

A Dynamic Approach to Placement and Removal Verbs in English

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A Dynamic Approach to Placement and Removal Verbs in English

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One of the aims of this paper is to provide a compositional account for verbal lexical decomposition of English removal and placement verbs. It is also hoped that this paper contributes to show the necessity of the “dynamic” perspective. I argue from Distributed Morphological perspective that to be a verb is to combine a functional verbal element, which might be called ‘little’ v_{take} (or v_{removal}), with a root in the complement of that v . Inspired by Levinson (2007, 2014) and from the perspective closest to Kajita’s (1977, 2004) dynamic theory of syntax, I propose that there is an inventory of ‘little’ v heads from basic to derived and that root removal and putting verbs involve ‘little’ v_{take} and v_{put} of removing/ taking and putting events which emerge in the early stage of language acquisition.

1 Introduction

One of the aims of this paper is to provide a compositional account for verbal lexical decomposition of English removal and placement verbs. It is also hoped that this paper contributes to show the necessity of the “dynamic” perspective. The focus will be on a particular verb class, which I call “Root Removal Verbs (or implicit removal verbs),” as illustrated by *seed*, *millk*, *dust* or *skin* (which appear in expressions like *seed raisons*, *millk the cow*, or *millk the snake (of its venom)*, or *dust the furniture*). My definition of the class of implicit removal verbs is that these verbs entail the removal of an entity, but the entity is not expressed by an argument of the verb, thus implicit.

One of the characteristics of verbs like *seed* and *skin* is that they can be used as either a noun or a verb. Thus, they might be called ‘denominal’ verbs in the sense that they are derived from nouns, in the spirit of Clark and Clark (1979). But Levinson (2007:19-21) points out the problems of the classification of verbs by Clark and Clark (1979), and proposes the alternative that so called “denominal” verbs are derived from roots rather than nouns. I also assume this claim.

In this paper I assume the model of grammar close to Marantz’s (1997) Distributed Morphology (DM). Thus I argue that the verbs like *seed* which has the meaning of “to remove seeds from something” are derived from roots like $\sqrt{\text{seed}}$ but these roots do not bear categories like “verb” or “noun.” Rather to be

キーワード：除去事象、配置事象、動態論の観点、語根除去動詞

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a verb is to combine a functional verbal element, which might be called ‘little’ v_{take} (or v_{removal}), with a root in the complement of that v . Furthermore, I argue that forms like TAKE SKIN OFF DP used in the early stage of language acquisition undergo the incorporation of the object argument into the verb, yielding Root Removal Verbs like [v_{take} + $\sqrt{\text{skin}}$] (= skin). The evidence comes from the fact that forms like “print-wipe,” which show that the incorporation is frozen in the intermediate stage, are preserved in the adult grammar (N.B. Kajita’s 2015 lectures at TEC).

Inspired by Levinson (2007, 2014) and from the perspective closest to Kajita’s (1977, 2004) dynamic theory of syntax, I propose that there is an inventory of ‘little’ v heads from basic to derived and that root removal and putting verbs involve ‘little’ v_{take} and v_{put} of removing/taking events and putting events which emerge in the early stage of language acquisition. Namely, $\sqrt{\text{seed}}$ and $\sqrt{\text{dust}}$ derive root (or implicit) removal verbs in conflation with ‘little’ v_{take} . These verbs are in contrast with implicit creation verbs like $\sqrt{\text{cup}}$ and $\sqrt{\text{loop}}$ which combine with $v_{\text{reconfigure}}$.

Concretely, in the case of implicit removal verbs, those roots like $\sqrt{\text{seed}}$ and $\sqrt{\text{skin}}$ are related to “removed” arguments, *seeds* in “seed the butternut” and *the fox* in “skin the fox”, by functional heads, called OUT and OF.

(1) [v_{take} [DP [OF [OUT $\sqrt{\text{seed}}$]]]]

OUT and OF are the covert parallels of prepositions *out* and *of*, with capital letters signifying the non-pronunciation of these elements in this context (N.B. Levinson

2007:47). Thus, root removal verbs are essentially a conflation of elements like v_{take} , OUT, OF and $\sqrt{\text{seed}}$ into one word (cf. Levinson 2014:212).

I show that ‘little’ v_{put} of the ‘putting’ event also conflates with $\sqrt{\text{bottle}}$, which contributes its conceptual meaning “to put a liquid into a bottle: e.g. ‘The wines are bottled after three years.’” ‘Little’ v_{put} combines with $\sqrt{\text{stable}}$ with the meaning ‘to put a horse in a stable.’

2 Levinson’s (2007, 2014) Root Creation Verbs

Levinson (2014:211) discusses Root Creation Verbs.

(2) Root Creation Verbs:

- a. The stylist braided her hair. → At least one braid was created.
- b. The decorator piled the cushions. → At least one pile was created.

(Levinson 2014:211)

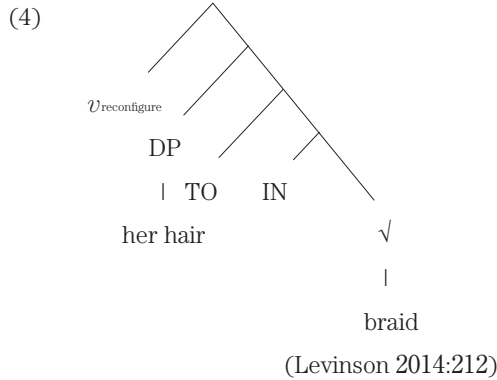
Levinson (2014:211) notes that these verbs entail the creation of an individual, without expressing that individual as a DP argument. Levinson (2014:211) considers the meaning of (2a) is the same as that of (3).

(3) The stylist **made/reconfigured** her hair **into a braid**. (Levinson 2014:211)

And Levinson (2014:211) argues that in examples like (2a) the object of the preposition *into* names the created individual, but, in root creation verbs, this individual is named by the root of the verb. That is, in (2a), what is created is a braid and so the class is called “root creation,” since the root names the creation (Levinson 2014:211).

Another crucial element of this “verb frame”

is the material which is reconfigured, such as *her hair* in (2a) (*ibid.*). In other words, the expression *braid the hair* does not imply making the hair itself. Levinson (2014:212) argues that *braid* is a complex built syntactically by incorporation in (4) and the denotation of the whole phrase is a predicate of events.



Levinson (2014:219) points out that *braid* can also appear as an explicit creation verbs like *bake* and *build*.

- (5a) means that the necklace itself is made, thus v_{create} and *braid* must have been conflated.
- (5) a. The jeweler braided a necklace (out of strands of silver).
b. The pastry chef baked a cake.

(Levinson 2014:219)

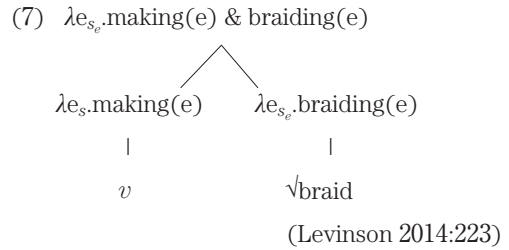
According to Levinson (2014:219), the interpretation of *braid* is paraphrased as shown in the following:

- (6) The jeweler **made/created** a necklace (out of strands of silver) **by braiding**.

(Levinson 2014:219)

Due to Levinson (2014:219), explicit creation verbs like *braid* do not occur with pseudo-relatives but do occur in the double object construction, and do not require a theme. In

contrast, Levinson (2014:223) argues that *braid* as a root creation verb obligatorily requires a theme. Levinson (2014:223) proposes that the root might combine with a different v (from v_{create}). Note that Levinson (2014:223) does not label this ‘little’ v .



Levinson (2014:223) predicts that the root type $\langle s_e, t \rangle$ easily occur in intransitive contexts.

This paper investigated the attested examples of what Levinson (2007, 2014) calls Root Creation Verbs or Implicit Creation Verbs.

- (8) a. The boy rose and cupped his hands to his mouth and shouted one last time at Teece: “Mr. Teece, Mr. Teece, what *you* goin’ to do nights from now on?”
[Ray Bradbury. 1950. *The Martian Chronicles*, Simon & Schuster Paperbacks, New York, p.132]
- a’. Kemper cupped his hands around the match.
[James Ellroy. 1995. *American Tabloid*, Vintage Books, New York, p.148]
- b. Bobby stood up and balled his fists.
[James Ellroy. 1995. *American Tabloid*, Vintage Books, New York, p.215]
- c. Caught a wrist and looped the rope around.
[Lee Child. 1998. *Die Trying*, Jove

small hands and peering under them toward the seven-foot stone bank of the canal, watching for Martians. [Ray Bradbury. *The Martian Chronicles*, Simon & Schuster Paperbacks, New York, p.232],” whereas $\sqrt{\text{shelf}}$ might be used in the expressions like “They shelved the groceries.”

3 Root Removal Verbs or Implicit Creation Verbs

In this section, it will be shown that $v_{\text{take/removal}}$ is assumed in my analysis of Root Removal Verbs/Implicit Removal Verbs like *seed*, *milk* and *dust* (occurring in expressions like *seed raisons*, *milk the cow*, *milk the snake (of its venom)*, and *dust the furniture*). Intuitively, these verbs entail the removal of an individual, without the expression of that individual as a DP argument, and are thus implicit. These verbs might also be referred to as “root removal,” because the root names the removal. I follow the proposal of Hale and Keyser (1993) and Levinson (2007:10, 2014) that even apparently simple verbs should be decomposed.

3.1 Root Removal Verbs and ‘little’ v_{take}

In this article, I argue that the phenomenon similar to Root Creation Verbs can be observed in Root Removal Verbs, whose vector heads in the opposite direction of “(root) creation”, and give grounds for the functional element called v_{take} .

Evidence of this claim comes from Tomasello’s (1992) children’s utterance data.

A fragmental syntactic structure in the form of “NP expressing a moving entity + OFF” is

used at some of the earliest stages of language acquisition, as is shown in the following examples (Tomasello 1992:317). It corresponds to the “almost complete” conceptual structure of the caused motion construction.

(14) NECKLACE OFF

(An utterance of a child of 18 months 25 days; meaning “wants Duddy to take her scarf off”) (Tomasello 1992:317)

When this utterance is construed as an imperative, it encodes the requirement for an eventuality to occur but the specification for [$\pm$ past] is ruled out (N.B. Ritter and Wiltschko 2009:170).

At the next stage of the language development, a verb appears to be placed before an NP-P(P), deriving the verb-particle construction, *move/take* NP *off* [], which corresponds to the complete conceptual structure of the caused motion construction.

(15) MOVE PAJAMAS OFF THIS

(An utterance of a child of 20 months 17 days; meaning “moving them off the chair”) (Tomasello 1992:318)

In the conceptual structure of the “*take*-type” caused motion construction, only “cognitively salient” constituents like TAKE, THIS KEY, OFF surface in the syntactic structure and the phonological structure.

(16) TAKE THIS KEY OFF

(An utterance of a child of 20 months 20 days; meaning “wants key out of the door”) (Tomasello 1992:318)

In the later stages of language development, “almost complete” phonological/syntactic

structures of the caused motion construction occur in the utterance. The data is shown below together with the context.

(17) TAKE SKIN OFF HOT DOG

(An utterance of a child of 21 months 4 days; meaning “wants Mama to”)

(Tomasell 1992:317)

Then, at the advanced stage of language acquisition, where the child attains the adult grammar of a language L, the relevant extralinguistic developments and the cumulative and threshold nature of dynamic constraints interact (N.B. Kajita 1997:391). TAKE SKIN OFF DP will be grammaticalized into “peel DP” and “skin DP” in the subsequent stages in which a grammar is developed into an adult grammar.

Note that in some cases, beside expressions like “take/wipe his fingerprint,” a DP object might be incorporated into a verb (i.e. noun incorporation) as shown in the expression “print-wipe,” which is used in a novel written by James Ellroy (Kajita’s Talk at Tokyo Eigogaku Danwakai, Kajita’s 2015 Lecture at TEC).

(18) You print-wiped every surface before you checked out.

[James Ellroy. 1995. *American Tabloid*, VintageBooks, New York, p.322]

This example means “to remove the fingerprint from every surface of things in the room,” and the object argument is incorporated into a verb by noun incorporation. This expression might be at the stage immediately before the stage in which the object DP₁ of “TAKE DP₁ OFF DP₂” and the verb TAKE are

merged into a single unit (like the verb *skin*). This might be the same force that attempts to incorporate the cognate object into the main clause (e.g. as in forming “Then she smiled a brief, bitter smile.” from “Then she smiled. A brief, bitter smile. [*Die Trying*]”). Note, however, one might not be able to say “*The criminal print-took the furniture.”

(19) *The criminal print-took (*or* print-removed) the furniture.

Then, there might be a possibility that an expression “it is unnecessary to braid all the way down the length. [*Disney FROZEN HAIRSTYLES*]” can be derived by incorporating the object DP(*the* hair) into the verb *braid* and then deleting (*the* hair) or making it unpronounced.

Wipe has the meaning “to remove dirt, liquid, etc. from something by a cloth and so forth.” Thus, in the following caused motion construction with *wipe*, the object “moisture” might be incorporated into the verb and made implicit.²⁾

(20) He wiped a dish dry.

I found the attested example in which the object “(the) side (of the car)” is incorporated into a transitive verb *wipe*. In this case, $\sqrt{\text{wipe}}$ combines with ‘little’ *v*_{contact}. “Sidewipe” here means “a fender bender.”

(21) Spellman sidewiped a car filled with wetbacks and sent 3 of them to the hospital.

[James Ellroy. 1995. *American Tabloid*, Vintage Books, New York, p.164]

In the following example “sidewipe” is a euphemism or its meaning is metaphorically

extended, namely “have an affair with women.”

- (22) Jack went through his little book and
sidewiped a hundred women inside six
months. [ibid., p.212]

Noun incorporation is also observed in the expressions of the ‘putting’ event. In the following instance, the object DP of “seal” of “stamp (the) seal” is incorporated into the transitive verb *stamp*.

- (23) Kemper signed the notary statement and
seal-stamped all three signature.

[James Ellroy. 1995. *American Tabloid*,
Vintage Books, New York, p.190]

In short, the verb class involving the ‘taking’ event (i.e. Root Removal Verbs) shown below might be evidence supporting my analysis which assumes ‘little’ *v_{take}* of the removal event in the derivation. (24a) is uttered in the cooking program on TV. *Empty* in (24i,j) is cited for a comparison. (25) are also examples of Root Removal Verbs.

- (24) Root Removal Verbs:

- a. Seed the butternut.→At least one seed
was removed.

(Giata at Home, TV program)

- b. Seed (the) raisons.

- c. Gut a fish.→At least one gut was
removed.

- d. He peeled a banana to eat it.

- e. skin a fox

- f. scale a fish

- g. weed a garden

- h. “What’s it like?” asked Moomintroll, who
was shelling peas with Hemulen.

[Tove Jansson. 1948. *Finn Family*

Moomintroll, Translated by Elizabeth
Portch, Farrar Straus Girox, New York,
p.112]

- i. cf. empty the water out of the tab.

(Genius)

- j. cf. The lights were on in the bar, staff
emptying ashtrays and wiping down
tables, collecting an enormous number
of glasses.→At least one ashtray was
emptied [H.G.].

[Ian Rankin. 1997. *Black and Blue*, St.
Martin’s Paperbaks: New York, p.348]

- j. They [= hundreds of rescued migrants]
are queuing up to be fingerprinted and
to be documented.

[BBC America, May 15, 2015]

- k. take their fingerprints.

- (25) a. He milks his cows every morning.

- b. milk the snake (of its venom)

- c. dust the furniture

- d. She cleaned the house and dusted it ...

[Ray Bradbury. 1950. *The Martian
Chronicles*, Simon & Schuster
Paperbacks, New York, p.122]

These examples entail the removal of an entity, but that entity is not expressed by an argument of the verb. The meaning of (24a) is parallel to that in (26). The meaning of implicit removal verbs in (25) can be paraphrased as in (27).

- (26) Giata took the seeds out of the butternut.
(or Giata removed the seeds from the
butternut.)

- (27) a. to take milk from a cow, goat, etc.

(Concise Oxford English Dictionary 10e,
2001)

- b. to take the snake of its venom ($\neq$ milk)
or to take venom ($\neq$ milk) from the
snake
- c. to take/remove dust from surfaces of the
furniture, the house, etc.

In the examples like (26), the object of the prepositions *out of* names the removed entity. However, in root removal verbs, this entity is named by the root of the verb itself (namely, the root shares the name with the removed entity). That is, in (24a) the removed entities are seeds, and in (24c) what are removed are guts, and so on. That is why I call the class “root removal,” since the root names the removal. Another important element of this “verb frame” is the presence of the material like “the butternut” in (24a) which is not reconfigured, although the content (i.e. seeds, guts, etc.) are removed.

The analysis proposed in this paper is that the removed entity contributed by root removal verbs is present in the syntax and is denoted by the root of the verb. The basic idea is that to construct a verb from such a root, which has a denotation like a common noun, root removal verbs essentially amount to a conflation of constituents similar to those underlined in (26) into a word. In which case the removed entity is contributed by a root rather than a DP. For instance, the root $\sqrt{\text{seed}}$ is claimed to contribute a property denotation of $\lambda x_e.\text{seed}(x)$. Namely, $\sqrt{\text{seed}}$ is a predicate of individuals and (i) using variable e for entities, or individuals, and t for truth values, such a root would be of type $\langle e, t \rangle$, (ii) in set theoretic terms, such a predicate denotes a

set of individuals, (iii) semantically this set of individuals share property denoted by the noun (N.B. Levinson 2007:22). And the root is related to “removed” argument, seed(s), by two functional heads, called OUT and OF. OUT takes the root as an argument and the result denotes the state of seeds being removed. OUT and OF in capital letters signify the non-pronunciation of these elements in this context (cf. Levinson 2007:47).

$$(28) \llbracket \text{OUT} \rrbracket = \lambda f \langle e, t \rangle . \lambda y_e . \lambda s_{s_e} . \exists x_e . \text{source}(s, y) \ \& \ \text{being-out}(s, x) \ \& \ f(x)$$

OF is a purely syntactic head licensed by the taking/putting v (a kind of the causative-move v) which has the ability to assign case:

$$(28) \llbracket \text{OF} \rrbracket = \text{semantically/type-theoretically} \ \text{vacuous}$$

As the root itself does not introduce any eventuality variable, with such verbs the only event variable is contributed by a causative v_{take} head with “removal” semantics that entail a kind of removal that involves emptying the content.

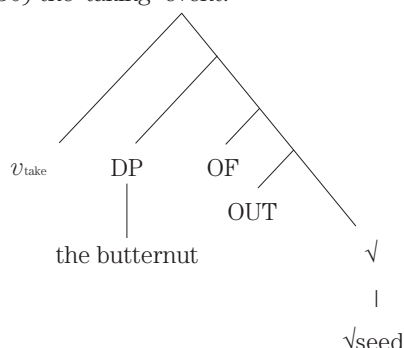
$$(29) \llbracket v_{\text{take}} \rrbracket = \lambda f \langle s, t \rangle . \lambda e_{s_e} . \exists s_{s_e} . f(s) \ \& \ \text{removing/} \ \text{moving}(e) \ \& \ \text{theme}(s, e) \ \text{CAUSE}(s, e)$$

This article adopts Levinson’s (2014:212) assumption that there is not merely one v head, but rather that there is an inventory of heads which serve to categorize verbs. In this article I distinguish descriptive predicates of ‘taking/putting’ from the $v_{\text{accompany}}$ used with explicit verbs of accompanying, but the meaning of this v can really be quite light, as can be seen by its interchangeability with light verbs like *take*. Note that the question of how

many varieties of ‘little’ *v*’s are allowed is shelved for the moment.¹⁾

The verb built by the heads detailed above is a complex that can be produced syntactically by conflation (without any semantic import).

(30) the ‘taking’-event:



(31) [v_{take} [DP [OF [OUT [$\sqrt{v}$ seed]]]]]

The denotation for this entire phrase given in (30) (or (31)) will amount to a predicate of events as follows.

(32) Formally: $\lambda e_{s_e}.\exists s_{s_s}.\exists x_{s_x}.\text{seed}(x) \ \& \ \text{going-out}(s)(x) \ \& \ \text{source}(s,\text{the butternut}) \ \& \ \text{removal}(e) \ \& \ \text{CAUSE}(s)(e)$

(33) Informally: A set of taking/removal events which cause an state in which ‘the butternut’ is deseeded.

Note that, in the case of root removal verbs (24a), the object of OF OUT is “the butternut (not the root ($\sqrt{\text{seed}}$)),” whereas in the case of Levinson’s (2007, 2014) root creation verbs ([_{DP} his hands] TO IN [$\sqrt{\text{cup}}$]) the vector heads in the opposite direction and the object of TO IN is the root ($\sqrt{\text{cup}}$). It is not clear whether this difference might bring a crucial consequence or not at this point.

Levinson (2007:19, 21, 2014) argues that verbs are derived from roots rather than nouns, in contrast to Clark and Clark (1979)

that consider so-called ‘denominal’ verbs are derived from nouns. As support for her analysis, Levinson (2007:21-22) notes it is not clear whether the directionality is assumed in the term ‘denominal’ when Clark and Clark classify *blanket* in “Jane blanketed the bed.” as ‘denominal’ whereas Clark and Clark does not consider *laugh* in “The professor laughed.” to be ‘denominal’ despite the fact that it is zero-related to nouns, too. What is important is that the root denotes a predicate of individuals (N.B. Levinson 2014:212). This predicts that the pseudo-resultative predicate can modify the root ($\sqrt{\text{peel}}$) of the type $\langle e, t \rangle$ can be formed with root removal verbs.

(34) Pseudo-resultative:

Rich people peel apples thick. → At least one thick peel was removed (from an apple).

Pseudo-resultatives do not modify the direct object of the verb as resultatives do. The resultative-like interpretation found with pseudo-resultatives is provided by modification of the removed entities as a result of the event (N.B. Levinson 2014:213). (34) might be an example of a pseudo-resultative because the relevant interpretation would not be that “an apple becomes thick” by removing its peel but that “the peel is thick,” in that “thick” modifies the removed entity, the peel. The pseudo-resultative sentence in (34) does not entail that the state denoted by the adjective *thick* holds at the beginning of the event (cf. Levinson 2007:34).

Pseudo-resultatives like the following example might also be formed, with the

intended interpretation that less than half of the seeds were removed.

- (35) Giada seeded the butternut less than 1/2 in 5minutes. → At least less than 1/2 seeds were removed.

However, is it possible to productively form the root-modifying pseudo-resultatives like (36a) or the pseudo-caused motion construction (36c)?

(36) Pseudo-resultatives:

- a. The magician seeded the butternut dry. → At least one dried seed was removed.
- b. Giada seeded the raisons full to the brim. → At least one seed was on the rim of the bowl.
- c. Giada seeded the butternut onto the plate. → At least one seed was put on the plate.
- d. Giada seeded the raisons plateful. → At least one plateful of seed was removed.
- e. Giada gutted the fish rotten. → ?*At least one rotten gut was removed.
- f. cf. Giada seeded the butternut empty.
- g. cf. Seed the raisons twenty times. → At least twenty seeds were removed.

It seems difficult to test the availability of pseudo-resultatives with English root removal verbs, whose secondary predicates do not modify the DP objects and the resultative-like interpretations are contributed by modification of removed individuals as a result of the events. If the intended meaning of (36a) is not that the deseeded butternut became *dry*, but that dry modifies the removed entity (seeds), then (36a) might be an example of a

pseudo-resultative.

‘Little’ v_{put} of the ‘putting’ event also combines with $\sqrt{stable}$ with the interpretation “to put or keep a horse in a stable (OALD, 2000).” $\sqrt{stable}$ also combines with $v_{pass/put}$ to form the passive. Note in passing that “on the cart” in (37) is an instance of fragment integration.

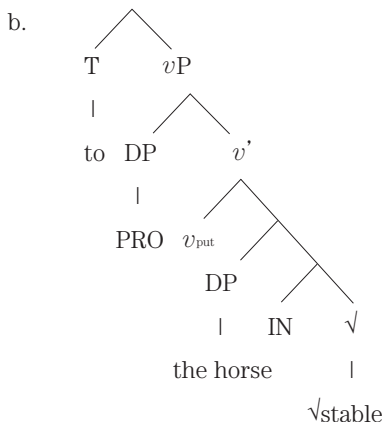
- (37) a. His obvious plan would be to stable the horse and open the cask where it stood – on the cart.

[Freeman Wills Crofts. 1920, 2011. *The Cask*, The Langtail Press, London, p.205]

- b. If a horse was stabled at the villa all night, some traces should surely be visible. [ibid.]

The active form (37a) is given the following structure:

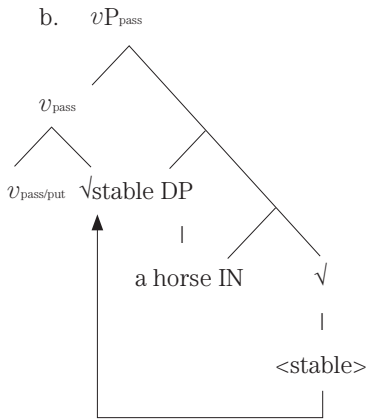
- (38) a. to stable the horse.



- (39) [T to [vP PRO [v [v_{put} [DP [TO [IN $\sqrt{stable}_{Location}$]]]]]]]]

The partial structure of the passive (37b) is given below:

(40) a. a horse was stabled



The ‘putting’ event, however, is hard to deal with. The following seemingly basic ‘putting’ event with the verb *put* means more than simply putting new car, *Super Cruise*, on the road.

(41) “We don’t need any change in legislation to put Super Cruise on the road,” said Dan Flores, a spokesman for Genral Motors.

[*International New York Times*, MONDAY, MAY 4, 2015, p.1]

In this example “Cadillac will offer no-hands highway driving,” namely “driving a car on the road.”

Note that $\sqrt{\text{seed}}$ is polysemous in that it can be used not only as the ‘taking’ event but as the ‘putting’ event. Consider (42). It is intriguing that what is planted is the seed of rye, not the rye itself which will sprout from the seed. And the rye and the seed are identified, not in the part-whole relation.

(42) seed rye in a field. [Genius]

It is known that in many languages roots are the smallest elements and are neutral with respect to the traditional categories like noun

and verb. The research in this area is in progress, discovering that a conflation of a functional element (‘little’ v or n) with a certain root in the complement of that element makes a verb or a noun in many languages. Note, however, according to Bliss (2014), in Halkomelem there is distinction between a verbal root of “dance” and a nominal root of “eagle”, which distinction is lost once the category-neutral suffix “-wa,” which Bliss calls LINK, is attached to them and they can be either a predicate or an argument.

And, following Levinson (2007:22-23), verbs like *bottle*, *stable* and *carpet* (i) basically denote entities, typically associated with nouns, (ii) denote predicates of individuals, (iii) using the variable e for entities, and t for truth values, $\sqrt{\text{bottle}}$, $\sqrt{\text{stable}}$ and $\sqrt{\text{carpet}}$ might be of type $\langle e, t \rangle$, (iv) in set theoretic terms, such predicates denote a set of individuals, and (v) semantically this set of entities share the property denoted by the noun (for example, the truth value might be fixed to be true when $\sqrt{\text{stable}}$ denotes a set of entities which semantically shares the property denoted by the noun *stable* and any entity has the property of a stable).

As far as I can judge from the examples seen in this paper, typically v_{take} combines with the root of type $\langle s_e, t \rangle$ and v_{put} (or v_{cover}) combines with that of type $\langle e, t \rangle$.

4 Inner Aspect Properties

Levinson (2007:23) points out the limitation of the attempt by Harley (2005) and Dowty (1979) to derive aktionsart properties of VPs

from the meaning of verbal roots. Let us apply this to root removal verbs and verbs of ‘taking’ and ‘putting.’

Implicit Removal Verbs show the following contrast when modification by temporal adverbs is used as a telicity test.

- (43) a. She dusted furniture for /?in a minute.
 b. She dusted all of furniture *for/in a minute.
- (44) a. She seeded the butternut *for/in a minute.
 b. She seeded all of the butternuts *for/in a minute.

According to these tests, implicit removal verbs with unbounded mass objects like furniture yield atelic sentences. With bounded objects, such as those in which amount restrictions like *all of* are added, the resulting sentence is telic. These tests shows that implicit removal verbs belong to ‘incremental theme’ verbs. As to these verbs, the telicity of the sentences they are embedded in depends on the boundedness of the theme (N.B. Levinson 2007:29).

‘Incremental theme’ verbs like *bottle*, *stable*, and *seed* (in the planting sense) (Location verbs) show the following telicity pattern (N.B. Harley 2005, Levinson 2007:29-30).

- (45) a. He stabled the horse #for 3 minutes/in three minutes.
 b. He put the horse in(to) a stable #for three minutes/in three minutes.
 c. He put the horse in the stables for 5 minutes/#in 5 minutes.
 d. He put horses in a stable for an hour/#in an hour.

5 Concluding Remarks and Remaining Problems

I tried to provide a compositional account for verbal lexical decomposition of English removal and placement verbs. I also indicated the necessity of the “dynamic” perspective. The focus was on a particular verb class, which I call “Root Removal Verbs (or Implicit Removal Verbs),” as illustrated by *seed*, *millk*, *dust* or *skin*.

Inspired by Levinson (2007, 2014) and from the perspective closest to Kajita’s (1977, 2004), I proposed that there is an inventory of ‘little’ *v* heads from basic to derived and that root removal and puting verbs involve ‘little’ *v*_{take} and *v*_{put} of removing/taking and putting events which emerge in the early stage of language acquisition.

Notes

- 1) Tuguro Nakamura (p.c.) points out the problems of how the children acquire a variety of phonetically null ‘little’ *v*’s and whether these *v*’s are language-particular or universal (in the latter case, whether Japanese has the same little *v*’s). Masahiro Akiyama (p.c.) notes that the subdivision of ‘little’ *v*’s might make lexical decomposition meaningless and that the generalization might not be captured if different adverbs go with different ‘little’ *v*’s.
- 2) In resultatives, resultative adjectives, not the object DPs, can be incorporated into verbs in some cases.
 - (i) “I have lost all faith in men,” said Ms. Myint Myint Than, who sat on a plastic stool impatiently wiggling her silver-painted toenails as her customers chatted away.

[International New York Times, Wednesday, November 20, 2013, p.1.]

And *whitewash* instantiates the lexicalization of the incorporation.

- (ii) a. Does a boy get a chance to whitewash a fence every day?

[Mark Twain. 1876. *The Adventures of Tom Sawyer*; Penguin Books, p.22.]

- b. “Say, Tom, let *me* whitewash a little.”

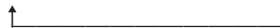
[Mark Twain. 1876. *The Adventures of Tom Sawyer*; Penguin Books, p.22.]

- c. When she found the fence whitewashed, and not only whitewashed but elaborately coated and recoated, and even a streak added to the ground, her astonishment was almost unspeakable.

[Mark Twain. 1876. *The Adventures of Tom Sawyer*; Penguin Books, p.25.]

In the following resultative, the result predicate (here, *silver*) is supposed to modify the object DP (here, *toenail*). However, the fact that the result predicate *silver* is incorporated into the verb *paint* might support the alternative analysis that the result predicate modifies *paint*, thus forming a “pseudo-resultative.” In addition, the resultative analyzed as a Small Clause might in fact be a loose combination (a fragment chunk) formed by Fragment Integration.

- (iii) She __ painted [_{Fragment} her toenails silver].



- (iv) All the siding was painted silver.

[Lee Child. 2010. *Worth Dying For*; Dell Books, New York, p. 9.]

- (v) a. All the siding was painted [_{Fragment} ~~<all the siding>~~ silver].

- b. All the siding was silver-painted <silver>.



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