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# Compatibility between constructions: What “non-prototypical” complex constructions reveal

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**Abstract:** This paper aims to develop the theory of Construction Grammar by exploring the issue of compatibility between constructions. Goldberg (2006: 10, 21–22) maintains that an actual expression is typically analyzable as the amalgam of several distinct constructions, predicting that non-conflicts between constructions will result in actual felicitous expressions but unsolved conflicts judgments of infelicity (ibid: 21–22). The present paper discusses the following related issues: (i) the nature of conflicts between constructions; (ii) the mechanisms of “conflict solving”; and (iii) what other consequences (besides felicity/infelicity) do non-conflicts/conflicts between constructions have?

The paper identifies four distinct major patterns of compatibility statuses—complete compatibility, partial compatibility, serious incompatibility and absolute incompatibility, respectively. Basing itself on a survey of both constructed and natural data of several different types of mixed imperative constructions, the paper makes the following claims. First, the complete compatibility between constructions results in felicity and may result in high frequency of use as well (e.g. the imperative in the active voice). Second, partial compatibility leads to felicity but with low frequency of use (e.g. the imperative with the progressive verb). Third, serious incompatibility yields either infelicity or felicity with low frequency of use (e.g. the imperative in the passive voice or the imperative in the subordinate clause). Finally, absolute incompatibility results in infelicity (e.g. Topicalization with imperatives with overt subjects).

The mechanisms of cross-constructional conflicts within mixed imperative constructions as well as their solutions are demonstrated to involve multiple cognitive conceptions/operations—included are the core vs. peripheral portions of semantic structure, adherence to (or departure from) prototypes and conflicts between irreconcilable semantic roles as well as those between rhetorical vs. non-rhetorical interpretations, among others.

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## 1 Introduction

A great deal of research on language structure and learning has been conducted within the Construction Grammar model. This paper focuses on one kind of “interactions of construction,”

which, in my view, has not yet received much attention despite its significance. Specifically, it discusses the phenomenon of *compatibility between constructions*. On Goldberg's approach (2006: 10), an actual linguistic expression is typically analyzable as the amalgam of several distinct constructions—the mono-clausal interrogative in (1) contains (at least) three constructions as listed in (2):

- (1) What did Liza buy Zach?  
 (2) a. Ditransitive construction  
     b. Interrogative construction  
     c. Subject-auxiliary inversion construction

She maintains that non-conflicts between constructions will result in actual felicitous expressions but unsolved conflicts judgments of infelicity (Goldberg 2006: 21–22).

Drawing upon some of the data and findings made in my survey of complex imperative constructions (Takahashi 2012), the present paper deals with the mechanisms of conflicts as well as non-conflicts between constructions. The paper attempts to address and clarify the following three points:

- (i) the nature of conflicts between constructions—exactly how do constructions conflict with each other conceptually?  
 (ii) the mechanisms of “conflict solving”—in what ways are potential conflicts between constructions reconciled?  
 (iii) possible consequences of cross-constructional conflicts

Why are complex imperative constructions interesting? The imperative is a construction lying somewhere between prototypical and non-prototypical according to Goldberg (2006: chapter 8). The imperative is prototypical in that it stands alone, being not dependent on another clause while this construction normally occurs without a grammatical subject and is restricted to main clauses in distribution, hence non-prototypical. Genuinely non-prototypical is an imperative combined with a progressive, passive or perfect verb or an imperative embedded in a subordinate clause. To my knowledge, non-declaratives have escaped the serious attention of researchers working within the framework of Construction Grammar. Analyses of the ways in which an imperative interacts with another construction are expected to contribute to the overall study of construction interactions. My main objective is to point out the phenomena (with both new and relatively well-known examples) in view of construction combining, rather than to present a rigorous account of them.

In section 2, I briefly introduce previous research in which three different kinds of construction interactions are identified. They include distributional, first language learning, and processes of construction combining in adult grammar. Section 3 identifies and illustrates four different kinds of compatibility statuses and their linguistic consequences. Section 4 is the conclusion, in which it addresses implications for Construction Grammar research.

## 2 Three different kinds of construction interactions

The phenomena of “construction interactions” come in at least three kinds. A construction interacts with other constructions in *distribution* (Zwicky 1994), in *first language learning* (Lieven 2009, and others), and in *processes of construction combining* in adult grammar (Goldberg 2006: 22; 2009).

First, let us look at Zwicky’s (1994) article, which pays attention to the issue of whether related constructions compete in distribution in both semantic and formal terms. He identifies two separate subtype of such relationships. One is what he labels “complementary distribution” or “exclusively alternative,” in which related constructions normally have different external distributions as illustrated below in (3) and (4):

- (3) a. ? Pat whimpered the pigs were flying. [Zero Argument C]  
 b. Pat whimpered that the pigs were flying. [*That*-Argument C]
- (4) a. ?? the idea those pigs can fly. [Zero Argument C]  
 b. the idea that those pigs can fly. [*That*-Argument C]

The finite argument clause constructions with complement *that* as in (3a) is not always interchangeable with the one without as in (3b) (p.619). The pair in (4) illustrates a similar distributional contrast regarding arguments of abstract nouns.

Zwicky terms the other relationship “free variation” or “inclusively alternative”, which means that related constructions have essentially the same external distribution, as (5) and (6) below demonstrate:

- (5) a. We will see more birds than will our friends. [SAI]  
 b. We will see more birds than our friends will. [SVP]
- (6) a. I can swim, as can all my friends. [SAI]  
 b. I can swim, as all my friends can. [SVP]

In (5), for example, both SAI and SVP are available in some subordinate clauses introduced by the conjunction *as* (Zwicky 1994: 619–620).

Next, the term “construction interactions” is used in the context of developmental psycholinguistic research. That is, it can mean an account of the development of an inventory of constructions and their inter-relationships. Included are Diesel and Tomasello (2001) on the development of finite complement clauses (e.g. *I think, I mean*) in the speech of young children, as well as Lewis and Elman (2001) as well as Reali and Christensen (2005) on acquisitions of later more complex constructions.

Third, construction interactions may refer to the processes of construction combining in adult grammar. Goldberg (2006: 10, 21–22) addresses the question of how distinct constructions are combined to form actual felicitous sentences:

- (7) A dozen roses, Nina sent her mother!

- (8) a. Ditransitive construction  
 b. Topicalization construction  
 and other (VP, NP, Indefinite determiner, Plural, ...) constructions.

She writes that (2006: 22):

“Constructions are combined freely to form actual expressions as long as they can be construed as not being in conflict (invoking the notion of construal here is intended to allow for processes of accommodation or *coercion*; see Kadman 2001; Michaelis 2004).”

Goldberg maintains that this construal accounts for why the same ditransitive construction appears in active declarative form as well as in question form as in (1) and topicalized form as in (7). The distributions of subject-auxiliary inversion and island phenomena are also analyzed from this perspective.

The essence of her analysis is that participating constructions should share one or more semantic and/or functional features in order for resultant constructions to be acceptable (Goldberg 2006: chapter 8, 2009: 112–113).

This article is primarily concerned with this third kind of construction interactions, which I call *compatibility between constructions*, though all the three dimensions of construction interactions are importantly related.

### 3 Four different kinds of compatibility statuses and their linguistic consequences

This paper is concerned with the third kind of construction interactions, which I call *compatibility between constructions*. In the first step, for reasons that I hope will become apparent, I posit four distinct types of *compatibility statuses*. I label them as *complete compatibility*, *partial compatibility*, *serious incompatibility* and *absolute incompatibility*, respectively. In what follows, I discuss each subtype and its linguistic consequences, with new as well as classic examples.

#### 3-1 Complete compatibility

In this subtype of compatibility status, the following prediction can be made:

- (9) The *complete compatibility* between constructions results in felicity; it results in high frequency of use as well.

One transparent instance of this is the imperative in the active (as opposed to passive) voice:

- (10) Call me later. (cf. \*Be called later.)

In Construction Grammar terms, the imperative here involves at least three (clausal) constructions. They are imperative, active voice, and transitive. Why is this resultant construction

felicitous? Critically, the imperative is typically associated with *an agentive subject* engaged in some *dynamic state-of-affairs* while the active voice is fully compatible with this construal. In my survey of four contemporary American novels, there were a total of 1774 imperative utterances and all of them occurred in the active voice; no single token of passive imperative was found (Takahashi 2012: Chapter 2).

### 3-2 Partial (or incomplete) compatibility

In the second case, *partial compatibility*, combining constructions are compatible with each other in core semantics but not in periphery. In this case, we can make the following prediction:

- (11) The partial compatibility between constructions results in felicity—but with low frequency of use.

This principle in (11) applies to English imperatives with progressive verbs:

- (12) a. (You want to see Professor Higgins?) Be waiting here at six.  
b. Don't be messing about when the bell rings.

The progressive verb normally highlights an interval of a dynamic, though durative and homogeneous, situation (Smith 1994: 226, Declerck 1991: 273, Michaelis 2004: 37). To the extent that the notion of dynamicity is favored by the imperative, no serious incompatibility is involved. Nevertheless, the two constructions are not completely compatible. The progressive lacks the conception of *boundedness*—with the initial and final end points of the situation “off stage” (cf. Langacker 1991b: 92). By contrast, the imperative prefers discrete (or temporally bounded) events to non-discrete (or unbounded) events due to its causal construal (Takahashi 2012: chap. 3).

One may say that in (12) the appearance of temporal expressions solves this potential problem. That is, the adverbial *at six* in (12a) temporally bounds the addressee's durative activity of waiting. Likewise, the appearance of the *when*-clause in (12b) bounds an otherwise unbounded event to a concrete moment in some implicit future time.

### 3-3 Serious incompatibility

In the case of serious incompatibility, combining constructions are mutually incompatible in their respective prototypes. The following prediction can be made with this status:

- (13) The serious incompatibility between constructions leads to either infelicity or felicity with low frequency of use.

English imperatives in the passive such as those below are classifiable as one such case:

- (14) a. ? Be helped by Mark.  
b. ? Be called soon.

The imperative and the passive do not readily combine with each other because of a serious potential conceptual conflict involved. Crucially, the imperative subject prefers an agent, while by contrast the passive subject normally requires a patient. Agent and patient are two semantic roles normally at odds with each other, though this does not mean that the two are never compatible.

Note that in (15) passive imperatives are perfectly acceptable:

- (15) a. Be checked over by a doctor, then you'll be sure there's nothing wrong.  
 b. Be flattered by what she says, it'll make her day.  
 (Bolinger 1977)

Broadly speaking, the imperative and the passive become compatible in (15), on the grounds that the passive construction departs from its prototype—with its subject argument acting more like an “agentive patient.” In (15a), while the subject entity being examined by a doctor appears to involve little agency, the subsequent phrase facilitates a special construal in which the whole sentence can be reinterpreted in terms of “DO SOMETHING (i.e. go to a hospital) SO THAT AS A RESULT YOU'LL be checked over by a doctor.” Due to what Panther and Thornburg (1998; 2007) would term “Result for Action” metonymy, the prior action is inferred and interpreted through the resultant situation explicitly coded by the imperative (cf. Takahashi 2012: chapter 5). In short, the combined constructions in (15) better conform to the conception of the imperative prototype because of the passive's significant departure from its prototype.

A somewhat similar phenomenon can be discerned in a totally different language like Japanese.

- (16) a. \*kare ni sin'you sare-ro  
 him by trust PASS-COMMAND  
 (Lit. 'Be trusted by him')  
 b. kantoku ni sikkari kitaer-arero  
 manager by hard train-PASS-COMMAND  
 (Lit. 'Be trained hard by the manager')

Just like English, passive imperatives in Japanese look normally ill-formed as in (16a) but become more acceptable in (16b) (cf. Nitta 1991: 32). Here again, the felicitous construction in (16b) involves a passive deviate from its norm, with its patient subject construed as more agentive.

A different kind of *serious incompatibility* arises from an imperative combined with a perfect verb. Early generative work (Lees 1964, Akmajian, Steele and Wasow 1979) posited a strict regulation prohibiting the use of perfect verbs in imperatives:

- (17) a. ? Have prepared it.  
 b. ? Have checked the facts.

The Sentences in (17) are extremely awkward but those in (18) aren't:

- (18) a. Do have checked the facts before you start accusing the people.  
(Davies 1986: 16)  
b. Please, do have made the effort at least once!  
(Bolinger 1977: 170).

Perfect sentences locate a situation prior to the time of utterance (Smith 1994: 242). This temporal conception is totally at odds with the future orientation of the imperative. Then why are sentences (18) more acceptable? This is because in (18a) the future marking function of the *before* clause solves the potential conflict. Consider:

- (19) a. Stocks of food cannot be brought in.  
b. Stocks of food cannot be brought in *before the rains start*.

The sentence of (19a) normally has a habitual reading but sentence (19b) with the *before* clause is more future-oriented in interpretation. A similar account holds for (19b). This temporal shifting operation accounts for the improved acceptability of (18).

Furthermore, there is also a serious conflict between an imperative, which is a main-clause phenomenon, and a subordinate construction, which is not. However, (20) with a concessive clause is fine:

- (20) I don't know what to tell you, Maggie, *except just be yourself*.  
(*The New York Times*, March 15, 2006, cited in Takahashi 2012: 177)

Here, the imperative is directive while the *except* clause behaves like a coordinate construction rather than subordinate. In such a case, the imperative is felicitously embedded on the grounds that the subordinate clause departs from its norm, allowing the imperative to convey a focal message.

### 3-4 Absolute incompatibility

Finally, the following prediction can be made concerning the case of absolute incompatibility:

- (21) Absolute incompatibility results in infelicity.

The classic failure of Topicalization with imperatives with overt subjects (Zwicky 1988: 440–442) might be viewed this way—in terms of a clash between two marked constructions:

- (22) a. \**The first forty problems, you solve by next week!*  
b. *YOU solve NP by next week!* [Imperative with S]  
c. *The first forty problems, solve by next week!* [Topicalization]

The failure might be attributed to the difficulty in processing two foci at once, topicalized NP

and overt subject.

In my data (1774 tokens of imperative utterances used in four American fictional stories (Takahashi 2012: chap. 2), there was no instance of an imperative combined with a passive, progressive, perfect verb or embedded in a subordinate construction. This finding suggests that compatibility status may have a serious impact on the frequency of use of a given construction (cf. Bybee 2007).

#### 4 Conclusions and implications for Construction Grammar research

The phenomena of cross-constructional conflicts within complex constructions involve multiple cognitive motivations and operations. So do their conflict solutions. While learning a language includes learning a great variety of constructions (Goldberg 1995; 2006, Kaschak and Glenberg 2004), acquiring the knowledge or ability to determine how one construction is conceptually compatible with another construction I claim is also a critical part of language learning.

On the basis of analyses of several distinct mixed imperative constructions, the main claims made in this paper can be summarized in the following points:

- (i) Four different subtypes of compatibility status are identifiable. They are *complete compatibility*, *partial compatibility*, *serious incompatibility* and *absolute incompatibility*.
- (ii) Conflicts between constructions arise from a variety of factors including a clash between prototypes, semantic cores as well as attentional bias, general processing demands (cf. Goldberg 2009); and
- (iii) Conflict solving involves multiple cognitive operations—including one construction's departure from its prototype (Takahashi 2012: chap. 5) and type shifting operation (Michaelis 2004).

It might be interesting to examine whether these findings can be generalized to other, non-imperative, complex constructions.

A few related questions that remain include:

- (i) Can the four compatibility statuses posited here be generalized to other complex constructions?
- (ii) Given that *complete compatibility* (between constructions) necessarily results in felicity, how about high frequency? Does this compatibility status always leads to high frequency?
- (iii) Is it possible for resultant constructions to occur with (relatively) high frequency when there is no complete compatibility between combining constructions?

Construction Grammar research along this line is expected to lead to a deeper and broader understanding of the creative potential of language as well as how this creativity is constrained regarding the degree of felicity as well as frequency of use (Bybee 2007).

## Notes

\*An earlier version is presented at the 7th International Conference on Construction Grammar held on 10-12 August 2012 at Hankuk University of Foreign Studies, Seoul, Korea. This paper has incorporated portions of data and discussions presented in Takahashi (2012), especially, those in chapters 4, 5, 6, 7 and 8.

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