When tense meets constructional meaning

The realis and irrealis alternation in the *enough* construction

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Construction Grammar, one of the major frameworks in Cognitive Linguistics, has been successful in providing accounts of a wide range of empirical data. The approach has recently placed great emphasis on low-level generalizations, and some studies have argued that a constructional meaning is often associated only with a specific lexical item. Therefore, by investigating in detail the form [copula *be* + Adj. + *enough* + *to*-infinitive], the present study proposes that the combinatorial potential of the intensifier *enough* and the derived constructional meanings are sensitive to tense, thus emphasizing the importance of 'item- and tense-specific constructions'.

Keywords: construction grammar, scale structures, tense, the *enough* construction

1. Introduction

Since Sapir (1944), English adjectives have been classified into two categories in terms of gradability: gradable and non-gradable adjectives. Gradability refers to a property that may vary depending on contexts. For example, the height value of *tall*, which is a gradable adjective, in *John is tall* may not be identical to the value in *Mary is tall*, whereas *male* or *female* in *Alex is male/female*, which are non-gradable counterparts, possess the same value in *Pat is male/female*.

Studies of the scale structure of adjectives have revealed that adjective gradability is classified into two types: open and closed scale adjectives (Kennedy & McNally 2005). Adjectives denoting closed scale structures refer to either or both the maximal or minimal degree of the scale such as *transparent* and *empty* whereas those with open scale refer to neither value (e.g., *tall* and *inexpensive*). This

classification heavily relies on whether adjectives may co-occur with degree intensifiers that denote maximal or minimal values, such as *almost*.[1]

(1)   Open scale adjectives
    a.   *My son is almost tall.
    b.   *This watch is almost expensive.

(2)   Closed scale adjectives
    a.   The bottle is almost empty.
    b.   The spot is almost invisible.

This linguistic test shows that gradable adjectives that do not co-occur with *almost* do not have an endpoint value; hence they are open scale, whereas those that may be modified by *almost* denote the endpoint value; therefore, they are closed scale.

    Although the modification of open scale adjectives by *almost* is quite unnatural, the co-occurrence of *enough*, which mostly follows open scale adjectives as illustrated in Table 1 (data source from the British National Corpus (BNC)).[2]

(3)   a.   The boxes are warmer, and we have several sizes, including one that's
       almost big enough to stand up in.   (COCA)
    b.   [D]iscussions of symbolic language in these educational psychology
       texts are *almost broad enough* to include multiple symbol systems.
                                                                              (COCA)
    c.   The light is *almost bright enough* to read by.   (COCA)
    d.   [W]e have many superconductors that are *almost good enough* to make
       it into technology.   (COCA)

The occurrence of *almost* with *enough* presents another puzzle. That is, when the copula *be* is used in the past tense, the use of the adverb modifier *almost* is sometimes (not always) unnatural.

(4)   ?His son was almost tall enough to ride on a roller coaster.

The above two observations pose the following questions, which are investigated in the present study: (i) Why does the modification of open scale adjectives by *almost* become acceptable once *enough* follows the collocation? and (ii) What prevents *almost* from modifying adjectives as illustrated in (4)?

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1. Note that the closed scale structures can be further classified into three types (see Kennedy & McNally 2005). However, such classification is not directly related to the current study, and thus will not be introduced here.

2. Italics without any additional notes are by the author.

Table 1. 40 most frequently used adjectives in the *enough* construction

Adjective	Freq.	Adjective	Freq.	Adjective	Freq.	Adjective	Freq.
old	305	young	75	close	50	sensitive	28
large	298	powerful	70	important	46	unlucky	27
strong	282	fit	64	rich	45	draft	25
lucky	250	brave	64	clever	42	high	25
good	189	small	61	wide	38	honest	24
big	136	flexible	58	serious	34	difficult	24
fortunate	126	stupid	58	hard	32	severe	23
easy	95	unfortunate	56	bold	29	tough	23
well	80	foolish	55	intelligent	29	shrewd	21
long	70	confident	51	bright	29	robust	21

This paper is organized as follows: Section 2 provides an overview of the theoretical background. Section 3 compares two approaches, implicit and explicit threshold approaches, and argues that the implicit threshold one is untenable. Section 4 proposes that the questions posed above can be addressed by assuming what this paper calls 'item-tense-specific constructions'.

2.   Theoretical background

This article agrees with a fundamental idea of Cognitive Linguistics, more specifically, Construction Grammar. While there are various versions of Construction Grammar, they all share some basic ideas. In this section, I shall briefly review the basic theoretical concept of Construction Grammar, and will provide evidence that expressions with the post-adjectival use of *enough* should be treated as a construction in terms of Cognitive Construction Grammar.

2.1 Construction grammar

In this section, I will briefly introduce the theoretical framework in the present study, namely, Construction Grammar (e.g., Boas & Sag 2011; Croft 2001; Fillmore et al. 1988; Fried & Östman 2004; Goldberg 1995; Kay & Fillmore 1999; Langacker 2009). While there are various approaches in Construction Grammar, the general consensus is that linguistic expressions are viewed as form-meaning pairings, and the construction itself may possess a meaning that cannot be reduced to its components. One of the Construction Grammar approaches, which is often called

Cognitive Construction Grammar (e.g., Boas 2013) states that constructions convey their own irreducible syntactic or semantic features, as Goldberg (1995) clearly defines: "C is a CONSTRUCTION iff$_{def}$ C is a form-meaning pair <F_i, S_i> such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions (Goldberg 1995: 4)."

Though attractive, Goldberg's approach has recently been criticized in that her constructional approach is so abstract that it may overgeneralize linguistic data (e.g., Boas 2010; Croft 2003, 2012; Iwata 2008; Nemoto 2005). For example, consider Croft's (2003) argument on the English ditransitive construction, [SBJ VERB OBJ1 OBJ2] as illustrated in (5):

(5)   John gave Mary a book.

Goldberg argued that the ditransitive construction conveys the meaning that "the agent … acts to cause transfer of an object to a recipient (Goldberg 1995: 32)." However, many verbs that typically do not involve transfer of possession can occur in the ditransitive construction, such as those expressing refusal (*refuse* and *deny*) or enablement (*permit* and *allow*). Goldberg also highlighted that not all refusal and permission verbs occur in the ditransitive construction, as evident in (6) and (7).

(6)   Sally permitted/allowed/*let/*enabled Bob a kiss.

(7)   Sally refused/denied/*prevented/*disallowed/*forbade him a kiss.

(Goldberg 1995: 130)

Based on this distributional idiosyncrasy, Croft (2003) suggested the following representations:

(8)   a.   [[SBJ *refuse* OBJ1 OBJ2]/[negative XPoss by refusing]]
      b.   [[SBJ *deny* OBJ1 OBJ2]/[negative XPoss by denying]]

(9)   a.   [[SBJ *permit* OBJ1 OBJ2]/[enabling XPoss by permitting]]
      b.   [[SBJ *allow* OBJ1 OBJ2]/[enabling XPoss by allowing]]   (Croft 2003 :58)

The structures on the left in (8) and (9) illustrate syntactic forms, and on the right, semantic information. Though they share the same syntactic pattern at their higher level, their semantic information varies. Thus, the ditransitive construction with these verbs has its own status. Croft termed the constructions in (8) and (9) 'verb-specific constructions' (Croft 2003: 58).

Croft also proposed that by abstracting verb-specific constructions, a speaker of English acquire a more schematic knowledge of the construction. For example, on the one hand, *refuse* and *deny* in the ditransitive construction exemplified in (8) share a similar semantic class in that both refer to a negative transfer of possession, and on the other hand, *permit* and *allow* in this construction illustrated in

(9) refer to a transfer of enablement. By abstracting these commonalities in verbs, constructional properties become more schematic as follows:

(10) a. [[SBJ REFUSE.VER BOBJ1 OBJ2]/[negative XPoss]]
      b. [[SBJ PERMIT.VERB OBJ1 OBJ2]/[enabling XPoss]]   (Croft 2003: 57)

Croft terms these structures 'verb-class-specific construction'.

One of the assumptions that cognitivists, especially those who emphasize the usage-based aspect of language use, accept is that a speaker's linguistic knowledge is stored taxonomically (e.g., Croft 2001; Goldberg 2006; Iwata 2008; Langacker 1987,1999). This also holds true of the knowledge of constructions. Thus, verb-specific constructions and verb-class-specific constructions form a taxonomic relation. Therefore the hierarchy seen above is a natural consequence of a fundamental idea of the constructional approach to language.

While I will follow the above-mentioned theoretical background in this paper, it is worth briefly mentioning that the term 'verb-(class-)specific constructions' is not an appropriate wording, at least in this paper. A fundamental idea of 'verb-specific constructions' is to focus on the importance of item-specific knowledge interacting with a larger linguistic structure (e.g., Boas 2009; Croft 2003; Iwata 2008). It is true that verbs evoke rich (and probably the richest) encyclopedic knowledge, compared to other grammatical categories, as they describe very detailed situations (e.g., Fillmore 1982; Fillmore & Atkins 1992), but we should not limit our scope of study to verbs, and should focus on other categories as well. One example is *pregnant*, which is typically considered as a non-gradable adjective, but the following example is a case in which its non-gradablility is coerced into gradable as in the following examples:

(11) a. $^?$I am very pregnant.
      b. I am so pregnant that I cant: shave my own legs…
          (http://www.whattoexpect.com/forums/june-2011-babies/topic/its-offical-
          im-so-pregnant-that-i-cant.html)

The word *pregnant* is considered as a non-gradable adjective because the state described is an either-or relation. That is, if a proposition p is true, then another proposition q is always false, and vice-versa (Lyons 1977). However, the example (11b) illustrates that an expectant woman's belly becomes bigger and bigger, and *so* may modify the gradable property, the belly-size dimension, that is stored within an extra-linguistic knowledge of English speakers. This example shows that many grammatical categories may evoke world knowledge that interact with grammar. For this reason, I employ the term 'item-specific constructions' to replace 'verb-specific constructions' (originally proposed as 'item-based constructions' by Tomasello (2005: 139)). In a later section, I will offer the necessity of an even lower-level generalization

2.2 Syntactic idiosyncrasy of *enough*

Adjectival expressions that include *enough* are syntactically peculiar in English, in that it is the only degree intensifier that follows adjectives. Hence, it is worth examining the linguistic features of adjectival expressions that include *enough*. In this section, I will provide an overview of the syntactic behavior of *enough*.

Most adverbs modifying degree adjectives are in the pre-adjective position, as shown in (12a), and not in the post-adjectival position, as in (13a). Nonetheless, the behavior of *enough* opposes this typical syntactic order, as exemplified in (12b) and (13b), respectively.

(12) Pre-adjective position
   a.   John is {very/so/too/pretty/sufficiently} tall.
   b. *John is enough tall.

(13) Post-adjective position
   a. *John is tall {very/so/too/pretty/sufficiently}.
   b.   John is tall enough.

As the contrast between (12a) and (13a) demonstrates, degree modifiers such as *very* can only occur in the pre-adjectival position and hardly occur in the post-adjectival position, while *enough* opposes the regular linear order. To my knowledge, *enough* is the only post-adjectival modification in English with respect to degree expressions. Thus, the behavior of *enough* corresponds with Goldberg's definition for construction, as quoted above. In this paper, I will focus on one of the relatively fixed use of *enough*, namely, [*be* Adj. *enough*to-infinitive], which will be termed the '*enough* construction'.

In the next section, I will compare two approaches that deal with scale structures in adjectival phrases.

3. Two approaches to threshold value

As numerous studies in the literature have illustrated, gradability is fundamentally a comparison of two values (e.g., Bierwisch 1989; Bolinger 1967, 1972; Cresswell 1977; Von Stechow 1984). For example, *tall* in *a tall student* compares one student with another height value, such as an average value of the students. In this case, a height average serves as a threshold.[3] While this is well accepted across theories, as I will introduce in the following subsections, there are two approaches in a locus

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3. It is usually termed 'standard of comparison' (e.g., Kennedy & McNally 2005). However, a standard of comparison requires a degree predicate, and this study deals with a non-degree

of a threshold value, which will be termed an 'implicit threshold approach' and an 'explicit threshold approach'. Thus, before delving into a deeper analysis of the *enough* construction, I will compare these two approaches.

3.1 The implicit threshold approach

What this paper terms the implicit threshold approach is an approach that is employed in a set of Jensen's investigations on adjectival constructions (Jensen 2014a, 2014b, 2015). His approach to a semantic component to be compared resides within the adjectives in question. See the following examples:

(14)   I'm too depressed to see straight.   (COCA, quoted by Jensen 2014a)

In this example, the degree of depression is so high that the person's eyesight is deprived. In other words, Jensen's term of the *too … to* construction conceptualizes an event in which a certain degree exceeds the maximal threshold. He explains that "[i]n the case of *too*, the boosting function increases the degree of ADJness beyond the maximal threshold of the adjectival scale in question (Jensen 2014c: 7)." Considering this quote, Jensen assumed that the maximal threshold resides in adjectives.

Jensen's assumption regarding the implicit threshold approach includes not only the *too … to* construction, but also the *enough* construction (Jensen 2015). The schematic structure of the *enough* construction denotes that the degree of the adjectives exceeds the lower threshold of the adjectives. Again, the locus of the threshold resides in adjectives.

This approach will have a fatal predicted infelicity. Consider the examples in (1), repeated below as (15):

(15)   Open scale adjectives
    a. *My son is almost tall.
    b. *This watch is almost expensive.

Without the support of any specific context, the modification of open scale adjectives, such as *tall* and *expensive*, by *almost* is not acceptable, as exemplified in (15). Jensen's approach assumes that a threshold is encoded in adjectives. Consequently, if the threshold is lexicalized in adjectives as the implicit threshold approach assumes, then the modification by *almost* should not be dependent on any syntactic environment. Put differently, a prediction borne out of the implicit threshold approach is that modification by *almost* is not acceptable as in (15) even though it

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predicate. Hence, I would prefer to use threshold, a somewhat more general standard, which is not necessarily a degree predicate.

occurs in the *enough* construction. Unfortunately, this prediction cannot be supported because there are examples of the *enough* construction co-occurring with *almost*, as shown in (16).

(16)   a.   The glass in the windshield is *almost strong enough* to resist the blow of a hammer.   (A Basic Dictionary of Synonyms and Antonyms)
       b.   I suppose he is *almost old enough* to have a pocket knife …
                                 (quoted from A Life in Letters by George Orwell)
       c.   The air of the room is *almost bad enough* to have extinguished …
                                 (quoted from Bleak House by Charles Dickens)
       d.   I looked down and saw a spout with a great ornamental mouth, *almost big enough* to sit on …   (quoted from Hard Cash by Charles Reade)

Moreover, *almost* also modifies open scale adjectives when they fill the adjectival slot of the *too … to* construction that Jensen highlighted, as shown in (17).

(17)   a.   [L]awn tractors are *almost too good* to be used.   (BNC CFS 2203)
       b.   I was then *almost too busy* to shudder.   (BNC B2E 634)
       c.   You were *almost too old* to adopt, weren't you …   (BNC JY0 1190)

Further evidence that the adjectives in the *enough* construction are strongly biased to having the open scale structure is the co-occurrence of closed scale adjectives. As (18) shows, *empty* co-occurs with endpoint-oriented modifier such as *completely, totally,* and *100%,* which indicates that the adjective possesses a closed scale structure. Hence, a co-occurrence with *empty* as in (19a) seems to be a counter-example to the generalization. Nevertheless, the co-occurrence of closed scale diagnostic modifiers used in (18) is not acceptable as in (19b).

(18)   The hall way was {completely/totally/100%} empty.

(19)   a.   The hallway was *empty enough* to remind her why graveyard shift had earned its name.   (COCA)
       b.   #The hallway was {completely/totally/100%} empty enough to remind her why graveyard shift had earned its name.

This modification relation shows that the interpretation of *empty* in (19a) is not a closed scale structure. In other words, the *enough* construction produces an open scale interpretation of *empty* in (19a).

   Some readers may find that (19b) is acceptable. However, the construal of the modifiers is not strictly the degree intensification that the adjective denotes. Rather, it modifies what Beltrama (2016) called a "speaker-oriented" dimension. That is, *completely, totally*, and *100%* intensify the degree of the speaker's confidence or commitment to the situation. Thus, a possible construal of intensification

in (19b) is intensification of the degree of commitment dimension, rather than intensifying the near-maximality of emptiness.

Based on the observation of the *enough* construction above, a generalization can be made as follows:

(20) The only possible interpretation of an adjective that occurs in the *enough* construction is the non-endpoint scale structure. When a closed scale adjective occurs in this construction, its interpretation is shifted to the non-endpoint structure.

The generalization in (20) illustrates that the endpoint denoted by *empty* is disregarded by the *enough* construction in (19). Due to this manipulation, intensification of the *enough* construction with the endpoint-oriented modifiers is not acceptable. In other words, the construction forces the closed scale interpretation of the co-occurring adjective into an open scale counterpart.

The scale shifting function of the *enough* construction presents some issues concerning the implicit threshold approach. As I have already introduced, the implicit threshold approach assumes that the standard is encoded in adjectives. That is, because the interpretation of adjectives that occur in the *enough* construction is a non-endpoint scale, the implicit threshold approach assumes that the *enough* construction does not co-occur with *almost*. However, this prediction does not correspond with empirical data, in that *almost* may co-occur with the *enough* construction as I have presented in (15). Therefore, the implicit threshold approach cannot be supported.

3.2 The explicit threshold approach

The second approach is what this paper terms the 'explicit threshold approach', employed by Meier (2003). This approach assumes that the threshold is located outside of the adjectives, contrasting to the implicit threshold approach.

Meier (2003) argued that *enough* compares one world with another one. Consider the following examples.

(21) a. Bertha is old enough to drive a car.
      b. The submarine is small enough to pass through the hole.

(Meier 2003: 70)

The sentence in (21a) confirms that Bertha's age exceeds the legal minimum age (e.g., Bertha's age is indefinite but is above minimum legal driving age of 16 years old). In other words, we can assume that, in the world presented in the sentence, everyone who drives a car must be a certain age or older. If Bertha is over that age, then she can drive a car irrespective of whether she actually drives or

not. Similarly, in (21b), if the submarine is smaller than the hole, then it can pass through the hole. In other words, if the maximal dimension of smallness for the vessel is greater than the minimal size required for any vessel to pass through the hole, then the vessel can go through.

Based on observations from the examples in (21), Meier (2003) concluded that *enough* serves the function of making a comparison between the two worlds. This claim is defined as follows:

(22) $[[\textbf{enough}]] = \text{MAX}(\lambda e.P(e)(w)) \geq \text{MIN}(\lambda e^\star.Q(w)(P(e^\star)))$

In (22), *Q* stands for a conditional sense, whereas *P* stands for the degree predicate, expressed by the main clause. This definition says that *enough* serves to relate the extent that a degree predicate expresses and the minimal extent that a conditional denotes.

The definition in (22) indicates that the minimalist operator (MIN) selects the smallest extent of a set of extents, and that background knowledge described by the *to*-infinitive phrase – in the example, the *to*-infinitive describes the legal age for having a driver's license – serves as a threshold. In other words, Meier's denotation assumes that it is not adjectives but the *to*-infinitive phrase that refers to a value to be compared.

The explicit threshold approach can account for the behavior of *almost* that it may modify adjectives, such as *tall* or *expensive* illustrated in (15). Let me introduce the idea of Rotstein and Winter's (2004) argument. They argued that although the distributional pattern of *almost* between open scale and closed scale adjectives is robust, modification of open scale adjectives by *almost* can be acceptable if a threshold is made explicit by context as illustrated in (23). In this example, John's height is close to 2.00 meters, which is a minimal threshold to be regarded as a tall basketball player.

(23)   A tall basketball player is someone above 2.00 meters high. John is 1.98
        meters, so he is *almost tall*.   (Rotstein and Winter 2004: 279)

Meier (2003) assumed that the background knowledge supplied by the *to*-infinitive phrase provides a minimal value to be compared with an adjective in question. Based on this insight, it can be surmised that modification of open scale adjectives by *almost* is acceptable because contextually supplied background knowledge serves as a threshold. This approach accords with Rotstein and Winter's argument. Therefore, the empirical data where *almost* may modify open scale adjectives with *enough* is properly treated by the explicit threshold approach because the threshold is made explicit by a non-adjective component.

While this paper supports Meier's approach with respect to the locus of a threshold value, her approach is not sufficient enough to account for the full range

of uses of *enough*. In the next section, I will illustrate some counter-examples to Meier's analysis, and provide an alternative approach in order to address the insufficiencies of Meier's exposition.

4. Toward an item- and tense-specific construction

In the last section, I introduced Meier's denotation of *enough*, and supported her approach in terms of the locus of threshold. In this section, I will argue (i) that while her analysis accounts for a typical use of *enough*, the *enough* construction as a whole, namely [*be*_{<tense>} Adj. *enough to*-infinitive], has a constructional meaning that cannot be accounted for by her approach; (ii) that a full compositional account may encounter difficulty; and (iii) that the *enough* construction can be fully accounted for by assuming what this study calls the 'item- and tense-specific construction'.

4.1 Realis and irrealis interpretations in the *enough* construction

This section argues that Meier's account is not sufficient to account for the use of *enough* exhaustively. Recall Meier's examples given in (21), repeated below:

(21) a. Bertha is old enough to drive a car.
       b. The submarine is small enough to pass through the hole.

<div align="right">(Meier 2003: 70)</div>

The appropriate interpretation of the *enough* construction in (21a) is that Bertha can drive irrespective of whether she actually drives or not. Similarly, whether the submarine really goes through the hole does not affect the interpretation of (21b). In other words, whether the event, described in the *to*-infinitive phrase, is realized or not does not affect the construal of the construction as a whole.

Meier's denotation predicts that *enough* occurs with *almost* any time. While that is true if the *enough* construction is used in the present tense as in Meier's examples, it is not so once the *enough* construction is used with the past tense form of *be* as in (4), repeated below.

(4) ?His son *was almost tall enough* to ride on a roller coaster

Therefore, Meier's denotation needs further elaboration.

From the example in (4), it is obvious that tense plays an important role in changing the interpretation of the *enough* construction. The tense alternation makes the construction sensitive to realization of the event expressed by the *to*-infinitive phrase. Consider the examples in (24) and (24'):

(24) a.   John was lucky enough to ride on a roller coaster.
     b.   John was unlucky enough to ride on a roller coaster.
     c.   John was unfortunate enough to ride on a roller coaster.
     d.   John was careless enough to ride on a roller coaster.
     e.   John was happy enough to ride on a roller coaster.

(24′) a. ?? John was lucky enough to ride on a roller coaster. In fact, he left here without riding on the roller coaster.
     b. ?? John was unlucky enough to ride on a roller coaster. In fact, he left here without riding on the roller coaster.
     c. ?? John was unfortunate enough to ride on a roller coaster. In fact, he left here without riding on the roller coaster.
     d. ?? John was careless enough to ride on a roller coaster. In fact, he left here without riding on the roller coaster.
     e. ?? John was happy enough to ride on a roller coaster. In fact, he left here without riding on the roller coaster.

The data in (24′) indicate that if an event is left unrealized, then the *enough* construction with a past tense of *be* is unnatural. Specifically, the past tense of the copula *be* in the *enough* construction invites a reading that the event happened, although such a reading can be canceled. This observation suggests that the *enough* construction appearing with the past tense form of the copula *be* is sensitive to the realization of the event described in the *to*-infinitive phrase. In contrast, the present tense *enough* construction denotes a situation that has not happened. The distinction in the interpretation of the construction corresponds to the realis/irrealis distinction by Dixon (2012: 22), who defined realis as a reference "to something which has happened or is happening" and irrealis "to something which has not (yet) happened. […] Within irrealis, there are generally a number of modality choices, covering necessity, possibility, potential, etc.," respectively.

In order to capture the realis/irrealis alternation, I would like to suggest that the *enough* construction cannot be fully explained without assuming a constructional meaning of [*be* Adj. *enough to*-infinitive] as a whole and specifying the tense of the copula of the construction as follows:

(25) a.   [[*be*$_{<present>}$ ADJ. *enough to*-infinitive]/[VP as an irrealis event]]
     b.   [[*be*$_{<past>}$ ADJ. *enough to*-infinitive]/[VP as a realis event]]

This notation follows Croft's one in (8) and (9). The italicized components are lexical items, and the small-capital indicates a grammatical category of the construction. Note that the bracketed subscripts express the tense of the copula *be*. I refer to these constructions an 'item- and tense-specific construction', by analogy to Croft's (2003) terminology, 'item-specific construction'.

The realis interpretation of the *enough* construction is problematic in a full compositional approach.[4] The present tense *enough* construction, as Meier also recognized, is strongly biased to the irrealis interpretation. If the principle of full compositionality works in the *enough* construction, the alternation between the present and past tenses should not influence the realis and irrealis interpretations. Put differently, full compositionality predicts that the irrealis interpretation is the only possible interpretation in the *enough* construction with the past tense form of the copula.

One possible solution of the full compositionality approach to the issue is that the realis/irrealis alternation through the tense can be accounted for by giving multiple meanings to the copula *be*. The present tense *be* denotes an irrealis state, and the past tense denotes both realis and irrealis counterparts. It is true that [Adj. *enough to*-VP] is semantically compositional, and a syntactic composition of the structure and the past tense *be* as in [$be_{<past>}$ [Adj. *enough to*-VP]] returns a realis interpretation by assuming *be* having multiple meanings. However, this approach implicitly assumes that [$be_{<past>}$ Adj. *enough to*-VP] as a whole is strongly biased to the realis interpretation although the irrealis interpretation should be equally possible in the full compositionality approach. In other words, the '*be*-as-polysemy approach' implicitly assumes that the *enough* construction as a whole has a certain compositional pattern, which indicates that the full compositionality approach no longer holds a full compositionality. Consequently, it lapses into a constructional account.

As introduced in Section 2.1, a speaker's knowledge of constructions is meronomically stored. Hence, speakers organize various verb-(class-)specific constructions in the English ditransive construction by abstracting their differences, resulting in the schematic constructions of the even more abstract constructions. The item- and tense-specific constructions in (25) have exactly the same meronomic structures. The two tense-sensitive *enough* constructions in (25) are organized and stored asdifferent sub-constructions of a more general (tense-neutral) *enough* construction. This structure is illustrated in Figure 1, following Iwata's (2008: 38) representation.

Assuming the item- and tense-specific construction overcomes the predicted infelicity of (4), repeated below, the modification of adjectives by *almost* is sometimes unnatural if the *enough* construction is used as a past time event.

(4) ?His son was almost tall enough to ride on a roller coaster.

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4. Langacker termed the principle of full compositionality as follows: "an expression's meaning is predictably derivable from the meanings of its parts (Langacker 2008: 40)."
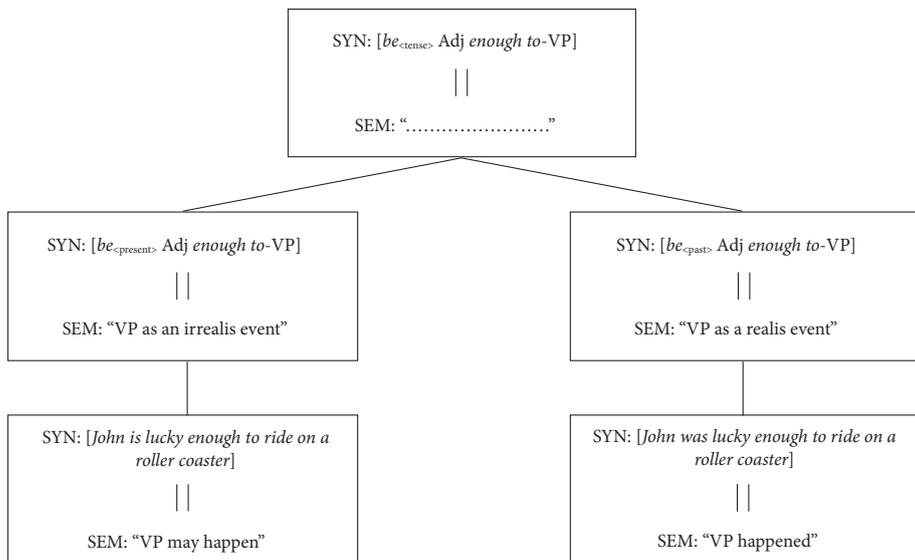
Figure 1. The hierarchical organization of the *enough* construction

The degree modifier *almost* denotes a near-endpoint value. For example, *the bottle is almost empty* means the bottle is nearly empty, but not empty in a strict sense. In other words, *almost* creates a state that is about to be realized. This means that the realis interpretation of the *enough* construction is semantically incompatible with *almost*. While the representation in (25a) is merely a notational variant of Meier's denotation, (25b) correctly predicts that *almost* cannot modify the *enough* construction if it is used with the past tense form *be*.

Some readers may find a counter-example to the item- and tense-specific construction, such as in (26):

(26)   I have not forsworn society since I joined the brotherhood of the brush (the most delightful fellows on the face of the earth), and *am glad enough* to smell the old fine gunpowder now and then …

(quoted from Little Dorrit by Charles Dickens)

The expression $be_{<present>}$ *glad enough to* is strongly biased to the realis interpretation even though it is used in the present tense. However, as I will argue in detail later, the example in (26) and other examples given in (24) differ in terms of their causation patterns. Consider the case of (24e), *John was happy enough to ride on a roller coaster*. Here, John's happiness prompted him to ride on a roller coaster. In contrast, the speaker's gladness is not the reason that he smells the gunpowder in the case of (26), rather, the speaker is glad because he smelled it. Therefore, the expression *be glad enough* has a different semantic structure than the ordinary

causation pattern observed in the *enough* construction and in the item- and tense-specific construction represented in (25b); however, I will not go into any further detail about this issue because it goes beyond the scope of this paper.

The next section explains why, among some copulas, only *be* is available in the construction above.

4.2 Comparing *be* and other copulative verbs

The realis interpretation is not available in other copulas referring to a state, such as *look, feel, sound*, and *smell* (Givón 1993; Quirk et al. 1985).

(27) a. John *looked happy enough* to ride on a roller coaster. In fact, he left here without riding on the roller coaster.
   b. John *felt happy enough* to ride on a roller coaster. In fact, he left here without riding on the roller coaster.
   c. That *sounded safe enough* to ride on a roller coaster. In fact, he left here without riding on the roller coaster.
   d. This cake *smelled good enough* to eat. In fact, he left here without riding on the roller coaster.

A reason why the realis interpretation of the *enough* construction is applicable with *be* and not with other copulas is that *be* expresses a higher commitment to a described event, whereas the others express a lower commitment. Before considering why the realis interpretation of the *enough* construction is available only when *be* is used, I will provide an overview of the semantic difference between *be* and other copulas.

Dixon (2005: Chapter 6.4.1) highlighted that *look, feel, sound,* and *smell* (or perceptive copulas) are used in an *as if* phrase, which expresses an event that has not happened yet, or an irrealis event, as exemplified below:

(28) John looks/sounds as if he's seen a ghost.   (Dixon 2005: 205)

The event denoted by the *as if* phrase in (28), namely to see a ghost, cannot happen in the real world. Table 2 shows a corpus survey of collocation patterns of the copulas occurring with the *as if* phrase (the data is taken from COCA). The leftmost column of the table shows raw frequencies of each copula used in the *as if* phrase. The central column indicates the total number of each copula in the corpus used in any form. The rightmost column is a relativized frequency (per 10,000 words) of the copulas occurring with the *as if* phrase. Seemingly, the copula *be* occurs with the *as if* phrase quite frequently, but its ratio is by far the least frequent collocation. This result indicates that by using *be* the speaker owes a strong commitment to a

Table 2. Collocational frequencies of the lemmatized copulas in the *as if* phrase

	as if	Total frequency	Per. 10,000
be	3,940	20,345,764	1.94
feel	4,373	375,280	116.53
look	4,275	739,683	57.80
smell	30	36,665	8.18
sound	1,173	139,315	84.20

state of affairs, whereas she or he resigns responsibility to a state of affairs when the perceptive copulas are used.

Given the collocation patterns of the copulas with the *as if* phrase, the realis and irrealis interpretation of the *enough* construction is resolved. That is, the use of perceptive copulas refers to an event that does not happen, whereas the copula *be* expresses an event that does. Therefore, it seems safe to conclude that the realis interpretation accords with a strong commitment to which the copula *be* refers, and the irrealis counterpart accords with a weak commitment.

4.3 Invited inference

In the previous two sections, I explained that the two interpretations of the *enough* construction are sensitive to tense, and the realis sense is available only with *be* and not with other copulas. The last question that this article investigates is a motivation for the construction becoming sensitive to tense.

Construction Grammar assumes that constructional meanings are sometimes motivated by implicature. For example, consider the WXDY construction (Kay & Fillmore 1999), given in (29):

(29)   Diner: What's this fly doing in my soup?
       Waiter: I believe that's the backstroke.   (Kay and Fillmore 1999: 4)

Kay and Fillmore (1999) argued that the diner's speech is ambiguous in two ways. One is a literal sense, that is, the diner is asking about the type of swimming the fly is doing. The other sense is that the diner wants to complain about the fly being in the food, meaning *how come there's a fly in my soup?* Thus, if the diner intended the first sense, the waiter's response is correct; nonetheless, the interpretation of the WXDY construction is usually the second one. Thus the waiter in (29) has chosen a wrong answer. Though Kay and Fillmore (1999) did not use the same terminology, this intended meaning conveys an invited inference (Traugott 2006; Traugott & Dasher 2002), of which Traugott (2006) said that "S/Ws[speakers/

writers] strategically use implicatures and invite AD/Rs [audiences/readers] to infer a meaning (Traugott 2006: 552)."

Returning to the central question of this section, the *enough* construction expresses two states of affairs, and one of them causes the other event to happen later. Consider the following examples:

(30)   John does not like riding on a roller coaster, but
    a.   John is happy enough to ride on a roller coaster.
    b.   John was happy enough to ride on a roller coaster.

In both cases, his happiness enables John to ride on a roller coaster. Hence, the *enough* construction essentially encodes a causative relation (or a 'force dynamic relation' as termed by Talmy (1985, 1988)). Once the causative relation as a whole occurs in a past time, it is natural to interpret the *to*-infinitive phrase as describing an event that has happened. Thus, the context that the past time event invites addressees to infer the realis interpretation. On the other hand, if a state that the adjective in question denotes is a current one, an event that the *to*-infinitive phrase describes is a future event. Hence, an interpretation of the *enough* construction cannot be realis, but rather its irrealis counterpart.

It is worth noting that this invited inference can be canceled out (Traugott 2012). More precisely, the riding event can be left unrealized in (30b), and thus, the construction follows the irrealis interpretation. This is because the realis interpretation is not fully entrenched yet, just like the WXDY construction in (29). One may argue that the realis interpretation is obtained through inference and is not a sub-construction of a larger construction. Nonetheless, I suggest that the realis/irrealis interpretations are two distinct sub-constructions of the *enough* construction because the past tense *enough* construction is strongly biased toward the realis interpretation, and the irrealis counterpart is hardly obtained without providing explicit or additional context.

To summarize, this section has provided a Construction Grammar account of the *enough* construction. In Section 4.1, I have argued the importance of an item- and tense-specific construction. That is, the two interpretations of the *enough* construction are sensitive to the tense of the copula. In Section 4.2, I demonstrated why the irrealis interpretation is available with *be* and not with other copulas. Section 4.3 illustrated how the realis and irrealis interpretations arise in the *enough* construction by supporting the importance of invited inference.

5.   Conclusion

This article has been concerned with both empirical and theoretical aspects of the *enough* construction. Section 3 introduced two approaches concerned with adjectival constructions, which I called the implicit threshold approach in Section 3.1 and the explicit threshold approach in Section 3.2. This study supported the explicit threshold approach, because the implicit threshold counterpart wrongly predicts that modification of open scale adjectives by *almost* is not acceptable in the *enough* construction. In Section 4, I proposed the item- and tense-specific construction in order to fully account for the *enough* construction.

I would like to conclude the paper by stressing its theoretical implications. First, and most importantly, the present study proposed the item- and tense-specific construction. Construction Grammar has recently emphasized the importance of low-level generalizations (e.g. Boas 2009; 2010; Croft 2003; 2012; Iwata 2008; Perek 2015). As such generalization is possible by examining the semantics of verbs, this study will help expand even lower-level generalizations.

Second, this study provided a constructional account of a construction in which adjectives and their scale structures play an important role. Many theories of the syntax-semantics interface (except for truth-conditional theories cited in this paper), including the constructional approach, mostly investigate verb-centered constructions, and little has been done regarding the adjective-centered counterpart (notable exceptions are Jensen's studies, as cited above). However, as this paper argued, a constructional approach has enough descriptive potential to venture up into wider range of linguistic data. I hope that this study has opened the eyes of construction grammarians to adjective-centered constructions.

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