicate the interaction of the abundant inherent verbal meanings and constructions. Iwata shows that locative alternation as in (22) can be adequately handled by this L-meaning/P-meaning model as in Figure 3.3.

- (22) a. Jack sprayed paint onto the wall. (locative variant)
- b. Jack sprayed the wall with paint. (*with* variant)

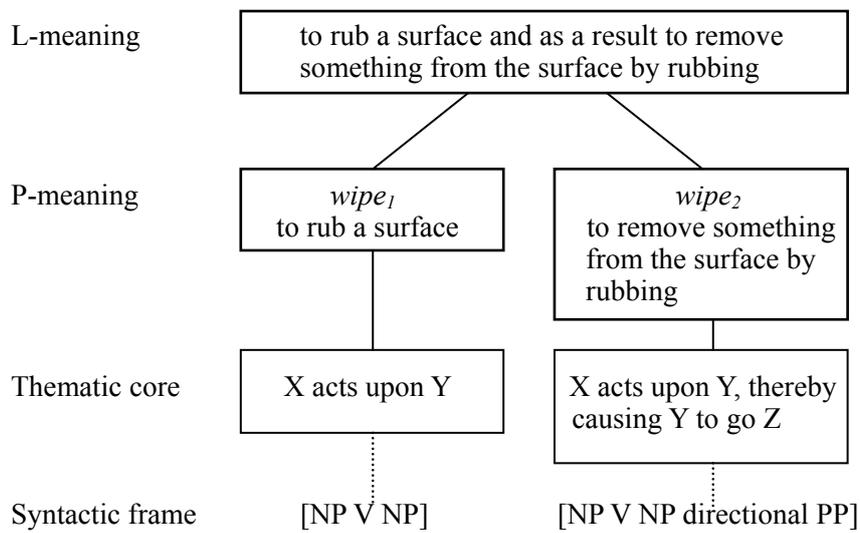
Figure 3. The L-meaning/P-meaning model of *spray* (Iwata 2005a: 369)



Iwata (2005a: 371f) argues that the idea that a single L-meaning gives rise to two P-meanings is not new and that it can be found in Langacker (1987) and Goldberg (1995). A verb can appear in a syntactic frame when its L-meaning is compatible with the semantics of a construction. Syntactic frames are associated with identifiable meanings, and this pairing of form and meaning amounts to ‘construction’ in the sense of Goldberg (1995). The verb *spray*, whose L-meaning includes both ‘putting’ and ‘covering’, is thus capable of taking both forms. The choice of the syntactic frame is determined by which aspect of the L-meaning is profiled, this process being an ‘alternate construal of the same situation’ in the sense of Langacker (1987). With more investigation into the alternations of different verbs, Iwata (2005b:114f) further concludes that the L-meaning of a verb occurring in locative alternation contains two scenes, which are related through a scenario as with *pack*, a higher-order schema as with *trim*, or through two related image schema as with *roll*.

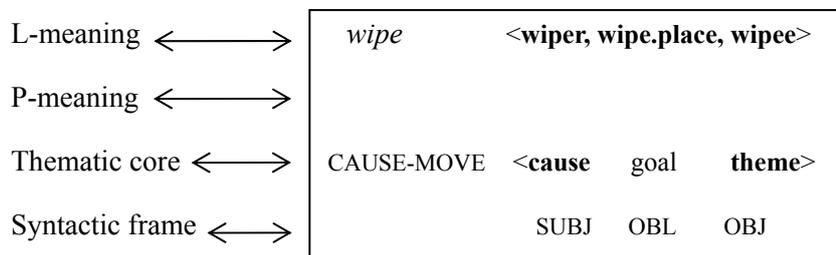
In addition to explicating locative alternation, Iwata's model also fulfills our needs in displaying the fine-grained nuances among verbal meanings. Following Boas' (2000) conception of verbal meaning, Iwata delineates the verb *wipe* in Figure 4.

Figure 4. The L-meaning/P-meaning model of *wipe* (adapted from Iwata 2005a: 382)



Comparing Goldberg's model with Iwata's, Figure 3.5 gives us an idea of the correspondences between the elements in Goldberg's (1995) and Iwata's (2005a, b) models.

Figure 5. Correspondences between models by Goldberg (1995) and Iwata (2005a, b)



The differences between Iwata's account and Goldberg's lie in the contribution of the constructions and the relationship among the constructions. While Goldberg aims to capture form-meaning correspondences that fall outside of lexical meaning, Iwata is concerned with the syntactic and semantic information lexically encoded in the L-meaning, and constructions here simply highlight aspects of verb meaning that are already there. And while Goldberg treats each construction as an independent unit, Iwata reveals the subtle relationship among constructions, connected by verbs.

What is assumed by lexical approach, Iwata's model puts more emphasis on lexical meanings. Iwata further gives two levels of verbal meaning, L-meaning/P-meaning, to explain the motivation which is at work in the integration of *wipe* verbs with different syntactic frames, so as to hence obtain extended meaning, in Levin and Rappaport Hovav's term. Iwata also displays the procedure of bridging lexical and syntactic frames by means of thematic cores. On the other hand, Iwata, as is also the case in the constructional approach, focuses on various surface forms and treats each of them as a meaning-bearing unit. However, complementing Goldberg's account, Iwata's analysis, highlighting the semantic compatibility between lexical items and syntactic structures, establishes reasonable constraints on constructional meanings.⁶

3. ANALYSIS

Based on the previous studies and theories, this section will demonstrate step by step the integration of verbal meanings and constructions in Hakka. In Section 3.1, following Jackendoff's decompositional theory, verbs of removal in Hakka will first be decomposed into several semantic concepts to represent the common event conceptual structure. This common conceptual structure forms the universal L-meaning of verbs of removal in our two-level-meaning model. Moreover, through Talmy's lexicalization, we identify six verbs

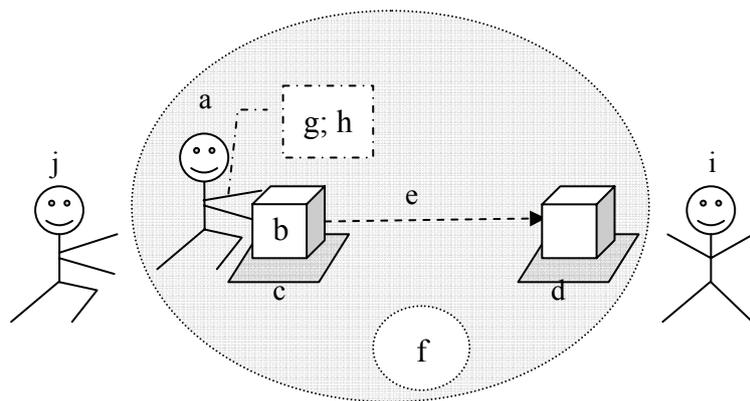
⁶ One of the reviewers points out that the P-meaning in Iwata's model is only a notional variant of the profiling and shading mechanism in Goldberg's model. Neither of the two models address the issue of the constraints of syntactic variants or diathesis alternations associated with a verb or a type of verbs. While the comment on the weaknesses of the two theories may be true, the issue mentioned will have to be left for another context to address.

with different conflated semantic components, which result in different syntactic realizations from phrasal to sentential levels. Taking frame semantics into consideration, Section 3.2, at a phrasal level, deals with the profiled and shaded semantic elements of each verb manifested in [V X] constructions, including [V O] constructions and [V C] constructions. The profiled elements will be treated as the P-meanings in our discussion. After the semantic frames, L-meanings, and P-meanings are constructed, various constructions of these verbs can be successively figured out through the transitional level, thematic cores. Consequently, these syntactic structures obtain their constructional meanings, developing into form-meaning pairings.

3.1 Conceptual Structures of Verbs of Removal

Verbs of removal, such as *ban1* 搬 ‘to remove’, *got2* 割 ‘to cut’, *cin1* 清 ‘to clear’, *sen3* 擤 ‘to blow one’s nose’, *cut8* 摔 ‘to wipe’, *hal* 下 ‘to unload’, etc., generally describe an animate agent contacting with the surface of a location through a certain motion for the purpose of causing a patient to move away from the source to the goal, as shown in Figure 6 (Levin and Rappaport Hovav 1991, Liu 2000). And this conceptual structure can be decomposed into several elements, as shown in (23) (cf. Gao 2001).

Figure 6. Decomposed conceptual structure of verbs of removal in Hakka



- (23) Elements in the conceptual structure of verbs of removal⁷:
- a. Agent (Ag): the remover in the event frame, prototypically animate;
 - b. Patient (Pa): the removee, the entity undergoing the effect of the action, including the undergoing of a change in both location and state;
 - c. Source (So): the location from which the removee moves;
 - d. Goal (Go): the location toward which the removee moves;
 - e. Direction (Di): the direction of the path along which a removal action is performed;
 - f. Result (Re): the resultant state after a removal action is performed;
 - g. Instrument (Ins): the means by which a removal action is performed;
 - h. Manner (Man): the manner by which a removal action is performed;
 - i. Beneficiary (Be): the beneficiary of the action
 - j. Comate (Co): the comate with whom the agent or the remover performs.

Next, six removal verbs are distinguished by the differences in their conflation with these semantic elements. First, the general removal verb *ban1* 搬 ‘to remove’ describes the general action of removing, without any conflated roles, indicating an agent acting upon a patient, thereby causing the patient to leave the source. Second, the removal verb *got2* 割 ‘to cut’ refers to the instrument role, such as a knife, which is conflated in its lexical meaning. That is, the removal verb *got2* 割 specifies the instrument meaning in its conceptual structure. Third, the removal verb *cin1* 清 ‘to clear’ specifies the resultant state after a removal action is performed. Fourth, the removal verb *sen3* 擤 ‘to blow one’s nose’ has the source role, nose, in its lexical meaning. Fifth, the removal verb *cut8* 搽 ‘to wipe’ performs a removal action with a specific manner in gesture, focusing on the contact motion. Sixth, the

⁷ These elements represent a continuous distribution from core to periphery which in turn manifest in different [V X] constructions. The continuum of these roles will be discussed in the following sections. One of the reviewers points out that it is Theme rather than Patient which occurs in a removal frame. Since we consider a change of location or a state as being affected by the action of removal, we still subscribe to the understanding that patient should be taken in a broad sense.

removal verb *hal* 下 ‘to unload’ specifies the direction along with the removal action.

After having built up the L-meaning of verbs of removal through decomposition and lexicalization, we will illustrate in the following sections how perspectivization, the shaping of P-meanings, influences the syntactic behavior at phrasal levels, [V X] constructions.

3.2 [V X] Constructions

In Section 3.2 we will discuss how verbs of removal interact with [V X] constructions, where X is replaced by different semantic elements, in order to examine the grammaticality of each pattern. The observations are illustrated in Table 2, which shows three possible patterns – [V O] constructions, [V C] constructions, and adjuncts.⁸ In Section 3.2.1, we will explain that it is the close intimacy between the verb and the patient and the highly semantic compatibility between verbal meanings and constructions that contribute to the grammaticality of [V O] constructions, including [V Pa], [V So] and [V Go] constructions. Next, Section 3.2.2 investigates those constructions where the verbs are followed by complements, including [V Di], and [V Re] constructions. In addition to the procedure for the mapping from profiled arguments to [V X] constructions, we will illuminate the fine differences between legitimate and illegitimate syntactic behavior, based on whether the participant role of a verb can be profiled or not in its particular frame, P-meaning. And, in Section 3.2.3, we will briefly introduce those elements which cannot be profiled in [V X] constructions. Last, Section 3.2.4 provides the generalizations of [V X] constructions.

⁸ Adjuncts deal with the roles which cannot be profiled in [V X] constructions.

Hakka Verbs of Removal

Table 2. Syntactic realizations of verbs of removal in [V X] constructions in Hakka

Lexical items		<i>ban1</i>	<i>got2</i>	<i>cin1</i>	<i>sen3</i>	<i>cut8</i>	<i>hal</i>
Semantic elements		[Ag, Pa, So, Go, Di, Re, Ins, Man, Be, Co]					
Conflated elements		n/a	Ins	Re	So	Man	Di
[V O]	[V Pa]	<i>ban1</i> <i>zok4-e2</i> 'to remove the table'	<i>got4 vo5</i> 'to cut the rice; to harvest the rice'	<i>cin1</i> <i>lep4-sep4</i> 'to clear the garbage'	<i>sen3 pi3</i> 'to blow one's nose'	<i>cut8</i> <i>hon3</i> 'to wipe off sweat'	<i>hal fo2</i> 'to unload cargo'
	[V So]	<i>ban1</i> <i>vuk4</i> 'to move (out of the house)'	<i>got4</i> <i>tien5-kam1</i> 'to cut the grass from the ridge (between fields)'	<i>cin1</i> <i>fong5-gien1</i> 'to clean the room'	* conflated	<i>cut8</i> <i>zok4-e2</i> 'to wipe the table'	*
	[V Go]	<i>ban1</i> <i>vuk4</i> 'to move (into the house)'	*	*	*	*	*
[V C]	[V Di]	<i>ban1</i> <i>cut4-hi3</i> 'to move (sth) out'	<i>got4</i> <i>hal-loi5</i> 'to cut down'	<i>cin1</i> <i>cut4-hi3</i> 'to clear out'	<i>sen3</i> <i>cut4-loi5</i> 'to blow one's nose'	<i>cut8</i> <i>hi2-loi5</i> 'to wipe clean'	* conflated
	[V Re]	<i>ban1</i> <i>ciang5-ciang5</i> 'to empty out'	<i>got4</i> <i>ciang5-ciang5</i> 'to cut (sth) completely'	<i>cin1</i> <i>kung1</i> 'to clear (sth) off'	<i>sen3</i> <i>ciang5-ciang5</i> 'to blow ... clean'	<i>cut8</i> <i>ciang5-ciang5</i> 'to wipe clean'	<i>hal</i> <i>kung1-kung1</i> 'to unload completely'
Adjuncts	[V Ins]	*	*	*	*	*	*
	[V Man]	*	*	*	*	*	*
	[V Be]	*	*	*	*	*	*
	[V Co]	*	*	*	*	*	*

3.2.1 [V O] constructions

Iwata’s model shows that a legitimate [V O] construction requires the compatibility of two levels, the P-meaning level and the syntactic level. At the P-meaning level, the patient role needs to be prominent enough to be profiled, while the others are shaded. At the syntactic level, the [V O] construction is a meaning bearing unit that describes the action and the entity affected directly by the action. The argument realizations of six removal verbs in the [V O] constructions are summarized in Table 3.

Table 3. Argument realizations of verbs of removal in [V O] constructions in Hakka

Lexical items	<i>ban1</i>	<i>got2</i>	<i>cin1</i>	<i>sen3</i>	<i>cut8</i>	<i>hal</i>
Participant roles	[Ag, Pa, So, Go, Di, G, Re, Ins, Man, Be, Co]					
Conflated elements	n/a	Instrument	Result	Source	Manner	Direction
Profiled patient roles	<i>zok4-e2</i> ‘the table’	<i>vo5</i> ‘the rice harvest’	<i>lep-sep4</i> ‘garbage’	<i>pi3</i> ‘snot’	<i>hon3</i> ‘sweat’	<i>fo2</i> ‘cargo’
[V O]	<i>ban</i> <i>zok4-e2</i> ‘to remove the table’	<i>got4 vo5</i> ‘to cut the rice; to harvest the rice’	<i>cin1</i> <i>lep4-sep4</i> ‘to clear garbage’	<i>sen3 pi3</i> ‘to blow one’s nose’	<i>cut8 hon3</i> ‘to wipe off sweat’	<i>hal fo2</i> ‘to unload cargo’

Croft (1998) discusses how the causal interaction of participant roles determines the choice of subject, object, and oblique for a variety of single clauses in English. The choice of subject, object, and oblique is not random. Rather it associates with control and affectedness, namely control for subjects and affectedness for objects. Dixon (1991, 2005) also deals with patient roles using the concept of affectedness. The affect verbs are prototypical transitive verbs, involving three semantic roles - “Agent moves or manipulates something (referred to as the Manip role) so that it comes into contact with something or some person (the target roles). Either the Manip or the Target (or occasionally, both) will be physically affected by the activity” (Dixon 1991:102; 2005:110). Hence, the Target (i.e., the patient role), directly affected by removing, becomes

more prominent in the concept structure of verbs of removal. Also, the Target is naturally realized as the direct object of the verb.

Here, [V O] constructions in Hakka echo the prototypical event type, called the ‘transmission-of-force’ model by Talmy (1976) and the ‘billiard-ball’ model by Langacker (1991): One participant interacts with another participant and transmits its force to the other participant, which then undergoes a change. In the case that this force-dynamic relationship is expressed by a simple active transitive verb, the agent is construed as acting entirely under his or her own volition (i.e., control), which brings about a complete change of state in the patient, so that the patient cannot change any further within the causal chain (i.e., affectedness). Hence, an agent and a patient are normally assigned to the subject and the object position in an active sentence, respectively.

Furthermore, according to Dowty’s (1991: 572) delineation of the five properties which contribute to a description of proto-patient roles⁹, the patient roles of verbs of removal feature as the most prototypical ones. *Zok-e2* 桌仔 ‘the table’, for example, undergoes a change of a state, which is location changed. It is also causally affected by the action *ban1* 搬 ‘to remove’, and it does not come into or out of existence without independence of the event. Last, *zok4-e2* 桌仔 ‘the table’ belongs to an incremental theme, since the event of removing the tables (to the basement) is partially or completely done based on how many tables in question are partly or completely moved (to the basement).

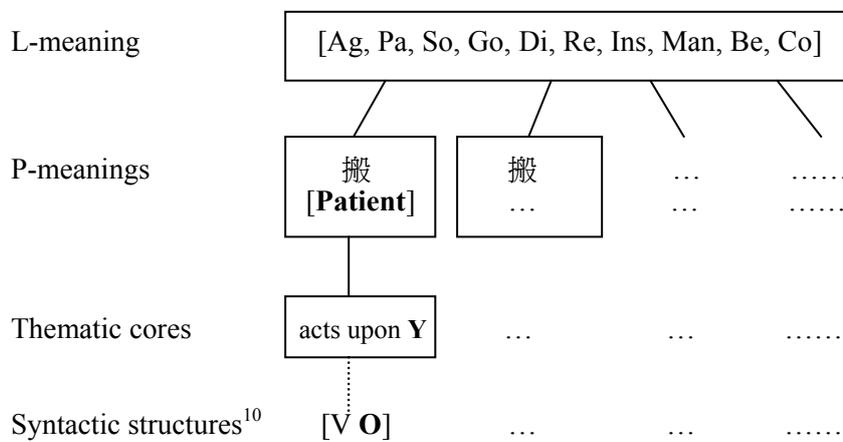
Zok4-e2 桌仔 ‘the table’, gaining most of the proto-patient entailments from the predicate *ban1* 搬 ‘to remove’, can be naturally mapped into the direct object position. Other objects, like *vo5* 禾 ‘the rice harvest’, *lep4-sep4* 垃圾 ‘garbage’, *pi3* 鼻涕 ‘snot’, *hon3* 汗 ‘sweat’, and *fo2* 貨 ‘cargo’, also possess the same features as *ban1* 搬 ‘to remove’ and they can also be treated as having prototypical patient roles as well.

⁹ Contributing properties and examples for patient proto-roles (in Object NP): (Dowty 1991: 572)

- a. undergoes change of state: e.g., John moved the rock.
- b. incremental theme: e.g., John filled the glass with water.
- c. causally affected by another participant: e.g., Smoking causes cancer.
- d. stationary relative to movement of another participant: e.g., The bullet entered the target.
- e. does not exist independently of the events, or not at all: e.g., John built a house.

Accordingly, return to Iwata's two-level-meaning model, all of the patient roles of verbs of removal observed so far can be profiled in or integrated with the [V O] construction to signify 'X acts upon Y', meaning 'to move an entity'. Take *ban1* 搬 'to remove' for example, as demonstrated in Figure 5.

Figure 5. The L-meaning/P-meaning model of BAN in the [V O] construction



In Figure 5, the universal concept of verbs of removal, L-meaning, is first carried out. Next, the P-meaning under discussion depicts one of the semantic elements on which we are focusing, i.e., the patient role. Then, the verbal meaning, through the thematic core, 'acts upon Y', denoting 'to act upon the patient', inevitably integrates with its corresponding syntactic structure, the [V O] construction. The prominence of the patient role and the semantic compatibility of verbal meanings and constructions also account for the transitivity of verbs of removal. That is, if the patient role is not mentioned, the expression will be puzzling, as in Sentence (26).

¹⁰ The term 'syntactic frames' in Iwata's (2000, 2005a, b) model is modified hereafter, because the concept of 'frame' in this thesis has followed Fillmore's (1982) definition.

- (24) a. 先生 愛 佢 搬去 外背。
Sin1-sang1 oi3 gi5 ban1-hi3 ngoi3-boi3
 Teacher want him move-to outside
 ‘The teacher wants him to move outside.’

(24) is obscure because it lacks the patient role, so that the reader will be curious about what the object is that the teacher has asked to be moved outside.

For the same reason, all the other patient roles are manifested in [V O] constructions in Table 3, although the verbs are conflated with different roles. Each patient role undergoes a change of state (or location) and is directly affected by its verb. For example, *vo5* 禾 ‘the rice harvest’ is no longer a part of the field because of the cutting motion; *lep4-sep4* 垃圾 ‘the garbage’ is outside of the house because of the clearing motion; *pi3* 鼻涕 ‘snot’ is cleared out from the nose because of the blowing motion; *han3* 汗 ‘sweat’ is gone because of the wiping motion; and *fo2* 貨 ‘cargo’ has left the truck because of the unloading motion. Therefore, all these roles are prominent enough to be profiled at the P-meaning level. The patient roles, integrating with the syntactic structures, become the direct objects of the removal verbs, and then constitute form-meaning pairs, denoting ‘removing something’.

In addition to patient roles, source and goal roles can appear in [V O] constructions in the conceptual structure of the removal verbs. Consider the examples in (25).

- (25) a. [V So] construction
 清 房間
cin1 fong5-gien1
 clear room
 ‘to clear the room’
 b. [V Go] construction
 搬 屋¹¹
ban1 vuk4
 move house
 ‘to move (out of the house)’

¹¹ The meaning of *ban1 vuk4* 搬屋 ‘to move’ is ambiguous. It refers to ‘moving into the house’, where *vuk4* 屋 ‘house’ is the goal, or it refers to ‘moving out of the house’, where *vuk4* 屋 ‘house’ is the source. See the detailed analysis in the following paragraphs.

In (25a) the direct object of *cin1* 清 ‘to clear’ is the source role *fong5-gien1* 房間 ‘room’. It can be understood that something (the patient role) has been cleared from the room. In (25b) *vuk4* 屋 ‘house’ is the location from which the furniture or anything else is removed. And it implies ‘to move (out of the house)’.

However, the frequency of the combination of the six removal verbs and these two roles is much lower. Not all these roles can freely combine with all the six verbs, as the patient roles do. Consider the following examples.

- (26) a. *[V So] construction
*下 貨車
hal fo3-cal
unload truck
‘to unload (cargo) from the truck’
- b. *[V Go] construction
*清 外背
cin1 ngoi3-boi3
clear outside
‘to clear (garbage) to outside’

(26a) shows that the verb *hal* 下 ‘to unload’ is not allowed to take the source role *fo3-cal* 貨車 ‘truck’ as its direct object. In (26b) the goal role *ngoi3-boi3* 外背 ‘outside’ is prohibited from combining with the removal verb *cin1* 清 ‘to clear’.

These two ungrammatical sentences show that the source and the goal roles are not as prominent as the patient role and they are not directly affected by the action of removal as the patient roles are. Nevertheless, these roles are required in some grammatical sentences. The examples in (27) can illustrate.

- (27) a. [V So] construction
佢 鑿 你 搽 *(桌仔)。
Gi5 gam1 n5 cut8 zok4-e2
He force you wipe table
‘He forced you to wipe the table.’

b. [V Go] construction

佢 舊年 搬*(屋)。
 Gi5 kiu3-ngien5 ban1-vuk4
 He last year move
 ‘He moved last year.’

In both sentences in (27), the source and the goal role have to be profiled after the removal verb, or the sentence will be incomplete.

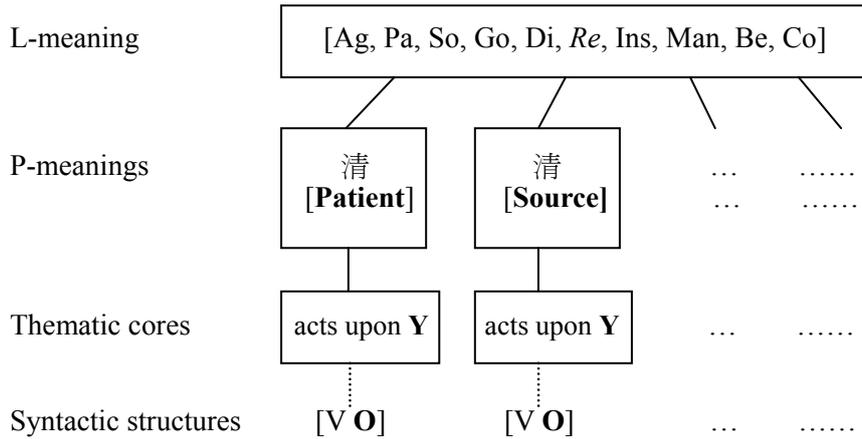
Table 4 shows that some removal verbs can be combined with the source roles, but that others cannot. The grammaticality of [V So] constructions is different from verb to verb.

Table 4. Argument realizations of verbs of removal in [V So] constructions in Hakka

Lexical items	<i>Ban1</i>	<i>got2</i>	<i>cin1</i>	<i>sen3</i>	<i>cut8</i>	<i>hal</i>
Participant roles	[Ag, Pa, So, Go, Di, Re, Ins, Man, Be, Co]					
Conflated elements	n/a	Instrument	Result	Source	Manner	Direction
Profiled source roles	<i>vuk4</i> ‘the (original) house’	<i>tien5-kam1</i> ‘the ridge (between rice fields)’	<i>fong5-gien1</i> ‘the room’	* conflated	<i>zok4-e2</i> ‘the table’	*
Particular frames	MOVING	FARMING				
[V Source]	<i>ban1 vuk4</i> ‘to move (out of the house)’	<i>got4 tien5-kam1</i> ‘to cut the grass from the ridge (between rice fields)’	<i>cin1 fong5-gien1</i> ‘to clear the room’	*	<i>cut8 zok4-e2</i> ‘to wipe the table’	*

Only four of the six removal verbs are compatible with this construction, *ban1* 搬 ‘to remove’, *got2* 割 ‘to cut’, *cin1* 清 ‘to clear’, and *cut8* 搽 ‘to wipe’. *Cin1* 清 ‘to clear’ and *cut8* 搽 ‘to wipe’ can be integrated with [V So] constructions, because the removee cannot be cleared or wiped without contacting the location. This means that the source roles (i.e., *vuk4* 屋 ‘house’, *tien5-kam1* 田坎 ‘ridge’, *fong5-gien1* 房間 ‘room’, and *zok4 e2* 桌仔 ‘table’), like the patient roles, are directly affected by their verbs. Take *cin1* 清 ‘to clear’ for example. The image of ‘clearing something’ highly overlaps with that of cleaning ‘some place’. When the garbage is cleared, the room becomes clean at the same time. Figure 6 depicts the integration between verbal meanings and constructions.

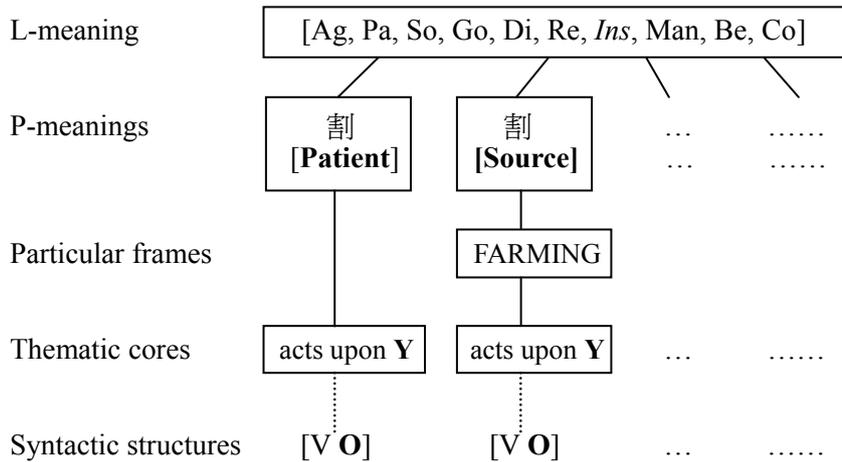
Figure 6. The L-meaning/P-meaning model of CIN in the [V So] construction



The L-meaning lays out the universal concept of verbs of removal with a slight difference, where the italic result role is lexicalized in the verbal meaning of *cin1* 清 ‘to clear’. This figure also demonstrates that the source role, like the patient role, is prominent enough to be profiled as P-meaning. And the [V So] construction, denoting the actions and the places affected by the actions, can be positively integrated with the P-meaning, profiled with the source role, through the thematic core, ‘act upon Y’, where Y symbolizes anything influenced by the action.

With respect to *ban1* 搬 ‘to remove’ and *got2* 割 ‘to cut’, particular frames are required to understand their meanings in [V So] constructions, such as the MOVING frame and the FARMING frame, respectively, because an agent does not contact with the source when acting upon the patient. Take *got2* 割 ‘to cut’ for instance. The image of cutting the grass on the ridge between two rice field is different from that of cutting grass in a field. Hence, without a particular frame, say a FARMING frame, we may not interpret the meaning of this [V So] construction. Figure 7 elucidates this concept.

Figure 7. The L-meaning/P-meaning model of GOT in the [V So] construction



First, the instrument role is conflated in the lexical meaning of *got2* 割 ‘to cut’. Second, the P-meaning profiles the source role. Next, before connecting with the thematic roles, we need a particular frame, the FARMING frame, to eliminate the gap between the image of the cutting of the grass on the ridge of a rice field and cutting grass in a field. Finally, the [V So] construction with the verb *got2* 割 ‘to cut’ can be successively induced through the thematic core ‘act upon Y’. As to the predicate *ban1* 搬 ‘to remove’, the MOVING frame is activated, amongst Hakka language users. To be more specific, the predicate ‘move’ combining with the source role ‘house’ in the [V So] construction

in English does not activate the MOVING frame, so the pattern ‘move the house’ would mean literally moving the house physically.

Although the patient and the source are influenced by *ban1* 搬 ‘to remove’ and *got2* 割 ‘to cut’ in a different way, there is still a close relationship between these two roles. That is, the former belongs to or is part of the latter. For example, the furniture, the patient of *ban1* 搬 ‘to remove’, is part of the house, the source of *ban1* 搬 ‘to remove’; the grass, the patient of *got2* 割 ‘to cut’, belongs to the grass on the ridge between rice fields. This close relationship can also explain the incompatibility of the removal verb *sen3* 擤 ‘to blow one’s nose’ or *hal* 下 ‘to unload’ and the [V So] construction, in that the patient *pi3* 鼻 ‘snot’ is not part of the source *pi3-gung1* 鼻公 ‘nose’ and the patient *fo2* 貨 ‘cargo’ does not belong to the source *fo3-cal* 貨車 ‘truck’. Furthermore, because the verb *sen3* 擤 ‘to blow one’s nose’ lexicalizes the source role *pi3-gung1* 鼻公 ‘nose’ in its verbal meaning without other options, it would be redundant to express this role again.

Next, when goal roles are specified in [V O] constructions, the verbal meanings profile the location which the removee is moved to, and the syntactic structures signify the actions and the entities, here the goals, affected by the actions. As we can see in Table 5, the [V Go] constructions are very restricted, and only *ban1* 搬 ‘to remove’ can integrate with the goal role in [V O] constructions.

Table 5. Argument realizations of verbs of removal in [V Go] constructions in Hakka

Lexical items	<i>ban1</i>	<i>got2</i>	<i>cin1</i>	<i>sen3</i>	<i>cut8</i>	<i>hal</i>
Participant roles	[Ag, Pa, So, Go , Di, Re, Ins, Man, Be, Co]					
Conflated elements	n/a	Instrument	Result	Source	Manner	Direction
Profiled source roles	<i>vuk4</i> 'the (original) house'	*	*	*	*	*
Particular frames	MOVING					
[V Goal]	<i>ban1</i> <i>vuk4</i> 'to move (out of the house)'	*	*	*	*	*

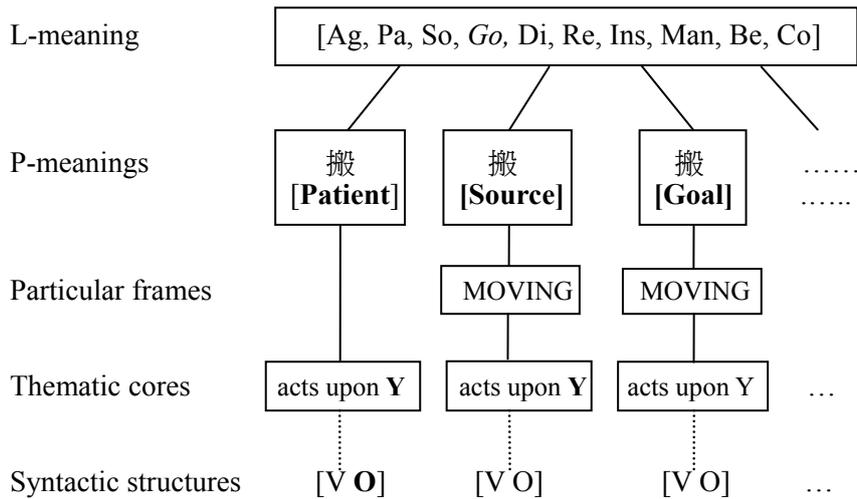
This restricted phenomenon is due to the fact that the conception of the removal verbs does not focus on the place to which the removee will go after the action. Verbs of removal focus more on the place which the removee is moved from, i.e., the source, because what matters to the agent is to remove something from some place. However, the neutral removal verb *ban1* 搬 'to remove' does not have this limitation. Both locations, that which is moved to or moved from, are prominent in its concept. And because of its peculiar use in both [V So] and [V Go] constructions, *ban1-vuk4* 搬屋 'to move from one place to another place in each moving event' produces a vagueness in readings between 'moving in' and 'moving out' with respect to the MOVING frame, as illustrated in (28).

- (28) 佢 當在該 搬屋。
Gi5 dong1-cai3-ge3 ban1-vuk4
 He DONG-CAI-GE move
 'He is moving.'

(28) may be interpreted in two ways. One is moving into the house, and the other is moving out of the house. The interpretation is highly dependant on the context and the evocation of the MOVING frame. When the agent is moving things to the front of a new house, he may be moving into the house. If the speaker sees him moving furniture out of a house, the speaker may think the agent is moving to another place.

Leaving the vagueness in (28) aside, the [V Go] construction with the verb *ban1* 搬 ‘to remove’ is grammatical because its lexical meaning is semantically compatible with its syntactic structure. Figure 8 may manifest this interaction.

Figure 8. The L-meaning/P-meaning model of BAN in the [V Go] construction



Among so many semantic roles existing in the universal concept, i.e., L-meaning, of the removal verbs, the goal role is profiled in this [V O] construction at the P-meaning level. Then, the particular MOVING frame helps us to understand why moving a location (or goal), *vuk4* 屋 ‘house,’ can be interpreted as moving something to the location, and furthermore, can be interpreted as ‘changing one’s house.’

3.2.2 [V C] constructions

In addition to noun phrases, predicates featuring complements can also appear in [V X] constructions. They specify more peripheral functions in the conceptual structure of the removal verbs. Consider the examples in (29).

- (29) a. [V Di] construction
 擤 出來
sen3 cut4-loi5
 blow exit-come (out)
 ‘to blow one’s nose’
- b. [V Re] construction
 下 空空
hal kung1-kung1
 unload empty
 ‘to unload completely’

In (29a) the direction role *cut4-loi5* 出來 ‘exit-come (out)’ succeeds the action *sen3* 擤 ‘to blow one’s nose’. It means ‘to blow something out of the nose’ without referring to the specific sections which come out the filth out. In (29b) the resultant state *kung1-kung1* 空空 ‘empty’ of the source *fo3-cal* 貨車 ‘truck’ is described right after the verb *hal* 下 ‘to unload’, which means ‘to unload the cargo from the truck, so that the truck becomes empty’.

These two participant roles are considered as complements, because these roles are required in some grammatical sentences. The examples in (30) can illustrate.

- (30) a. [V Di] construction
 佢 搵 桌仔 搬 *(出去)。
Gi5 laul zok4-e2 ban1 cut4-hi3
 He LAU table remove exit-go
 ‘He moved the table out.’

b. [V Re] construction

佢 搽 房間 清 *(空空)
Gi5 lau1 fong5-gien1 cin3 kung1-kung1
He LAU room clear empty
'He cleared the room.'

In (30), either the source role *cut4-hi3* 出去 'exit-go' or the goal role *kung1-kung1* 空空 'empty', has to be profiled after the removal verb. Otherwise, the sentence will be incomplete. Hence, these constructions are together considered as [V C] constructions.

Like [V O] constructions, legitimate [V C] constructions have two conditions as well. For the lexical frame, the complements need to be prominent enough to be profiled, while the others are shaded. For the syntactic structure, on the other hand, [V C] constructions are able to point out the actions and the complements affected by the actions. Due to these two conditions, the lexical frame and the syntactic structure will then be semantically compatible with each other. Therefore, the verbal meanings can integrate with the constructions. In the following paragraphs, we will expound how different integrations between verbs and complements bring about the grammaticality of [V C] constructions.

Gao (2001) distinguishes nine directional verbal compounds in Mandarin functioning as directional complements that will be discussed in relation to physical action verbs, as in Table 6.

Table 6. Directional verbal compounds in Mandarin (Gao 2001: 71)

a. <i>chu1-lai2</i>	出來	‘exit-come’	Outward movement
b. <i>chu1-qu4</i>	出去	‘exit-go’	Outward movement
c. <i>guo4-lai2</i>	過來	‘cross-come’	1. Moving towards the speaker 2. Turning around towards the speaker
d. <i>guo4-chu4</i>	過去	‘cross-go’	1. Moving away from the speaker 2. Turning to the side away from the speaker
e. <i>shang4-lai2</i>	上來	‘ascend-come’	Motion from a lower to a higher position
f. <i>shang4-qu4</i>	上去	‘ascend-go’	1. Motion from a lower to a higher position 2. Distance far away from the speaker
g. <i>xia4-lai2</i>	下來	‘descend-come’	1. Motion from a higher to a lower position 2. Moving something away from a position
h. <i>xia4-qu4</i>	下去	‘descend-go’	1. Moving from a higher to a lower position 2. Moving something from somewhere
i. <i>qi3-lai2</i>	起來	‘rise-come’	Upward movement

Following Gao’s study, we examine these nine directional compounds with verbs of removal in Hakka, and their combination of the verbs into compound forms in the [V Di] construction. A legitimate [V Di] construction requires the direction role to be profiled in the lexical frame and the syntactic structure denoting the action and the entity, i.e., the path, affected by the motion. As we can see in Table 7, the allowance for the direction roles in [V Di] constructions is different from verb to verb.

Table 7. Argument realizations of verbs of removal in [V Di] constructions in Hakka

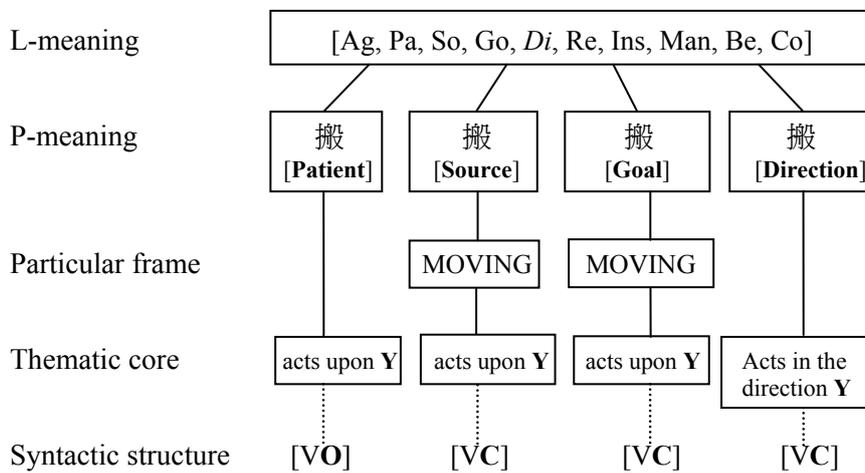
Lexical items	<i>ban1</i>	<i>got2</i>	<i>cin1</i>	<i>sen3</i>	<i>cut8</i>	<i>hal</i>
Participant role	[Ag, Pa, So, Go, Di, Re, Ins, Man, Be, Co]					
Conflated element	n/a	Instrument	Result	Source	Manner	Direction
Profiled argument (Direction)	<i>cut4-hi3</i> 'out'	<i>hal-loi5</i> 'down'	<i>cut4- hi3</i> 'out'	<i>cut- loi5</i> out	<i>hi4-loi5</i> upward	*
[V Direction] construction	<i>ban1</i> <i>cut4-hi3</i> 'to remove (sth) out'	<i>got4</i> <i>hal-loi5</i> 'to cut down'	<i>cin1</i> <i>cut4-hi3</i> 'to clear out'	<i>sen3</i> <i>cut4-loi5</i> 'to blow one's nose clear'	<i>cut8</i> <i>hi2- loi5</i> 'to wipe clean'	*

Only *hal* 下 'to unload' can not occur in the [V Di] construction, since the direction meaning is already conflated in the removal verb *hal* 下 'to unload'. Hence, taking the complement denoting a downward direction, like *hal-loi5* 下來 'descend-come' or *hal-hi3* 下去 'descend-go' results in redundancy, while taking the other directional complement, like *song1-loi5* 上來 'ascend-come' or *cut4-hi3* 出去 'exit-go', results in semantic incompatibility.

Although *got2* 割 'to cut', *cin1* 清 'to clear', *sen3* 擤 'to blow one's nose', and *cut8* 搥 'to wipe' can have direction roles as their complements, the variations of the directional patterns are strictly limited. *Sen3* 擤 'to blow one's nose', like *pi3* 呸 'spit', a verb incorporated with body-waste Source, only takes the directional phrase *cut4-loi5* 出來 'exit-come' for its complement. *Cin1* 清 'to clear', with a container concept referring to its source, only combines with horizontal directional complements like *cut4-hi3* 出去 'exit-go' or *cut4-loi5* 出來 'exit-come'. *Got2* 割 'to cut', on the other hand, takes horizontal directional complements, parallel to hand level, without a container concept, such as *go3-loi5* 過來 'cross-come' or *go3-hi3* 過去 'cross-go'. It also takes vertical directional complements, mainly downward, like *hal-loi5* 下來 'descend-come' or *hal hi3* 下去

‘descend-go’. *Cut8* 摔 ‘to wipe’ only works with the upward movement, *hi3-loi2* 起來 ‘rise-come’, meaning ‘to wipe something off’.¹² Last, *ban1* 搬 ‘to remove’ can freely combine with all directional compounds in the [V Di] constructions since it is a neutral verb with no specification of a direction meaning in its lexical meaning. Take *ban1* 搬 ‘to remove’ for example; the integration of verbal meanings and the constructions is revealed in Figure 9.

Figure 9. The L-meaning/P-meaning model of BAN in the [V Di] construction



The P-meaning of *ban1* 搬 ‘to remove’ points out that the direction role is perspectivized in this context. Through the thematic core ‘acts in the Direction Y’, the direction role is manifested from the lexical meaning to the syntactic structure.

¹² Huang and Chang (1996) studies the various V-*qilai* constructions in Mandarin based on metaphorical extension. According to their analysis, there are three meanings, including the directional-*qilai*, the inchoative-*qilai*, and the completive-*qilai*, derived from the basic one through the interaction with the lexical semantics of different classes of verbs (H&C 1996: 202). They also mention that movement words, which are compatible with the directional reading, like *cut8* 摔 ‘to wipe’ in Hakka, are ambiguous in these meanings, but can be disambiguated by context (Huang, Chu-Ren and Shen-Ming Chang 1996: 205).

Last, when the complements specify the result roles, the resultant states have several possibilities, referring to the result of the agent after performing an action, that of the patient after being influenced by an action, or that of the source and the goal after an action is performed. Again, a grammatical [V C] construction requires semantic compatibility between lexical meanings and syntactic structures. For the former, the result role should be profiled. For the latter, the [V Re] construction represents the action and the state after the action is performed. Because the resultant state can be profiled from various perspectives, the result role is taken by verbs much more freely. All six removal verbs can be manifested in the [V Re] constructions, as illustrated in Table 8.

Table 8. Argument realizations of verbs of removal in [V R] constructions in Hakka

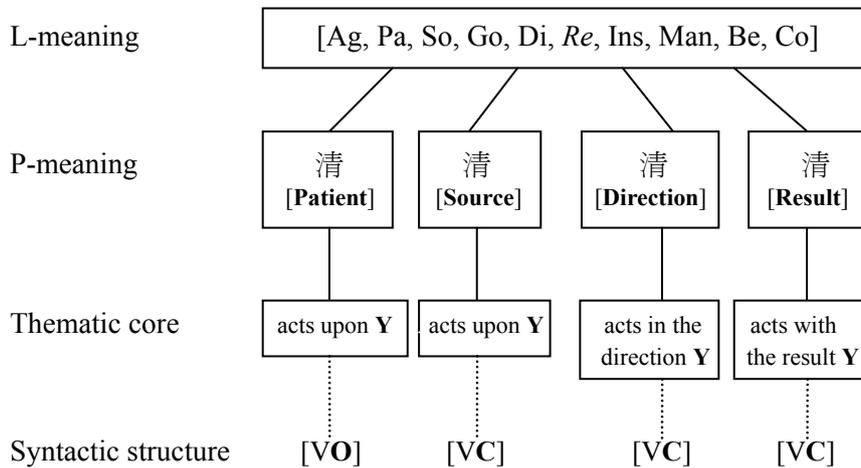
Lexical item	<i>ban1</i>	<i>got2</i>	<i>cin1</i>	<i>sen3</i>	<i>cut8</i>	<i>ha1</i>
Participant role	[Ag, Pa, So, Go, Di, Re , Ins, Man, Be, Co]					
Conflated element	n/a	Instrument	Result	Source	Manner	Direction
Profiled argument (Result)	<i>ciang5-ciang5</i> 'clean'	<i>ciang5-ciang5</i> 'clean'	<i>kung1</i> 'empty'	<i>ciang5-ciang5</i> 'clean'	<i>ciang5-ciang5</i> 'clean'	<i>kung1-kung1</i> 'empty'
[V Result]	<i>ban1</i> <i>ciang5-ciang5</i> 'to empty out'	<i>got4</i> <i>ciang5-ciang5</i> 'to cut (sth) completely'	<i>cin1</i> <i>kung1</i> 'to clear (sth) off'	<i>sen3</i> <i>ciang5-ciang5</i> 'to blow... clean'	<i>cut8</i> <i>ciang5-ciang5</i> 'to wipe clean'	<i>ha1</i> <i>kung1-kung1</i> 'to unload completely'

As we have mentioned above, all removal verbs can be modified by all kinds of results. The combination is free and productive. The situations we discuss in Table 8 all describe the resultant states of the source. There are also certain other situations describing the results of other roles. For example, *sen3 fung5-fung5* 擤紅紅 'to be blown red' means the nose (the source role) becomes red after blowing; *got4*

fai2-tet4 割壞忒 ‘to be cut broken’ means the knife (the instrument role) is broken.

One point has to be noticed here. Although *cin1* 清 ‘to clear’ has conflated with the result in its lexical meaning, it can still take a result role without redundancy. This is because these result complements are used to make an additional remark as a nuance in relation to the condition of the resultant state. The integration process is shown in Figure 10.

Figure 10. The L-meaning/P-meaning model of CIN in the [V Re] construction



With the conflated result role in the L-meaning, *cin1* 清 ‘to clear’ profiles the same role to emphasize the resultant state after ‘clearing’. The result of the clearing may be shown in different ways, such as ‘clean’, ‘neat’, etc. And the expression *cin1 kung1* 清空 ‘to clear (sth) off’ in Table 8 points out the resultant state ‘empty’ after clearing.

3.2.3 Adjuncts

As to the remainder of the roles, the instrument, manner, benefactive, and comate roles, none of these roles appears in the [V X] constructions. Different from the complements we have discussed in Section 4.2.2, these roles are considered as adjuncts, and they are the least core roles of

the Hakka removal verbs. Matthew (1981: 124-6) proposes a list of criteria for justifying the complement-adjunct distinction. First, the type of semantic relation that holds between the dependent and its head: the complement is a participant in the event, while the adjunct is a circumstantial dependent. Second, the presence of collocational relations: the presence of a collocational relation implies that the syntactic dependent is a complement, and the absence of collocational relations implies that the syntactic dependent is an adjunct. Matthew's third criterion is whether or not the expression of the dependent is obligatory. The last criterion is about latency, which is the requirement for a definite interpretation of a dependent if that dependent is left syntactically unexpressed. The example of a complement and an adjunct is given in (31):

- (31) 佢 [用 抹桌布]_{adjunct} 搽 [桌仔]_{complement}。
Gi5 yiung3 mi5-zok4-bu3 cut8 zok4-e2
He use wiper wipe table
'He wiped the table with a wiper.'

The table is a participant in the event, and *the wiper* describes the instrument with which the action proceeds. Then, the absence of a collocational relation between 'wipe' and 'wiper' implies that the prepositional phrase is an adjunct. Additionally, *the table* in (33) is an obligatory element of the transitive clause, but 'with a wiper' is an optional element of the same clause. Last, one can say *cut8 ciang5-ciang5 搽淨淨* 'to wipe clean' only when a definite referent for the direct object is accessible in the discourse context (e.g., the table).

4. CONCLUDING REMARKS

Abiding by Iwata's model, we have first analyzed the verbal meaning at two levels: the L-meaning level, representing the general concept scene, and the P-meaning level, representing the profiled event scene. We have also examined the constructional meaning from its corresponding thematic core. And finally we have expounded the semantic compatibility between the verbal meanings and the constructional meanings, making their combination more reasonable and less arbitrary. However, we have made some modifications to Iwata's

two-level meaning model in the present study. Iwata's study focuses on the syntactic alternations exhibited by the same verb, but this study observes verbs of removal included within a family concept. Then, to further distinguish the fine-grained nuances among each sub-class, we additionally incorporated Jackendoff's decompositional theory, Talmy's lexicalization approach, and Fillmore's frame and perspective notion so as to investigate the concept structure and the inherent lexicalized meanings of each subclass.

Furthermore, we have presented the fine-grained integration of verbal meanings and constructions through a multilateral model. We have examined the interaction between six removal verbs in Hakka and different [V X] constructions, in which X is substituted for semantic roles existing in the universal concept of the removal verbs. [V Pa] constructions display highly semantic compatibility with the removal verbs; that is, all of these verbs belong to causative or transitive verbs and all of the removing actions have a direct impact on another party. However, the acceptability of the other constructions, including [V So], [V Go], [V Di], [V Re] constructions, varies from verb to verb, which can be explained by two reasons. First, profiling the role which is exactly the conflated role of the verb may result in redundancy. Second, profiling a semantic role which is not prominent enough to be profiled or asupposed participant role which does not belong to its verbal frame will cause semantic incompatibility. According to their appearances in [V X] constructions, we can make a continuous distribution of these roles, as shown in Table 9.

Table 9. Core - peripheral continuum roles of verbs of removal in Hakka

Verbs	Role			
	Conflated	Core	More peripheral	Most peripheral
<i>ban1</i>	n/a	Ag, Pa, So, Go	Di, Re	Ins, Man, Be, Co
<i>got2</i>	Ins	Ag, Pa, So	Di, Re	Go, Ins, Man, Be, Co
<i>cin1</i>	Re	Ag, Pa, So	Di, Re	Go, Ins, Man, Be, Co
<i>sen3</i>	So	Ag, Pa	Di, Re	Go, Ins, Man, Be, Co
<i>cut8</i>	Man	Ag, Pa, So	Di, Re	Go, Ins, Man, Be, Co
<i>hal</i>	Di	Ag, Pa,	Di, Re	So, Go, Ins, Man, Be, Co

For *sen3* 擤 ‘to blow one’s nose’ and *hal* 下 ‘to unload’, the roles which are conflated in their lexical meanings can not be profiled in [V X] constructions; for the other verbs, the conflated roles might be profiled in [V X] constructions or in adjuncts. In addition, roles which can be profiled in [V O] constructions are core roles, roles which can be profiled in [V C] constructions play more peripheral functions, and those which cannot be profiled in [V X] constructions are the least core roles. Core-tendency roles can appear in both [V X] constructions and adjuncts, depending on the information prominence of the context, while peripheral-tendency roles may only be profiled in adjuncts.¹³

¹³ As pointed out by the two reviewers, while the core participants are reified as the object in the construction under discussion, more peripheral functions are realized as complements or adjuncts, which presumably are predicates. Whether such an extension of the object noun phrase in the construction to the predicative complements or adjuncts in the construction is feasible or not will need more theoretical justifications. But this issue will be left for future research.

Given the analysis, some directions for future study are successively provided. First, other verbs of removal in Hakka, such as *bok4* 剥 ‘to flay’, *guat4* 刮 ‘to scrape’, *pat4* 撥 ‘to get rid of’, *so3* 掃 ‘to sweep’, *to1* 拖 ‘to drag’, *co3* 搓 ‘to roll between the hand’, *mat4* 抹 ‘to rub’, and so on, need to be investigated to complete the family concept of removal, and to find out the proto-typicality of each removal verb. Second, based on further examples from authentic data and corpora, more constructions, such as Hakka LAU and BUN constructions, resultative complement constructions, topicalization constructions, and inchoative/causative constructions can be discussed to exam the process of their fusion with the verbal meanings. And finally, the modified multilateral model needs to be tested in exploring the integration of other verb families and linguistic phenomena in different languages.

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從動詞意義和結構的整合分析客語移除類動詞

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本文以客語移除類動詞為研究對象探索語意和形式的關係。動詞的語義透過詞彙分解化、概念結構、詞彙化、框架語義和顯像等機制帶出。後以 Goldberg (1995, 2006) 的構式理論為基礎，運用 Iwata (2005a, b) 建議的修正模式，對動詞和結構之間的整合，提出更精細、更詳盡的解釋。根據前述方法，我們初步將移除類動詞分為六個次分類，並呈現出他們在結構上被顯像的論元。最後帶入 Iwata 提出的模組，分析各次分類動詞和不同句子結構的結合情形和其後的語義表現。