

English Roots, Verbs and Events

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Introduction

In this article, I consider first the fact that unergative verbs derived from the roots like $\sqrt{\text{sneeze}}$ have the properties of creation verbs and propose an analysis assuming a basic 'little' v_{create} head (N.B. Levinson 2014). Next I argue that unergative verbs like *smile* and *nod* used in the gesture-expression construction (Levin and Rapoport (1988: 277)) or as nonverbal communication verbs (N.B. Omuro 1997) are also creation verbs and that little v_{create} or v_{express} heads (or 'express(ion)' is the subset of 'creation'), which introduce the object argument position, combine with roots like $\sqrt{\text{smile}}$ and $\sqrt{\text{nod}}$ (N.B. Levinson, 2014, p. 220). Furthermore, I will argue that double object construction like *take/cost* DP₁ DP₂ share syntactic/semantic properties with Japanese gapped passives, if we assume both involve low (source) applicatives that introduces a relation between two arguments, such that the first argument DP₁ ceases to be in the (literal/metaphorical) possession of that second argument DP₂ (Pylkkänen, 2008, p.75). I also propose that a 'little' $v_{\text{take/removal}}$ of the removing event combines with $\sqrt{\text{take/cost}}$. A conflation of v_{take} and $\sqrt{\text{cost}}$, proposed in this paper, is indirectly supported by Hopper's (2008) claim that the *take NP and ...* construction, an English emergent serial verb construction, without the *take* construction, yields the sentence which would compress the lexical arguments into a single clause. The compression might be construed as a conflation of a 'little' v and a root.

The model of grammar that I assume is closest to that proposed in Marantz's (1997) 'Distributed Morphology,' whose key claim is that words are built from

roots, which are neutral with respect to syntactic categories like noun and verb, and combine with a functional verbal element, a ‘little’ *v* or *n*. These roots are in the complement of that *v* or *n*. Note that *cost* and *sneeze* might be used as noun or verb. Levinson (2007, p. 19) rejects Clark and Clark’s (1979) classification of goal verbs like *braid* and *pile* as ‘denominal’ verbs on the ground that the directionality from nouns to verbs is not clear and argues that these verbs are derived from roots rather than nouns. Moreover, Levinson (2014, p. 212, p. 220) assumes the availability of different ‘flavors’ of *v* and that the *v* introduces the argument position for the object. But the subject is introduced by the functional projection *v*P (Keine 2013).

I add to this framework that the different ‘species’ of *v* correspond to the different kinds of event the arguments participate in, such as the putting event (*v_{put}*) and the taking/removal event (*v_{take/removal}*). Thus we diverge from Chomsky’s (1995, p. 315) position that “*v* is a light verb to which *V* overtly raises.”

I also propose that there is an inventory of *v* heads from basic to derived from the perspective closest to Kajita’s (1977, 2004) dynamic theory of syntax framework.

1. Unergative verbs as creation verbs

Unergative verbs like *sneeze* can be used as explicit creation verbs, exemplified in (1a) and (2).

- (1) a. “I bet your cow never sneezed a hole in the schoolhouse wall. Our cow did!” This begins is one of the funniest, fastest-paced, tallest-tale stories ever told! The fun mounts as absurdity cascades on absurdity, until at the very end one small boy ... (enchantedlionbooks.com/node/164)
- b. Olive blew a smoke ring into the air. (*The Sculptress*, p. 7)
- c. cf. Frances kicked the hole in the fence.
(Levin and Rapoport, 1988, p. 283)

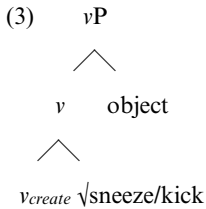
(2) In return for work well done, Harry is given a donkey that sneezes money.

When a wicked inn keeper tries to steal [the] donkey, Harry teaches him a lesson with the help of a magic stick. Based on Grimm’s tale.

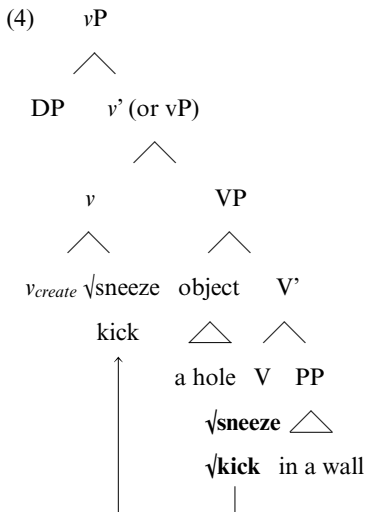
(books.google.com... *The Donkey That Sneezed*. Star Bright Book, 1998/10/01)

In these examples, the unergative verbs might be called “explicit creation verbs” because the object DP expresses the created object and the root provides a manner specification for the creation of that object (N.B. Levinson 2014, p. 219).

According to Marantz (2005) and Levinson (2014, p. 219), creation verbs have the following structure:

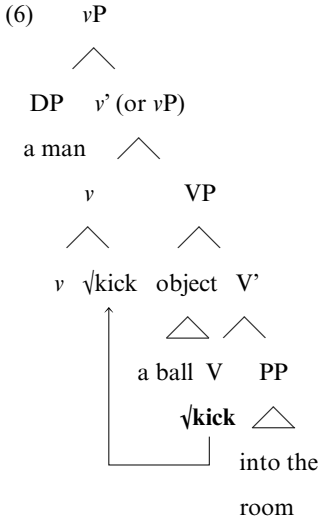


I propose that the syntactic structure assigned to the sentences of (1a, c) is as follows:



Except the different types of little *v*, the above structure is identical with the structure (6) assigned to the sentence (5) (cf. Richards, 2010, p. 14).

(5) A man kicked a ball into the room.



Next I argue that unergative verbs like *smile* and *nod* used in the ‘gesture-expression construction (Levin and Rapoport, 1988, p. 277)’ or used as ‘nonverbal communication verbs (N.B. Omuro, 1997)’ are also creation verbs and that little *v_{create}* or *v_{express}* heads (or ‘express(ion)’ is the subset of ‘creation’), which introduce the object argument position, combines with roots like $\sqrt{\text{smile}}$ and $\sqrt{\text{nod}}$ (N.B. Levinson, 2014, p. 220). That is, the object DPs (*her gratitude* and *his grave assent*) express the created (abstract) objects (with gestures) and the roots contribute a manner specification for the creation of the (abstract) object.

(7) a. The American coughed a response.

[Ian Rankin. 1997. *Black and Blue*, St. Martin’s Paperbacks, New York, p.136]

b. After a quick coffee, the girl smiled her gratitude and left.

[Frederic Forsyth. 2010. *The Cobra*, A Signet Book, New York, p.100]

c. Informed all of this, the minister nodded his grave assent and approval.

[Frederic Forsyth. 2010. *The Cobra*, A Signet Book, New York, p.143]

d. He saw Roz's surprise as she came into his room, and he frowned his irritation.

[Minette Walters. 1993. *The Sculptress*, St. Martin's Paperbacks, New York, p.28-29]

e. Rebus nodded, waved a general goodbye, and got out.

[Ian Rankin. 1997. *Black and Blue*, St. Martin's Paperbacks, New York, p.66]

Of course, it goes without saying that 'cough DP' is also used to express the meaning 'to force air or something out of your throat or lungs by coughing' as in 'to cough up ... her tiny organic invaders ("Who's in Charge Inside Your Head?" *NYT*, Web, 10/6/2012)', thus the interpretation depends on the choice of the type of DP argument.

Cognate object constructions like (8)-(9) resemble gesture-expression constructions on the surface, thus it might be possible to regard the cognate objects as the effected/created objects and the roots (in these examples, 'murmur' and 'cough') as contributing a manner specification for the effectuation/creation of those objects (cf. Omuro, 1990, p. 74).

(8) And then he began to wander up and down, wondering where it was and murmuring a murmur to himself.

[A. A. Milne. 1926. *Winnie-the-Pooh*, Ch. V, p.78]

(9) Cairo coughed a little apologetic cough and smiled nervously with lips that had lost some of their redness.

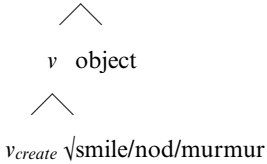
[Dashiell Mammet. 1926. *The Maltese Falcon*. Vintage Crime/Black Lizard Vintage Books: New York, p.45]

Note, in passing, that from the descriptive perspective in (8) the cognate object *murmur* is not modified by any adjective and the benefactive-like argument is

expressed by the dative (*to himself*).

Again I assume the structure (10) for cognate object constructions, in the spirit of Marantz (2005) and Levinson (2014, p. 219).

(10) vP



However, among the above three verbs (i.e., *smile*, *nod* and *murmur*) *smile* has not extended its use to the extent that it involves an applicative head in the sense of Pykkänen (2008), thus capable of forming a double object construction (cf. **The girl smiled him her gratitude.* and **He murmured him(self) a murmur.*).

2. Double Objects — the Properties Shared by Nonverbal Communication

Verbs and a Verb Take.

Unlike verbs like *smile*, verbs like *nod* license a double object construction. There is a direct object slot type *e* which combines with a complex v head ($v_{create} + \sqrt{\text{nod}}$) of type $\langle e, \langle s, t \rangle \rangle$, thus providing a site for inserting the APPL(icative) head, which introduces the relation that an effected/created argument (i.e., the object of the verb) comes to be in the possession of the benefactive-like argument as a consequence of the effectuation/creation event (cf. Levinson, 2014, p. 222).

(11) a. The host nodded me good-bye. (Double Objects)[Genius]

b. cf. He nodded a greeting. [Lee Child, *Tripwire*, Dell Books, 2011, p.479]

This line of approach diverges from the traditional grammar explanation that a cognate object ‘nod’ is omitted in constructions like ‘She nodded her consent.’ (cf. ‘She nodded (a nod of) her consent.’).

In addition, (semantic) predicates like ‘express/EXPRESS’ assumed in Levin and Rapoport’s (1988, p. 283) analysis of a cognate object through ‘lexical

subordination,’ as in (12), might also be analyzed as a ‘little’ *vcreate*.

(12) a. Fauline smiled her thanks.

smile₂: [x EXPRESS y BY [x DO ‘smile’]] (Levin and Rapoport 1988:283)

I propose that the inventory of (semantic) predicates of Levin and Rapoport (1988, p. 283), as shown in (13), can also be treated as different ‘species’ of *v* (except *go*), assuming that the *vexpress* is the subset of *vcreate*.

(13) a. *go*: The bottle floated into the cave.

b. create: Frances kicked the hole in the fence.

c. remove: The company processed the vitamins out of the food.

d. cause-state: Evelyn wiped the dishes dry.

e. cause-location: Philip waltzed Sally across the room.

f. express: Pauline smiled her thanks. (Levin and Rapoport, 1988, p. 283)

In other words, I argue that the inventory of semantic predicates (13) might be redefined so that they form ‘natural classes’ in light of different ‘little’ *v* heads.

The new inventory *v* heads which can serve as verb categorizers, with attested examples, is as shown in (14). Note that *Vgo* signifies the non-pronunciation counterpart of *go* in this context and can serve as a verb categorizer.

(14) a. *Vgo*: Boyd waltzed off – no nod, no wink, suspect dismissed.

[James Ellroy. 1995. American Tabloid, vintage Books, New York, p. 40]

b. *vput*: John seeded rye in a field.

c. *vtake*: Seed the butternut.

d. *vtake*: The company processed the vitamins out of the food.

e. *vtake*: John skined a fox.

f. *vtake*: Evelyn wiped the dishes dry.

(cf. Jimmy wiped blood from his eyes and kept swinging.

[James Ellroy. 1995. American tabloid, Vintage Books, New York, p. 62])

g. *vtake*: You print-wiped every surface... [ibid, p. 322]

h. *vaccompany*: Philip waltzed Sally across the room.

- i. v_{create} : Frances kicked the hole in the fence.
- j. v_{create} : I bet your cow never sneezed a hole in the schoolhouse wall.
- k. $v_{create/express}$: Pauline smiled her thanks.

(cf. Levin and Rapoport, 1988, p. 283)

‘Process’ originally means to ‘to perform a series of operations to change something’ but it denotes a taking/removing event in (14d) because ‘vitamine is taken out through a series of operations.’ I assume that v_{take} which might be spelled out as take introduces the argument positions for the object and the path.

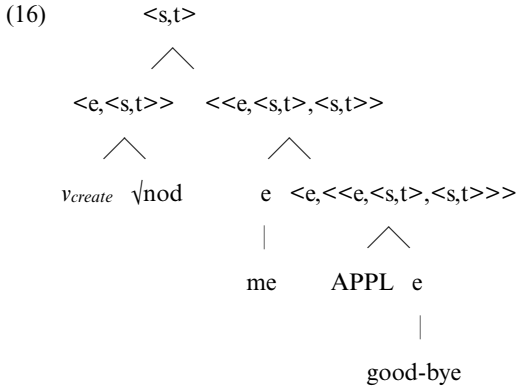
Wipe might be regarded as a change-of-state verb that ‘denote a change of state of the theme argument (N.B. Levinson, 2014, p.224),’ thus *wipe* might be regarded as $v_{cause-state}$. But the expression ‘wipe the dishes dry’ means to remove moisture or liquid from the dishes, and the thing to be removed (i.e., moisture) does not surface as an argument of the verb, thus I propose that *wipe* is a variety of ‘implicit removal verbs’ like *seed* and *skin*. Note also that in (14f) a resultative adjective *dry* modifies the theme, in this example ‘the dishes.’

In (14a) (intransitive) manner of motion verbs like *waltz* of ‘waltz off’ means ‘to move lightly’ and are a member of ‘go.’ I assume a covert verb ‘ \sqrt{go} ’ combines with ‘waltz’ as a verb categorizer. On the other hand, ‘waltz’ as a transitive verb means that Philip ‘accompanies’ Sally across the room while dancing, thus a functional element $v_{accompany}$ is conflated with \sqrt{waltz} to join syntactic categories like ‘verb.’

Each verb in (14b-k) is a variety of v_{put} of the putting event and v_{take} of the taking /removal event, but they form a ‘natural class’ under each ‘little’ v .

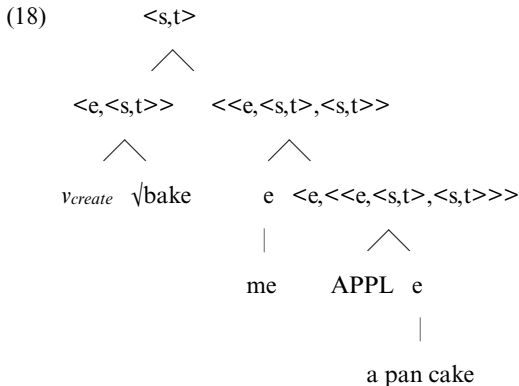
Semantically \sqrt{nod} is of type $\langle s_e, t \rangle$, a predicate of events, and combines with the v_{create} via Event Identificaitin (Kratzer 1966). I propose the composition of *nod* as a creation verb in (11a) is as follows:

- (15) The host nodded me good-bye. (‘implicit’ creation - *good-bye* is the creation/ expression)



Thus, we can capture the properties shared by creation verbs and nonverbal communication verbs like *nod* in licensing a site for an APPL head in a double object construction.

(17) The host baked me a pan cake. ('explicit' creation – "a pan cake" is the creation/expression)



(N.B. Levinson, 2014, p. 222)

Given the fact that *nod* can be used in the structure 'give the nod (= consent)' and the double object construction like 'give Object a nod (e.g. give him a nod),' the similarity between *nod* and *bake* is obvious in that they can encode either an intended transfer of possession associated with the event introduced by the verb

or benefactive-like reading encoding an intended result of possession.

As an alternative, one might assume $v_{express}$ as the subset of v_{create} . But I leave this to future research.

(19) [VP [v v_{create} $\sqrt{\text{sneeze/kick}}$] [VP [DP a hole] [v' [v <~~sneeze/kick~~>] [PP in a hole]]]]

(20) [VP [v $v_{create} \supseteq \text{express}$ $\sqrt{\text{smile/nod/murmur}}$] [cognate object]] ($v_{express}$ is a subset of v_{create})

Furthermore, while a verb ‘grudge’ means ‘to give (something unwillingly)’ and can occur in double object constructions like ‘My father grudged me money,’ it also has a usage like (21), where either v_{create} or $v_{express}$ is involved.

(21) He got it and grudged a frowning smile, the first time Rebus had seen the trick. [H.G. grudge here means “to give something unwillingly.”]
[Ian Rankin. 1997. *Black and Blue*, St. Martin’s Paperbaks, New York, p. 165]

Finally, I propose that double object constructions like ‘take/cost DP₁ DP₂’ provide a site for inserting (Low) source applicative head, as in Pylkkänen (2008, p. 75), that introduces a relation between two arguments, such that the first argument DP₁ ceases to be in the (literal/metaphorical) possession of the second argument DP₂. And I argue that this enable us to capture properties shared by ‘take/cost DP₁ DP₂’ and Japanese gapped passives, which Pylkkänen (2008, p. 68) considers to be a low source applicative. For example, in (22) the (Low-) APPL(ICATIVE) head takes ‘me’ and ‘\$3 million’ as the arguments and relate ‘me’ to ‘\$3 million’ and state that the direct object ‘\$3 million’ is (taken away) from the possession of ‘me.’

(22) a. The house cost you \$3 million.

b. “Spending hard-earned money on a folly. Why, it must have cost you three million dollars—”

[Ray Bradbury. 1950. *The Martian Chronicles*, Simon & Schuster Paperbacks, New York, p. 142]

In (23a) the *Low-Apppl_{From}* head relate the two arguments, namely ‘more than

thirty seconds (which is precious time)’ and ‘him,’ to the effect that the former is taken away from the possession of the latter. The example (23b) involves *v_{take}* of the removal event because (23b) would mean that ‘profits are gone.’

- (23) a. The lock on Holly’s door was new. But cheap. He worked quietly, which delayed him. Took him more than thirty seconds before the last tumbler clicked back. [Lee Child. 1998. *Die Trying*, Jove Books: New York, p. 403]
- b. He’s got Santo T. in custody down there, and he’s costing us hundreds of thousands a day. [James Elroy. 1995. *American Tabloid*, Vintage Books, New York, p. 141]

Note that when CP follows ‘*take/cost* DP₁ DP₂,’ as in (24), the construction shows similarity to *tough*-construction as the object DP is the incremental theme (or rather the ‘scalar theme’). Kajita (1977, p. 68) notes that ‘object raising’ (*tough*-movement) is applied to verb phrases like *require* DP but this is another story (cf. Rosenbaum 1967).

- (24) Well, Mister Way up in the Middle of the Air, you get the hell home and work out that fifty bucks you owe me! Take you two month to do that. [Ray Bradbury. 1950. *The Martian Chronicles*, Simon & Schuster Paperbacks, New York, p. 125]

After relating these two arguments, the low applicative head takes an eventive verbal head as another argument, relating the arguments to that event. Formally, the APPL head takes two individuals before combining with the constituent of type $\langle e, \langle s, t \rangle \rangle$.

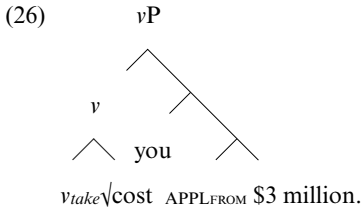
- (25) Low-*Appl*_{From} (source applicative):

$$\lambda x. \lambda y. \lambda f \langle e, \langle s, t \rangle \rangle. \lambda e. f(e, x) \& \text{from-the-possession}(x, y)$$

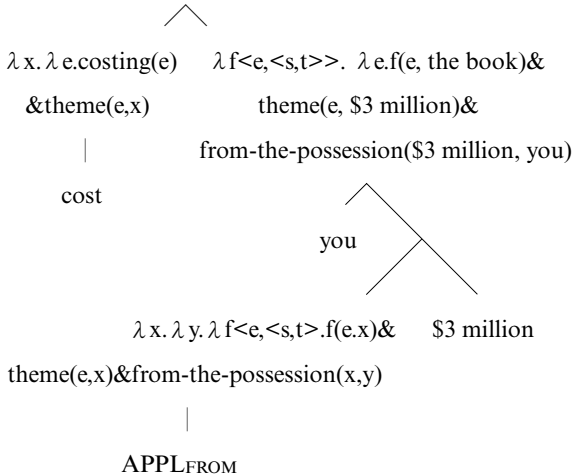
(Pylkkänen 2008, p. 75)

Therefore, I provide the following analysis of the sentence (22a) (setting aside a conflation of the voice head and external argument for the current purposes). The root combines with a *v_{take}* head, then the resultant constituent *v_{take}*+√take as an

argument combines with Low- APPL_{FROM} which take the DP objects (you, \$3.00).



- (27) $\lambda e.\text{costing}(e)\&(\text{incremental})\text{ theme}(e, \$3\text{ million})\&$
 from-the-possession (\$3 million, you)



The structure of English double object constructions with *take/cost* as a main verb is identical with that of Japanese gapped passives (apart from the difference of the basic word order of the two languages; English being SVO and Japanese SOV).

Pylkkänen (2008, pp. 67-68) associates a Japanese gapped passive with the following (partial) structure indicated in (28a,b).

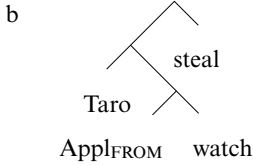
- (28) Gapped passive as a low source applicative

a. Taro-ga dorobou-ni tokei-o to-rare-ta.

Taro-NOM thief-DAT watch-ACC steal-PASS-PAST

‘Taro was affected by the thief stealing his watch.’

(Pylkkänen, 2008, 68, slightly modified)



(Pylkkänen, 2008, p. 68, slightly modified)

In conclusion, double object constructions like ‘*take* *cost* DP₁ DP₂’ provide further support to my claim that little *v_{take}* is involved in the taking event.

3. Hopper’s (2008) *take NP and ... construction and compression*

My proposal that *v_{take}* is combined with the roots like $\sqrt{\text{seed}}$ in (14c-g) is further supported by Hooper’s (2008, p. 262) claim that the *take NP and* construction (29a), which Hopper (2008) consider to be ‘emergent serialization in English,’ would compress into a single clause (29b) without the *take* construction. Theoretically speaking, ‘compression’ is restated in terms of a conflation of roots like *cost* and ‘little’ *v_{take}*, which might be spelled out as an overt light verb in the case of the *take NP and* construction.

(29) a. This test ... will take national standards and move them down into the classroom. (CSPAЕ) (Hopper 2008:261)

b. This test will move national standards down into the classroom. (CSPAЕ) (Hopper 2008:262)

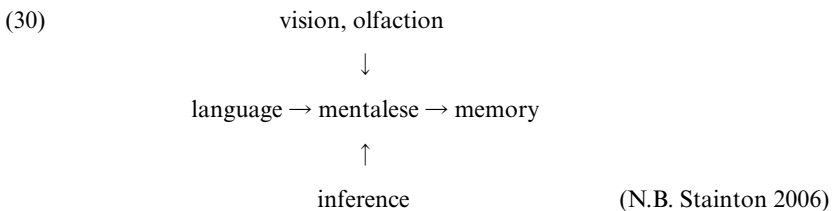
Note that Hopper’s (2008) notion compression is ‘syntactic’ in contrast with Fauconnier and Turner’s (2002) ‘conceptual’ compression. According to Hopper (2008, p. 261), the canonical *take NP and* construction is such that the first clause involves *take* and the object which is resumed anaphorically by a pronoun in the second clause and the transitive verb of the second verb refers back to *take* in the

first clause, followed by adverbial elements like *into DP*.

4. An Interface between Language and the Real World

In this article, I have employed the representation of formal semantics because it takes into consideration the interface with the (real) world, thus compatible with Stainton's (2006) *mentalese*. Croft (2012, p. 17, fn.5) also notes that Jackendoff (1991) is concerned solely with the already-constructed linguistic semantic representation, and is not concerned with the relationship between that representation and the "real world." But Croft (*ibid.*) states that the linguistic semantic representation is used for all types of cognition, not just language.

I do not adopt Croft's (2012) three-dimensional model but I follow the same direction as Croft does in that I concern myself with the linguistic representation and the real world. I assume the model closest to that presented in Stainton (2006). Stainton (2006, p. 43, p. 160, p. 177ff.) states that faculties of various kinds, including one for language and at least one for integrating mental representations from various sources, namely perceptual faculty (e.g. vision), memory, or inference – these are translated into *Mentalese* representations. These *Mentalese* translations are sent to the central system that can integrate information from various domain specific faculties (Stainton 2006, p. 43, p. 160).



Stainton (2006, p. 167) also argues that 'Mentalese is a language of thought, with compositional syntax and semantics – but no phonology.' Consider the sentence (31a) describing the taking/removal event, in which the 'compressed' information is supplied in *Mentalese* beyond the compositional semantics

obtained from the conflation of *v_{take}* with the root and fragment integration of [Fragment Chunk the pennies off a dead man's eyes].

(31) a. One look at him, and I knew that he would take the pennies off a dead man's eyes. [Little Women, the shooting script, p. 40]

b. Shoot the wings off the flier. [Wanted.]

c. cf. The most favoured method was to shoot the top off the stem, and sting with it.

[John Wyndam. 1951. *The Day of the Triffids*, Penguin Books, London, p. 33]

(31b) implies that the sniper has the ability of hitting the most difficult target. Emotion such as amazement and the meaning of achieving a difficult task are added to this sentence (N.B. Fauconnier and Turner, 2006, p. 362).

(32) a. And on the walls were shadows with no people to throw them, and here and there mirrors in which no image showed. "All of us vampires!" laughed Mr. Fletcher. "Dead!"

[Ray Bradbury. 1945. *The Martian Chronicles*, Simon & Schuster Paperbacks, p. 150]

b. And a second Miss Drummond, shrieking, was nailed into a coffin and thrust into the raw earth under the floor.

[Ray Bradbury. 1945. *The Martian Chronicles*, Simon & Schuster Paperbacks, p. 153]

'Nail' in (32b) is an instance of the "putting" event, to be supplemented with the pragmatic meaning or background that the vampire does not die unless you drive a stake into its heart.

5. Concluding Remarks

I first argued that unergative verbs used as creation verbs involve a basic 'little' *v_{create}* head (N.B. Levinson, 2014). Then I argued that unergative verbs like

smile and *nod* used in the gesture-expression construction are also creation verbs. Finally, I showed that double object constructions like *take/cost* DP₁ DP₂ share syntactic/semantic properties with Japanese gapped passives, assuming that both involve low (source) applicatives as in Pykkänen (2008, p. 75).

In addition to the different ‘flavors’ of *v* which Levinson (2014) assumes, I argued that it is necessary to assume that a ‘little’ *v* not only introduces an object argument position into a syntactic structure but also introduces the kind of event which involves an agent and a patient. I also proposed the availability of different ‘species’ of *v* from basic to derived from the perspective closest to Kajita’s (1977, 2004) ‘dynamic theory of syntax’ framework.

Ac knowledge

Many of the ideas presented in this paper are inspired by a series of lectures at TEC given by Masaru Kajita (an emeritus professor of Sophia University; a former associate professor of Tokyo Gakugei Daigaku University).

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