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A New Type of Secondary Predicate Construction in English

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ABSTRACT

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This paper argues that secondary predicate constructions of a kind (e.g., *Mary built a house big*) share some properties with either resultative or depictive constructions, but at the same time they have a property that resultative and depictive constructions do not possess. This set of grammatical properties suggests that the secondary predicate constructions (called *build-big* construction in this paper) should belong to a subcategory of both resultative and depictive constructions in the classification of secondary predicate constructions. That is, secondary predicate constructions are not simply divided into resultative and depictive constructions. This is further supported with pseudo-resultative constructions (e.g., *Mary braided her hair tight*) since they also have some properties that are shared with typical resultative or depictive constructions.

KEYWORDS

secondary predicate, resultative, depictive, *build-big* construction, pseudo-resultative, multiple inheritance

1. Introduction

Secondary predicates in English can serve as a resultative secondary predicate as in (1a) or a depictive secondary predicate as in (1b) (the secondary predicates are in boldface and their understood subjects are underlined in the data).

(1) a. Bill hammered the metal **flat**.
b. Tom ate the fish **raw**.

The sentence (1a) is a typical resultative construction: it means that Bill's action of hammering the metal caused it to become flat. The resultative predicate *flat* describes the result state involved in the causation denoted by the sentence (see discussions of resultative constructions in Simpson 1983, Washio 1997, Malka Rappaport Hovav and Levin 2001, Goldberg and Jackendoff 2004, Wechsler 2005, Boas 2003, Beavers 2010, Levinson 2010, *inter alia*). By contrast, (1b) is a typical depictive construction: it means that the fish was raw when Tom ate it. The depictive predicate *raw* does not describe any result state; it is implausible to say that Bill made the fish raw by eating it or Bill's action of eating the fish caused it to become raw (see discussions of depictive constructions in Cormack and Smith 1999, Müller 2004, 2008, Simpson 2005, Himmelmann and Schultze-Berndt 2006, among others). Although the two constructions look alike, they basically belong to the two different categories. There are several types of resultative and depictive constructions, and they are one of the most discussed topics in the linguistics literature. However, sentences like (2) below have been rarely studied in the literature to my best knowledge even though they just look like resultative and depictive constructions. For example, Boas (2003) provides a comprehensive classification of English resultative constructions extracted from the BNC (British National Corpus),[1] but sentences like (2) are not reported in the study.

(2) a. Mary built a house **big**.
b. Mary drilled a hole **deep**.
c. Mary brewed the coffee **strong**.

The sentences in (2) appear to have the same structure as that of typical resultative and depictive constructions: roughly, [NP + V + NP + AP]. In addition, the underlined objects in (2) serve as the understood subjects of the secondary predicates in boldface just like resultative and depictive constructions. More specifically, (2a) entails that a house is big, (2b) entails that a hole is deep, and (2c) entails that the coffee is strong. These basic commonalities between (1) and (2) suggest that they all belong to a broad category (namely, secondary predicate construction). Then the next question we can ask is whether the sentences in (2) (which are called *build-big* construction for convenience in this paper) are resultative construction or depictive construction. At first glance, they look more like resultative construction since something is created in the meanings of the sentences in (2) and resultative constructions also describe an event in which an action causes an entity to have a property (result state); they both describe a causation. I show in this paper, however, that the sentences in (2) have some properties shared by either resultative or depictive construction as well as a property that is not shared by either of them. In other words, we can say that the *build-big* constructions are somewhere in between resultative and depictive

[1] The British National Corpus (BNC) "contains 100 million words of text from a wide range of genres (e.g., spoken, fiction, magazines, newspapers, and academic)." (https://www.english-corpora.org/bnc/)

constructions. Similarly, Kearns (2007) assumes that the following sentence *He dug the hole deep* is not a typical resultative sentence. Based on the set of the grammatical properties, I argue then that the sentences in (2) (the *build-big* constructions) should belong to a subcategory of both resultative and depictive constructions; secondary predicate constructions are not simply divided into resultative and depictive constructions. An empirical contribution of this study is the presentation of corpus data of sentences like (2). A theoretical contribution is the introduction of a new category in the classification of secondary predicate constructions: that is, we have something that belongs to neither typical resultative nor typical depictive constructions.

The rest of this paper is organized as follows. In section 2, corpus data of *build-big* constructions is presented to show that they are actually used. In section 3, five grammatical properties of resultative and depictive constructions are examined and compared with *build-big* constructions. Then with respect to the five properties, pseudo-resultative constructions (e.g., *Mary braided her hair tight*) are compared and contrasted with *build-big* constructions in section 4. Section 5 concludes the paper.

2. Corpus Data

Before the main issue of this paper is discussed in section 3, I present here some corpus data of the secondary predicate constructions under discussion. First, we can see in (3) that *build-big* constructions are found in the Web.

(3) a. And I carved a hole **big** enough.
(https://www.bruwriter.com/the-little-green-penguin.html)

b. ... and they carved a ship **big** enough for fifty penguins.
(https://www.bruwriter.com/the-little-green-penguin.html)

c. It's a consequence of having invented a technology **powerful** enough to alter an entire species.
(https://www.media.mit.edu/articles/gene-drives-could-stop-the-world-s-oldest-problems-kevin-esvelt-wants-to-make-sure-they-don-t-start-any/)

d. Only when you have digged a hole **deep** enough for Shihong that would make his escape impossible, you should contact me.
(https://www.wuxiaworld.co/LEGEND-OF-THE-GOLDEN-TIGRESS/1939972.html)

e. I brewed the coffee **strong**, the way I like it in order to get the full flavor of the coffee and to see if it had a bitter flavor to it.
(https://www.walmart.com/reviews/product/23555013?reviews_limit=10&reviewId=56944877)

The *build-big* constructions in (3) can be classified into two types according to whether *enough* follows the secondary predicates in the constructions. For instance, (3a) (*And I carved a hole big enough*) and (3b) (*... and they carved a ship big enough for fifty penguins*) contain an *enough*-expression, but (3e) (*I brewed the coffee strong, the way …*) does not have *enough* after the secondary predicate. The *enough*-expression specifies the degree of the secondary predicate. For example, the secondary predicate *big* in (3b) itself involves an open scale (a source of atelicity), but *enough for fifty penguins* following the secondary predicate specifies a certain point on the scale involved in the secondary predicate, and this point contributes to making the predicate telic. If such an *enough*-expression was not in the sentences, the utterance context would do the same job. In short, we can find real uses

of *build-big* constructions in a corpus whether they include an *enough*-expression or not.

The *build-big* constructions are also found in a different corpus, the COCA (Corpus of Contemporary American English):[2]

(4) a. ? Garfield: I don't think they've ever baked a cake **big** enough. I love to get cake-faced on my birthdays.
b. When setting concrete pier forms in the ground, dig the holes **large** enough to allow room for side-to-side adjustment.
c. They haven't invented the hat **big** enough to pull that rabbit out of
d. I design illusions and construct the apparatus **necessary** for perfoming them.
e. Brew the coffee **strong** please.
f. ... and she figures they must be baking the pie **fresh**, because it's taking forever.
g. ... an English man who was building the buggies **cheaper** than anyone else.

The sentences in (4) can also be divided into the two types depending on whether an *enough*-expression follows the secondary predicates. Note that in (4d), the PP (*for performing them*) should be part of the AP headed by *necessary*; more specifically, the PP should be complement of *necessary*. Likewise, in (4g) the *than*-expression (*than anyone else*) should be complement of *cheaper*, and so it is part of the AP headed by *cheaper*. In short, both (4d) and (4g) belong to the type of *build-big* constructions without an *enough*-expression following the secondary predicates.

More examples are given in (5): they are extracted from iWeb:[3]

(5) a. Dig a hole **larger and deeper** than the container, add a handful of bonemeal and some rotted manure and mix into the soil.
b. Dig a hole **large** enough to hold the plants root system.
c. Use a trowel to dig a hole **big** enough to accommodate the roots of the plant.
d. Mourinho is likely to make multiple defensive signings this summer as he looks to build a squad **capable** of challenging for the Premier League title.

Again, the *than*-expression (*than the container*) in (5a) and the PP (*of challenging for the Premier League title*) in (5d) should be part of the APs.

Based on the data given above, the basic components of the predicates of *build-big* constructions can be represented like the following:

(6) a. V NP AP
b. V NP AP *enough* …

[2] "The corpus contains more than one billion words of text (25+ million words each year 1990-2019) from eight genres: spoken, fiction, popular magazines, newspapers, academic texts, and (with the update in March 2020): TV and Movies subtitles, blogs, and other web pages." (https://www.english-corpora.org/coca/)

[3] The iWeb includes "14 billion words (about 14 times the size of COCA) in 22 million web pages." (https://www.english-corpora.org/iweb/)

The words used in the *build-big* constructions are summarized in (7).

(7) a. V: *drill, carve, dig, build, invent, brew, bake, construct* (creation verbs)
b. NP: *a hole, a house, a ship, a technology, the coffee, a cake, the holes, the hat, the apparatus, the pie, the buggies, a squad* (products)
c. AP: *deep, big, powerful, strong, large, necessary, fresh, cheaper, larger and deeper, large, capable* (states)

The set of sentences presented in this section is just a fraction of *build-big* constructions in corpora. Thus there may be more types of *build-big* constructions. Nonetheless, the given data appears to be enough to show that they are actually used in English. In this paper I focus on the *build-big* constructions in (2) and discuss what properties they have in relation to typical resultative and depictive constructions.

3. Grammatical Properties

In this section, I discuss five grammatical properties of typical resultative and depictive constructions so as to compare them with properties of *build-big* constructions. It is shown here that *build-big* constructions share some properties with either resultative or depictive constructions, but at the same time they have a property that resultative and depictive constructions do not possess.

3.1 Entailment of Change of State

An important property of resultative constructions is that they involve a change of state denoted by the secondary predicate. Consider the following resultative constructions and their entailments:

(8) a. Bill hammered the metal **flat**. ⇒ The metal became flat.
b. Bill wiped the table **clean**. ⇒ The table became clean.

If the resultative sentences in (8) are true, then the following sentences are also true. Without the truth of the second sentences, the first sentences cannot be true. For instance, the resultative sentence in (8b) means that as a result of Bill's wiping the table, it became clean. In other words, the table was not clean at the beginning of the wiping event, but it was clean at the end of the event.

By contrast, secondary predicates of depictive constructions do not denote a change of state. Consider the depictive constructions in the following:

(9) a. Tom ate the fish **raw**. ⇏ The fish became raw.
b. Tom ate the fish **hungry**. ⇏ Tom became hungry.

In (9) the first sentences do not entail the second sentences. Even if the second sentences are assumed to be false, the first sentences can be true. The secondary predicate of a depictive construction describes a state of the

understood subject that holds at a certain point (or duration) in the event described by the main predicate. For instance, in (9a) the fish was raw when Tom ate it: the sentence does not mean that the fish became raw by eating it. Similarly, in (9b) the depictive sentence does not mean that Tom became hungry by eating the fish. Tom was hungry when he ate the fish. No change of state is described by the secondary predicates of depictive constructions.

Now, with the clear contrast between the resultative and depictive constructions, we examine *build-big* constructions below; does the secondary predicates of *build-big* constructions denote a change of state? Consider the following examples:

(10) a. He drilled a hole **deep**. ↛ A hole became deep.
b. He built a house **big**. ↛ A house became big.
c. He brewed the coffee **strong**. ↛ The coffee became strong.

As illustrated in (10), the first sentences (*build-big* constructions) do not entail the second sentences. This non-entailment suggests that the secondary predicates of *build-big* constructions do not denote a change of state; rather, they describe a state that holds at a certain point in the event described by the main predicate. For example, the first sentence in (10b) does not mean that a house was not big at the beginning of the building event, but it was big at the end of the event. Then we can say that the *build-big* constructions share the important grammatical property with depictive constructions, rather than resultative constructions.

Note, however, that change of state entailment like those in (8) is not found in some intransitive resultative constructions. An example is given in (11).

(11) The ice froze **solid**. ↛ The ice became solid.

When the second sentence in (11) is false, the first sentence can be true. One may argue then that *build-big* constructions are not necessarily more like depictive constructions with respect to the change of state entailment. But we can see that a change of state is involved in (11) despite the non-entailment. The intransitive resultative sentence in (11) means that an entity was not solid at the beginning of the freezing event, but it was solid at the end of the event. The entity can be called *water* or *ice* depending on a certain physical property (or state) of it. That is, the state of the entity changed in the meaning of the resultative sentence: *The ice froze solid* entails *An entity became solid*. Then, we can reasonably say that the secondary predicates of *build-big* and depictive constructions do not denote a change of state, unlike resultative constructions whether they contain a transitive or intransitive verb.

3.2 Displacement of Secondary Predicates

The secondary predicates appear after their understood subjects in both resultative and depictive constructions. If the secondary predicate is displaced to a different position in a resultative construction as shown in (12), then the resulting sentence does not have the same meaning as the original resultative sentence:

(12) a. Bill hammered the metal **flat**. ≠ Bill hammered the flat metal.
b. Bill wiped the table **clean**. ≠ Bill wiped the clean table.

In (12a) the second sentence *Bill hammered the flat metal* can have the non-resultative meaning that the flat metal had existed and Bill hammered it. This interpretation is not available for the resultative sentence in (12a). Similarly, in (12b) the secondary predicate *clean* is displaced to the prenominal position in the second sentence, and this sentence is not a resultative construction anymore; no change of state is entailed in the sentence since the verb *wipe* is an activity verb, and the adjective *clean* in the NP can describe a state of the table when Bill wiped it.

By contrast, even if the secondary predicate of a depictive construction is displaced to a different position in the sentence, the meaning of the resulting sentence seems to be identical to that of the original depictive construction. Consider the following examples:

(13) a. Tom ate the fish **raw**. = Tom ate the raw fish.
b. Tom ate the fish **hungry**. = Tom, who was hungry, ate the fish.

The first sentence in (13a) describes the state of the fish being raw when Tom ate it, and this interpretation is also expressed in the second sentence in (13a). In the second sentence of (13b), the adjective *hungry* is part of the non-restrictive relative clause. Nonetheless, the two sentences in (13b) appear to have the same meaning: Tom was hungry when he ate the fish.

We can see in the following examples that *build-big* constructions behave similarly to depictive constructions with respect to the displacement of secondary predicate. If the secondary predicate of a *build-big* construction is displaced to the prenominal position of the understood subject, the resulting sentence has the same meaning as the original *build-big* construction:

(14) a. Mary drilled a hole **deep**. = Mary drilled a deep hole.
b. Mary built a house **big**. = Mary built a big house.
c. Mary brewed the coffee **strong**. = Mary brewed the strong coffee.

Note that the verb *drill* can be used not as a creation verb: the object of it can be material rather than a product (e.g., *Mary drilled the ground*). Assuming that *drill* in (14a) is a creation verb in both the sentences, we can say that the two sentences have the same meaning: a deep hole was created by drilling. The other two *build-big* constructions in (14) display the same property. In short, *build-big* constructions share another grammatical property with depictive constructions.

3.3 Aspect of Secondary Predicates

A third grammatical property of the secondary predicate constructions is related to the question about when the state denoted by the secondary predicate holds in the event described by a secondary predicate construction. First, consider the following resultative sentences:

(15) a. Bill hammered the metal **flat**.
⇒ The metal was flat at the end of the event, but not at the beginning of the event.
(The metal was flat only at the end of the hammering event.)

b. Bill wiped the table **clean**.
⇒ The table was clean at the end of the event, but not at the beginning of the event.
(The table was clean only at the end of the wiping event.)

The secondary predicate of a resultative sentence denotes a result state: it holds only at the end of the event denoted by the main predicate of the sentence. This property is related to change of state involved in resultative construction discussed above; a change of state entails that the result state holds not at the beginning of the evet, but at the end of the event. Then, the property regarding when the state of the secondary predicate holds may not be important for resultative constructions. But depictive constructions do not entail a change of state, and the non-entailment of a change of state does not specify exactly when the state of the secondary predicate holds in the event described by a depictive construction.

It seems that the secondary predicate of a depictive construction describes a state that holds at the beginning of the event described by the construction:

(16) a. Tom ate the fish **raw**. ⇒ The fish was raw when Tom started eating it.

b. Tom ate the fish **hungry**. ⇒ Tom was hungry when Tom started eating the fish.

In (16a), when Tom started eating the fish, it was raw; it is hard to imagine that the state of the fish being raw changes at the end of the event. Thus, the state of the secondary predicate in (16a) seems to hold during the whole eating event. But in (16b), when Tom started eating the fish, Tom was hungry, and it is likely that he was not hungry anymore at the end of the eating event. That is, the state of the secondary predicate does not necessarily hold at the end of the event in (16b). This leads to the conclusion that the state of the secondary predicate of a depictive construction necessarily holds at the beginning of the event, but it is at the end of the event that the state of the secondary predicate of a resultative construction holds.

Now, consider the following *build-big* constructions. The state described by the secondary predicate of a *build-big* construction holds only at the end of the event:

(17) a. He drilled a hole **deep**.
⇒ A hole is deep only at the end of the drilling event.

b. He built a house **big**.
⇒ A house is big only at the end of the building event.

c. He brewed the coffee **strong**.
⇒ The coffee is strong only at the end of the brewing event.

For instance, in (17a) the state of a hole being deep holds only after the hole is created, and the hole is created at the end of the drilling event. That is, the state of the secondary predicate holds only at the end of the event in *build-big* constructions. In this respect, they parallel resultative constructions.

3.4 Creation of an Entity or a New Property

With resultative constructions like those in (18), we can say that something with a new property came to exist:

(18) a. Bill hammered the metal **flat**.
⇒ The flat metal came to exist.
(The flat metal existed only at the end of the hammering event)
b. Bill wiped the table **clean.**
⇒ The clean table came to exist.
(The clean table existed only at the end of the wiping event)

In the resultative sentence (18a) the flat metal was created, and in (18b) the clean table was created. The metal had already exited when Bill started hammering it, but the metal was not flat at that time. The metal became to have a new property (the state of being flat); the flat metal came to exist. Similarly, in (18b) the clean table came to exist.

By contrast, nothing is created in depictive constructions, as illustrated in the following:

(19) a. Tom ate the fish **raw**. ⇏ The raw fish came to exist.
b. Tom ate the fish **hungry**. ⇏ Tom, who was hungry, came to exist.

It is not that the raw fish was created in the meaning of the depictive sentence in (19a). Similarly, it is not that Tom, who was hungry, came to exist in the depictive sentence in (19b).

We can see from the following examples that *build-big* constructions behave similarly to resultative constructions:

(20) a. Mary drilled a hole **deep**. ⇒ A deep hole came to exist.
b. Mary built a house **big**. ⇒ A big house came to exist.
c. Mary brewed the coffee **strong**. ⇒ The strong coffee came to exist.

At the end of the event described by the *build-big* construction in (20a), a deep hole is created. Similarly, something is created in the other *build-big* constructions. Hence, we can say that they parallel resultative constructions in terms of creation of an entity having the property of the secondary predicate. Note, however, that it is the new property of the secondary predicate that came to exist in resultative constructions, but in *build-big* constructions the combination of an entity and a new property came to exist. This difference is related to the existence of the understood subject, which is further discussed below.

3.5 Existence of the Understood Subject

The understood subjects of resultative constructions (e.g., the underlined objects in (21)) exist during the events described by the constructions:

(21) a. Bill hammered the metal **flat**. ⇒ The metal existed during the hammering event.

b. Bill wiped the table **clean.** ⇒ The table existed during the wiping event.

In (21a) Bill had the metal while he hammered it, and in (21b) the table existed while he wiped it.

Similarly, the understood subjects in depictive constructions seem to exist while the referents of the grammatical subjects perform the actions of the verbs. This is illustrated in (22).

(22) a. Tom ate the fish **raw**. ⇒ The fish existed during the eating event.

b. Tom ate the fish **hungry**. ⇒ Tom existed during the eating event.

Note, however, that (22a) can be used to describe a situation in which the fish was or was not completely consumed at the end of the eating event. (22b) can also describe a situation in which Tom was or was not hungry at the end of the eating event. We can say then that the existence of the understood subject in a depictive construction is not entailed at the end of the event, but it is entailed at the beginning of the event. Summarizing, both resultative and depictive constructions involve an existing entity (that a secondary predicate is predicated of) at the beginning of the events denoted by the main predicates of the constructions.

In contrast, a *build-big* construction involves an entity that does not exist at the beginning of the event, but exist at the end of the event. The understood subject underlined in the *build-big* constructions in (23) are created in the meanings of the sentences.

(23) a. Mary drilled a hole **deep**. ⇏ The hole existed during the drilling event.

b. Mary built a house **big**. ⇏ The house existed during the building event.

c. Mary brewed the coffee **strong**. ⇏ The coffee existed during the brewing event.

In this respect, *build-big* constructions are unlike resultative and depictive constructions.

However, the intransitive resultative construction in (24) does not entail the existence of the understood subject during the event described by the construction.

(24) The ice froze **solid**. ⇏ The ice existed during the freezing event.

Then one may argue that *build-big* constructions are similar to a certain type of resultative construction (i.e., intransitive resultative construction). But note that in (24) an entity existed during the freezing event; the entity can be referred to as *ice* or *water* according to a certain physical property of it. By contrast, *a hole* in (23a) is a hole whether it be deep or not, *a house* in (23b) is a house whether it be big or not, and *the coffee* in (23c) is coffee whether it be strong or not. In other words, a new entity is created in (23), but it seems not to be the case that in (24) a new entity come to exist. Rather, the state of the existing entity changes in (24). Then we can say that *build-big* constructions have a property (creation of a new entity) that is not shared with typical resultative or depictive constructions.

4. Pseudo-Resultative Construction

I have argued above that *build-big* constructions share some grammatical properties with resultative constructions and some other properties with depictive constructions. In this section I show that pseudo-resultative construction (Levinson 2010) is similar to *build-big* construction, but at the same time they have a different property. Consider the following examples of pseudo-resultative constructions:

(25) a. Mary braided her hair **tight**.
b. Mary piled her cushions **high**.
c. Mary sliced the bread **thin**.

An important property of pseudo-resultative predicates is that their understood subjects do not appear in the syntax. For instance, in (25a) the secondary predicate *tight* is not predicated of the object *her hair*: the sentence (25a) does not mean that tight hair came to exist. Instead, the secondary predicate modifies the root of the verb (Levinson 2010): tight braid came to exist in (25a). The main verbs of pseudo-resultative constructions are creation verbs (e.g., *braid*, *pile*, and *slice*) like *build-big* constructions. In this section, pseudo-resultative constructions are examined with respect to the five grammatical properties of the secondary predicate constructions discussed above.

First, no change of state is involved in pseudo-resultative constructions; the secondary predicates do not denote a change of state. This is illustrated in (26).

(26) a. Mary braided her hair **tight**. ↛ A braid became tight.
b. Mary piled her cushions **high**. ↛ A pile became high.
c. Mary sliced the bread **thin**. ↛ A slice became thin.

For instance, the pseudo-resultative sentence in (26a) does not mean that the referent of the object *her hair* or something (a braid) changed from the state of being not tight to the state of being tight. Rather, the sentence entails that a braid was created and it was tight.

Second, if the secondary predicate of a pseudo-resultative construction is displaced to the prenominal position as in (27), then the resulting sentence sounds awkward (see Levinson 2010):

(27) a. Mary braided her hair **tight**. ≠ ?Mary braided her tight hair.
b. Mary piled her cushions **high**. ≠ ?Mary piled her high cushions.
c. Mary sliced the bread **thin**. ≠ #Mary sliced the thin bread.

Even if we assume that, for instance, the second sentence in (27a) is marginally acceptable, its meaning is not identical to the meaning of the first sentence. In the pseudo-resultative sentence, *hair* is not necessarily tight, but in the second sentence *hair* is tight.

Third, the state denoted by the secondary predicate holds only at the end of the event described by a pseudo-resultative construction:

(28) a. Mary braided her hair **tight**.
⇒ The braid was tight only at the end of the braiding event.

b. Mary piled her cushions **high**.
⇒ The pile was high only at the end of the piling event.

c. Mary sliced the bread **thin**.
⇒ The slice was thin only at the end of the slicing event.

Since the understood subject of the secondary predicate is created at the end of event, the state of the secondary predicate cannot hold at the beginning of event.

Fourth, a pseudo-resultative construction entails the creation of a new entity which has the property denoted by the secondary predicate. Consider the examples in (29).

(29) a. Mary braided her hair **tight**. ⇒ A tight braid came to exist.

b. Mary piled her cushions **high**. ⇒ A high pile came to exist.

c. Mary sliced the bread **thin**. ⇒ A thin slice came to exist.

A tight braid, a high pile of cushions, and a thin slice are created in the pseudo-resultative constructions, respectively.

Fifth**,** pseudo-resultative constructions do not entail that the understood subject of the secondary predicate exists during the event denoted by the construction:

(30) a. Mary braided her hair **tight**. ⇏ The braid existed during the braiding event.

b. Mary piled her cushions **high**. ⇏ The pile existed during the piling event.

c. Mary sliced the bread **thin**. ⇏ The slice existed during the slicing event.

For instance, the pseudo-resultative construction in (30c) involves an entity that does not exist at the beginning of the slicing event, but exist at the end of the event: a slice (or slices) is created in (30c). Summarizing, pseudo-resultative constructions share some properties with resultative, depictive or *build-big* constructions.

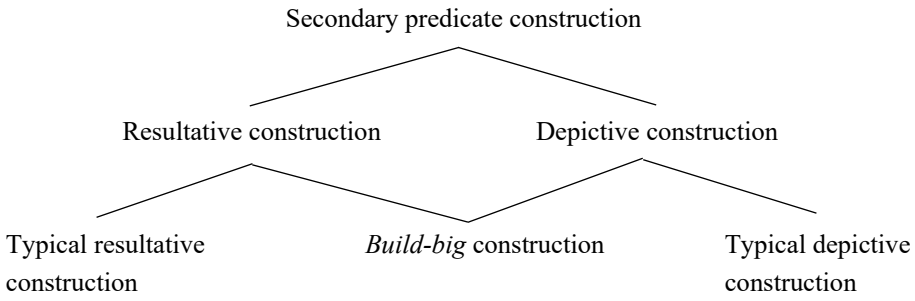
The five grammatical properties of the secondary predicate constructions discussed above (resultative, depictive, *build-big*, and pseudo-resultative constructions) are summarized in the following table:

(31) Summary of the properties (1 = yes, 0 = no)

	Resultative Construction	Pseudo-resultative construction	*Build-big* Construction	Depictive construction
1. Is a change of state entailed?	1	0	0	0
2. V N A = V A N	0	0	1	1
3. Does the state of the secondary predicate hold only at the end of event?	1	1	1	0
4. Is an entity with the property of the secondary predicate created?	1	1	1	0
5. Is the understood subject of the secondary predicate created?	0	1	1	0

The *build-big* constructions share some properties with resultative or depictive constructions; at the same time, they have a property that is not shared with either of them. The pseudo-resultative constructions share most of the five properties with the *build-big* constructions; they differ only on the second property in the table. We cannot say that *build-big* constructions (and pseudo-resultative constructions) belong to either canonical resultative or canonical depictive constructions; we should have a new category related to but different from resultative and depictive constructions. This idea is briefly expressed in the following classification of secondary predicate constructions:

(32)



Note that in (32) *Build-big* construction is a subcategory of both Resultative construction and Depictive construction. This means that *build-big* constructions inherit some properties from the higher categories (supertypes) in the classification and they also have at least one property that is not inherited from the upper categories (see the notion of multiple inheritance in Head-driven Phrase Structure Grammar in Pollard and Sag 1994, Sag et al. 2003). In short, *build-big* constructions can be placed under both resultative and depictive constructions.

5. Conclusion

I have argued in this paper that the secondary predicate construction of a kind (e.g., *Mary built a house big*) shares some grammatical properties with resultative or depictive constructions. In addition, it also has a property

that is not shared with resultative or depictive constructions. This set of properties suggests that the secondary predicate construction (called *build-big* construction in this paper) should not be classified as either typical resultative or typical depictive construction; it is more plausible to add a new category for *build-big* constructions to the classification of secondary predicate constructions. That is, the secondary predicate constructions are not simply divided into either resultative or depictive constructions. This is further supported with pseudo-resultative constructions since they also have some properties that are shared with resultative or depictive constructions.

The idea of the new category may be implemented using the notion of multiple inheritance in HPSG (Head-driven Phrase Structure Grammar in Pollard and Sag 1994, Sag et al. 2003) since it allows a subcategory (a subtype in HPSG terminology) which inherits properties from several distinct higher categories (supertypes). In addition to the properties discussed in this paper, *build-big* constructions would have other syntactic and semantic properties. Investigations about further grammatical properties and an exact formalization of *build-big* constructions remain as future work.

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Examples in: English
Applicable Languages: English
Applicable Level: Tertiary

