

Define Constructions Before Constructions Define You: Rhetorical Figures in the AB BEFORE BA Construction

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Abstract: Despite considerable recent attention to a few rhetorical figures (primarily the tropes metaphor and metonymy), linguists have ignored the rhetorical tradition and overlooked the many figures that could help them to explain functional meanings they have long struggled to understand; they have been especially hampered by methods that considered morphology and semantics separately. In an attempt to bridge this gap, we have turned to an emerging template-driven framework called Construction Grammar, into which figures can be incorporated quite naturally. When combined with usage-based theories of general cognition, Construction Grammar provides us with the perfect tools to capture, and make use of, hidden gems found in the figurative tradition which are often overlooked by other frameworks. In this paper, we not only demonstrate just how naturally rhetorical figures can be depicted through constructions, but also show that they are no longer just fancy linguistic décor, through an analysis of the AB BEFORE BA constructions, which prominently leverage chiasmic figuration. Our formal representations draw in particular on embodied construction grammar.

Key words: Construction Grammar, rhetorical figures, chiasmus, cognitive linguistics, multi-lingual

Abstract: Bien que certaines figures rhétoriques (principalement les tropes, la métaphore et la métonymie) aient récemment bénéficié d'une attention considérable, les linguistes n'ont pas tenu compte de la tradition rhétorique et négligé de nombreuses figures qui pourraient les aider à expliquer des significations fonctionnelles qu'ils peinent à comprendre depuis longtemps. Ils ont été

particulièrement gênés par des méthodes qui envisageaient la morphologie et la sémantique séparément. Dans une tentative de combler cette lacune, nous nous sommes tournés vers un cadre émergent appelé la grammaire de construction, dans lequel les figures peuvent être naturellement intégrées. Combinée aux théories d'usage basées sur la cognition générale, la grammaire de construction nous fournit les outils parfaits pour capturer et exploiter des trésors cachés de la tradition figurative, souvent négligés par d'autres cadres. Dans cet article, nous démontrons non seulement à quel point les figures rhétoriques peuvent être représentées naturellement à travers les constructions, mais nous montrons également qu'elles ne sont plus de simples ornements linguistiques, à travers une analyse des constructions de type AB AVANT BA, qui tirent largement parti de la figuration chiasmique. Nos représentations formelles s'appuient en particulier sur la grammaire de construction incarnée.

Mots clés : grammaire de construction, figures rhétoriques, chiasme, linguistique cognitive, multilinguisme

INTRODUCTION

Construction Grammar is a new/old linguistic framework. It's new in that it arose in reaction to the dominant structuralist and generative frameworks of the twentieth century, most notably those developed by Noam Chomsky. It's old in that it has rekindled the ancient grammatical notion of the construction, distinct from any rule-based system, though it has done so with very little awareness of ancient grammar. And it is old also in that it has rekindled the form/function alignment that characterizes rhetorical figures, doing so with even less awareness. We argue, focusing on a small family of highly figured constructions, that rhetorical figures often motivate grammatical constructions and explain their communicative functions. Our evidence includes the several variations of our basic construction, some extensions, and some homologous constructions in French and Persian.

In 2018, *Twitter* user kyle g posted, “im gonna destroy the world before it destroys me” (@helvetikyle).¹ The expression is extreme, but the form it takes is not uncommon. For example, there is a *SingularityHub* article titled, “Ray Kurzweil: We Can Control AI Before It Controls Us” (O’Keefe II), and a video on *YouTube* titled,

“Hear Them Before They Hear You! Logitech G Pro X Gaming Headset Review” (*NoNonsensePC*). Examples from as early as the sixteenth and seventeenth centuries can be found: “Learne to forsake them, before they forsake you” (Bedel) and “Wherefore leave them before they leave you” (Stafford).

What these examples all have in common is that they combine the ancient rhetorical figure of chiasmus (reverse repetition, as in the famous “all for one, one for all”) with a partially prefabricated grammatical construction. That is, they are essentially *both* rhetorical and grammatical. What’s more, they encode a very specific set of meanings that are a necessary function of that rhetorical–grammatical fusion. Neither the rhetoric nor the grammar can account for the meaning independently.

These examples are all of the form (NP^A Aux) V^X NP^B before NP^B (Aux) V^X NP^(A), and the structure evokes a sense of urgency about a particular action (Please see Appendix A for the abbreviation conventions and other features of our formalism). This convergence of rhetoric, grammar, and meaning is a clear indication that we have not found a few coincidentally similar expressions, but a construction in the contemporary sense of Construction Grammar, as pioneered by linguists such as Charles Fillmore, Paul Kay, George Lakoff, and Adele Goldberg (Hoffmann and Trousdale 1–2). We know constructions are memorable (Goldberg, *Explain* 7), but linguists have not been very good at explaining why they are memorable. Rhetoricians can help them with that, at least for constructions like the one we have uncovered. Why does this particular sequence of words seem to resonate so well with our brains? We believe the answer to that lies in the rhetorical figures that participate in the construction. In this paper, we analyze the construction we call the AB BEFORE BA construction using the Embodied Construction Grammar (ECG) framework to highlight just how important rhetorical figures are to this construction.

Our work develops a research programme initially proposed by Mark Turner (“Figure,” “Role”), and builds on recent work at the University of Waterloo by the Rhetoricon Database research group (see Black et al.; Harris, “Grammatical,” “Rules”; Gawryjolek et al.; Harris and Di Marco, “Rhetorical Figures,” “The Cognitive and Computational Programme”; Tu; Wang et al.). We not only bring new data and analyses to the programme with our investigation of an unexplored family of English constructions, we also make preliminary excursions into other languages (French and Persian), finding homologous constructions.

We proceed as follows: First, we introduce the general construction and several popular variations. Next, we present the rhetorical figures manifest in the construction. Then we tie the information from the previous sections into the ECG framework to give a representation of the construction with respect to rhetorical figures and to demonstrate the advantages of including rhetorical figures in the formalism. We also include an exploration of some variations of our construction in English as well as in other languages, confirming that the impact of rhetorical figures is not limited to a single general English construction.

Those are the specifics. Our general argument is much broader and points the way toward a unified approach to meaning that leverages both the rhetorical tradition and contemporary linguistics. We use the AB BEFORE BA construction to argue that rhetorical figures play an important role in grammatical constructions and provide elegant and reusable abstractions for meaning and form that would be of considerable benefit to Construction Grammarians.

THE AB BEFORE BA CONSTRUCTION

A grammatical construction by the simplest definition is a form and meaning pair (Goldberg, *Constructions* 4). Every construction has a form pole and a meaning pole (Langacker). We will thus start by identifying the general form and meaning of the AB BEFORE BA

construction, focusing on the conceptual schemas evoked. Then we will present some variations of the construction.

General Form and Meaning

First, let us look at a few examples of the AB BEFORE BA construction:

- (1) Learn AI before AI learns you (Engineering at Alberta Professional Development)
- (2) I must finish this degree before it finishes me!
(@elsieclara)
- (3) Take control of your workspace before it takes control of you (Marryshow)

Though the syntactic structures vary, with (1) including an implicit *you*, (2) including a deontic modal auxiliary, and (3) including prepositional phrases in the direct objects, they all take the general form (NP^A Aux) V^X NP^B before NP^B V^X NP^A. All three examples also feature second clauses that evoke negative scenarios; something will happen that is bad or unpleasant for NP^A.² The examples take what the speaker construes as a threat—AI, psychological defeat, loss of control—to evoke fear and thereby urge their addressees to take action. The presence of *before*, in particular, gives imminence to the threat and creates a sense of urgency.

Rhetorical figures often leverage iconicity (Brinton; Fahnestock 21–22; Harris, “Chiastic”), and an important principle of iconicity, the principle of sequential order (Haiman), implies that the temporal order of the words and phrases reflects or enforces the temporal order of events; with our construction, this means that the action urged by the AB clause must precede the action threatened in the BA clause (i.e., AB < BA; see Haiman). Through this principle, the AB BEFORE BA construction implies that you have a chance to do

AB now; if you do not take that chance, BA will happen later, rhetorically (or, as linguists would say, pragmatically) creating a sense of urgency. The BA clause states the consequences of failing to enact what the AB clause expresses.

Moreover, the construction also implies that the utterance is comprehensive, since it establishes only two possible options in the decision/action space. One observation that supports this is how the AB BEFORE BA construction is commonly mistaken for the related AB OR BA construction (which also conveys a threat and urges an opposite pre-emptive action). For example, John F. Kennedy's famous line from his speech to the UN general assembly in 1961, (4), is commonly misremembered as (5):

- (4) Mankind must put an end to war or war will put an end to mankind. (Kennedy)
- (5) Mankind must put an end to war, before war puts an end to mankind. ("John F. Kennedy Quotation")

Note that Kennedy's expression depends more fully on the principle of sequential order, because *or* imposes no temporal order, while *before* does. The principle of sequential order is in play for both constructions, but the clausal connectives leverage different dimensions. The subordinator, *before*, emphasizes the opportunity to pre-empt the threat. The disjunctive, *or*, emphasizes the only-two-option decision space.

Both dimensions are operative in both cases, however: the temporal sequence and the comprehensive decision space. The temporal order indicates that the undesirable outcome is imminent. The two-out-of-two option's comprehensiveness further triggers the sense of urgency, as the addressee has only one course of action to avoid negative consequences.

To fully understand the meaning pole of this construction, it is important to look at the contexts in which it occurs. It is mainly in directives used by people who want to see a change in the world around them: politicians convincing their addressees to come together to defeat evil, activists urging their addressees to join their causes, or people who simply think the world can be a better place. This makes Twitter a popular place for the construction. But the causes are not always wholesome ones. In some cases, the construction is used to inject hateful rhetoric in the urgency; if we do not take action against *some group of people* right this moment, destruction awaits us. For example,

- (6) Annihilate Islam before it annihilates Whites, Christians, Europeans and others (@natsocialist).

In this way, the construction can prey on people's instinct to Other and alienate those they do not like or relate to, or to demonize abstract forces, as in (7):

- (7) We need to destroy capitalism before it destroys us
(Socialist Alternative Sydney University)

This use of the construction positions the addressee, enveloped as referent in the A NPs, as separate and distinct from the referent of the B NPs. A must oppose B because B opposes A.

Since the construction commonly occurs with themes of violence, it can also be found in video games. In the 1980s, the computer game Snakebite had the following slogan:

- (8) Eat the snake before it eats you (Orwin)

More recently, an article posted on *Blizzard Watch* had the title

- (9) How to manage your Corruption in patch 8.3 and hug your inner tentacle beast before it hugs you (Rossi)

Combining multiple constructions with the AB BEFORE BA construction, (9) implies that the addressee needs to urgently hug their “inner tentacle beast” before it hugs them. The action of hugging would seem to ameliorate the threatening nature of the construction, but the form of the construction overrides the verb: whatever is going on (and we do not have any knowledge of the game), it is clear that being hugged by your inner tentacle beast is not a good thing.

So, this construction is not limited to negative verbs (e.g., *destroy*); it can occur with neutral verbs (e.g., *manage*) and even positive verbs (e.g., *hug*). Consequently, we can conclude that the conceptual schemas are evoked by the construction and not by the individual verbs, one of the core tenets of Construction Grammar. A list of all the verbs and verb phrases we have found with the construction is provided in Appendix B. For each verb, select examples can be found in Appendix C.

Variants of the AB BEFORE BA Construction

The AB BEFORE BA construction appears in a number of forms in our data. This section describes the most common forms of the construction and a few less common variants.

$V^X NP^B \text{ before } NP^B V^X NP_{2nd;1pl}$

The most common form the construction takes in our data is $V^X NP^B \text{ before } NP^B V^X NP_{2nd;1pl}$. This includes examples like

- (10) Stop speeding before it stops you (“Stop Speeding”)
- (11) End factory farming before it ends us (Viva! Charity)
- (12) Take control of change before it takes control of you (Brown)

This variant features an IMPERATIVE construction of the form V NP (i.e., an imperative containing an explicit object) with an implicit second person (*you* or *we*) followed by the lexeme *before* and a TRANSITIVE construction of the form NP V NP_{2nd;1pl}. What is important about the object in the second clause is that it includes the addressee, who is being urged to take action, but can also include the speaker, a situation which we have formalized in the admittedly awkward subscript _{X2nd;1pl}. The imperative clause precedes a threat of total destruction, such that these examples can be effectively paraphrased as conditional warnings: *If you do not stop speeding, speeding will stop you; If we do not end factory farming, it will cause the end of us; if you don't take control of the changes in your life, they will take control of you*. Prototypical examples have first- and second-person pronouns as the isolated NP. Additionally, this variant of the construction is less compositional than the general form because the matrix clause, the first clause, is an IMPERATIVE construction and the “meaning of the IMPERATIVE construction ... cannot be derived from the lexical meanings of the words alone” (Hilpert 42).

$NP^A V V^X NP^B \textit{before} NP^B V^X NP^A$

Another common variant of our construction takes the form $NP^A V V^X NP^B \textit{before} NP^B V^X NP^A$. Examples include,

- (13) We must destroy the Republican Party before it destroys us. (@Archonoclast)
- (14) We need to screw them before they screw us (@neilsimm)
- (15) im gonna destroy the world before it destroys me (@helvetikyle)
- (16) I'm going to take a bite out of the big apple (before it takes a bite out of me) (Quint)

- (17) You should leave her before she leaves you (8530683641)
- (18) Comcast wants to become Roku before Roku becomes Comcast (Levy)

This variation contains two verbs, the first one often an auxiliary. In (13) – (15) the first clause is a declaration; (13) and (14) are declarations of obligations, while (15) and (16) declare intentions. In the second person, this variant takes the form of an admonition (17). With (18), an intention is indicated but the speech act here is a descriptive statement.

The construction commonly expresses desire or obligation, so it occurs predominantly with deontic verbs, e.g., *need*, *must*, *should*. There is a sense of a moral order that requires fixing or completion in some way: NP^A is obliged to or desires to perform an action on NP^B in order to prevent NP^B from performing that action on them. Prototypical variants of NP^A are first- and second-person pronouns here too, and the NP^B of the second clause in this variant is frequently realized as a pronoun.

Like the examples of the previous variant, (13) – (17) evoke a threat to the addressee: *If we do not screw them, they will screw us. If you do not leave her, she will leave you*. However, (18) is interesting in that it does not threaten the addressee. This special case of the variant usually occurs with company names representing NP^A and NP^B. But there is still a presumed undesirable consequence that awaits Comcast if it does not take action. Extensions of this special case include questions of the form Aux NP^A *become* NP^B *before* NP^B *becomes* NP^A? such as (19) and (20):

- (19) Can Netflix become Disney before Disney becomes Netflix? (Levy)
- (20) Can Netflix become HBO before HBO becomes Netflix? (Asacker and Ramsey).

In both these cases, despite the verb *become* being neutral, the construction implies that if company A does not displace company B, it will be pushed out of the relevant market, presumably being rendered inconsequential or bankrupt. This construction suits the zero-sum implications of a two-option decision space very well, and not coincidentally fits the winner/loser ethos of high capitalism nicely.

Other Variants

While the two variants outlined in the previous sections are the most common, they are not the only ones. Other variations include those of the form (NP^A Aux) V^X NP^B *before* NP^B Aux V^X NP^(A). An interesting example appears in a tweet by @NickTehShonx. In a friendly exchange with another *Twitter* user, he says,

(21) *hugs you before you can hug me* (@NickTehShonx).

The form of this example is not especially odd: V^X NP^B *before* NP^B Aux V^X NP. However, what is interesting is that the tweeter leverages this construction to create an utterance that gives off a sense of competition, albeit comically, despite using a positive verb, *hug* (reminiscent of example 9). Another example from *Twitter*, this time with an explicit NP^A (*I*) and an auxiliary verb (*will*) in the first clause, as well as an auxiliary verb (*can*) in the second, is

(22) I'll leave you before you can leave me (@Tvaninks).

The speaker declares that she will be leaving the addressee before the addressee has a chance to leave her. As such, variants of the construction that include an auxiliary verb in the second clause come off as more of a declaration than a threat, even if that declaration has competitive overtones. The sense of two inverse options that the basic construction conveys, involving two “protagonists,” lends itself to this kind of competition rather well. It recalls a tagline from an old TV show (*Hill Street Blues*) about cops in a gritty precinct of an unnamed but Chicago-like city, in which

the sergeant always told the officers as he sent them out after the morning briefing to

- (23) Do it to them before they do it to you. (“Hill Street Blues”)

Again, we see the zero-sum implications of inverse, mutually exclusive alternatives.

RHETORICAL FIGURES AND CONSTRUCTION GRAMMAR

Existing works that look at the role of rhetorical figures in Construction Grammar include Mark Turner (“Figure”), Graeme Trousdale, and Randy Allen Harris (“Grammatical,” “Rules,” “Chiastic”). Harris argues, for instance, that “many rhetorical figures are constructions in the contemporary sense of Construction Grammar” and, hence, Construction Grammar supports “a rhetorical return to pre-Enlightenment views of language in which rhetoric and grammar were mutually informing disciplines” (“Grammatical” 1). In this section, we go over some of the rhetorical figures that are essential to the analysis of our construction: antimetalepsis, antimetabole, mesodiplosis, and parison. We will then show how rhetorical figures contribute to both the meaning and the form of the construction, making them vital to our arguments and ineliminable from an accurate account of the construction.

The Origin of Constructions

The attentional and mnemonic effects of rhetorical figures, in particular, serve a major explanatory dimension that is underdetermined in Construction Grammar. The core psychological model in Construction Grammar is a usage-based exemplar network (Bybee; Goldberg, *Explain*). The model suggests that language is acquired and maintained through “the universal

human capacity to recognize repeating structures [that is, ones with a lot of usage in a linguistic community] and build analogies on them” (Handl and Graf 123). Somehow, a pattern—let’s say AB BEFORE BA—finds expression by a speaker. Call them Speaker1. They express that pattern. Somehow, that pattern appeals to a hearer, who becomes Speaker2 of the pattern at some future time, whereupon it lodges in other language users (Speaker3, ... SpeakerN), who in turn, express it themselves, lodging it in others, and so on. Many of Speaker3 – SpeakerN are not repeating the initial pattern verbatim, with all the same lexical items, but spinning off variations to suit their contexts and intentions. Meanwhile, Speaker1 is still expressing it, spawning other spawners, to the point where trying to enumerate them is useless. We have, then, a construction propagated culturally through usage. The model for any individual “grammar” in the Constructionist framework takes the form in this theory of an exemplar network, with prototype complexes latticed in among variations.

It’s a good story. But what other account might we offer of a construction like AB BEFORE BA having multiple occurrences in a community and multiple recognizable variants; indeed, in many communities, in multiple languages, in barely charted variants? They all just spontaneously occur to each speaker in a community independently? They all have their universal grammars that just coincidentally now and again exude AB BEFORE BA patterns? There’s only one thing wrong with the Constructionist exemplar story: there’s no real account of the features and mechanisms that might give rise to a construction or to explain why it catches on. People just happen to come up with these arrangements and other people just happen to like them enough to remember them and express them. There is only that loose appeal to analogy as a mechanism for propagation. But what is analogy? Where does it come from?

Analogy is a process satisfying our neurocognitive disposition to find similarities, not just to find *patterns*, that is, but to find *certain kinds of patterns*, and also to forge new “creative” similarities—metaphors, similes, reifications, anthropomorphisms, and so on. This disposition has been well understood since at least the time of Aristotle (e.g., *de Memoria* 451b), as have dispositions for correlation (linguistically realized as metonymy), contrast (linguistically realized as antithesis, and also at work in modes of irony), and recurrence (linguistically realized in all the figures of repetition—rhyme, parison, alliteration, antimetabole). These four principles have been robust throughout the history of thought in theories of memory, learning, and mental activity, becoming codified in the long reign of Association Psychology as the Laws of Contiguity, Similarity, Frequency, and Contrast, and all now having homes in cognitive neuroscience (see Olson and Ramírez 30ff.).

But these four are not the only principles that shape our perception, categorization, and expression of experience. Minimally central to the ways we both experience the world and communicate about our experience, the catalogue should include meronymy (part/whole associations, linguistically realized in synecdoche), sequentiality (before/after associations: incrementum, gradatio, antimetabole), scalarity (greater/lesser associations: hyperbole, meiosis, litotes, also incrementum), positionality (locative relations: rhyme, alliteration, epanaphora), and identity (sameness relations: all the figures of repetition). The experimental and observational literature on these neurocognitive pattern biases is too extensive to review here, but if we just take one of the most central to figuration and to the construction we are reporting on, repetition, landmark studies go back as far as Hermann Ebbinghaus (1885), and a major review of memory research, now almost 50 years old, concluded that “[r]epetition is one of the most powerful variables affecting memory” (Hintzman 47). Indeed, we all recognize instinctively how crucial repetition is to memory, especially linguistic memory. If we want to remember a name or a number or a few grocery items, we repeat them over and over to ourselves.

The intersection of language and neurocognitive pattern biases produced the linguistic configurations we now call *rhetorical figures* in the long, mutually reinforcing evolutionary development of human culture and language. Figures are a cognitive technology of attention and memory. That's why they are so dense in pre-literate works like *Gilgamesh*, the *Iliad*, and the Old Testament, why they structure our proverbs and heuristics and clichés, why we can so easily recall expressions like “All for one, one for all,” “Ask not what your country can do for you; ask what you can do for your country,” and “Do unto others as you would have others do unto you,” and why those expressions propagate so easily through our culture (Rubin). Those expressions all leverage repetition (antimetabole, mesodiplosis, parison), positionality (mesodiplosis), and sequentiality (antimetabole).

So does the AB BEFORE BA family of constructions.

Rhetorical Figures in the AB BEFORE BA Construction

There are multiple rhetorical figures present in the AB BEFORE BA construction. The most obvious is chiasmus, frequently regarded as a single figure, but which we recognize as a cluster of figures defined as the “general pattern of reverse repetition of linguistic constituents.”³ A particular member of the chiastic cluster, antimetalepsis, dominates our data. We define it as “reverse repetition of sense and/or of reference,” visible in this example:

(24) We can control AI before it controls us (O’Keefe II)

Here, the referents encoded by *We* and *AI* swap their syntactic and semantic roles from the first clause to the second clause, where they are coded by the pronouns *us* and *it*. Another example is

(25) stop them before they stop you. (Olukoya)

In (25) the implicit *you* swaps places with *them* (referencing leg cramps) in the second clause and we get an explicit *you*. A more constrained type of antimetalepsis is antimetabole, which requires the reverse repetition of at least two lexemes (and therefore, of their sense and potentially of their reference). An example of antimetabole in a case of the AB BEFORE BA construction is

(26) I'll finish it before it finishes me (Chatwin 234).

Figures of contrast and reversal, such as antimetabole, often collocate with parison, a form of parallelism where phrases or clauses have the same syntactic structure; in fact, Tu's analysis of eighty-six instances of antimetabole, asyndeton, epanaphora, and epiphora revealed that a third of them also contained parison (33). Another frequent collocate of antimetabole found in many instances of the AB BEFORE BA construction is mesodiplosis, or the repetition of a lexeme between landmark constituents, such as two noun phrases.

Rhetorical figures have a significant impact on the meaning of constructions. But it is not just the *presence* of rhetorical figures that mediates form and meaning, but the *collocation* of rhetorical figures. For example, antimetabole and antimetalepsis often trigger a sense of reciprocity between the referring expressions (noun phrases) that are repeated in reverse order. Combining this with parison and/or mesodiplosis essentially seals the form of the construction as soon as the clause prior to "before" has been decided. Take (17) for example: "You should leave her before she leaves you" (8530683641). When "You should leave her" has been uttered, under conditions of parison, mesodiplosis and antimetabole, we are guaranteed that the latter half must be "she leaves you" and guaranteed that reciprocal relations will hold between *you* and *her/ she*. "The antimetabole guarantees two occurrences each of two distinct elements," Harris observes. "The mesodiplosis mediates their relation to each other ... and [t]he parison stabilizes the syntax to ensure the mutuality of that relationship" ("Rules" 236). That mutuality means that the two noun phrases swap syntactic roles

(*you* is first a subject with the direct object *her*, and then *she* is a subject with the direct object *you*) and semantic roles (*you* is first an AGENT with the PATIENT *her*, and then *she* is an AGENT with the PATIENT *you*). The form drives the meaning. And, if one of the figures is not present, the expression would violate the rhetorical conditions of the construction.

Under the conditions of reciprocity, a fixed verb between the two noun phrases (mesodiplosis) and a fixed clausal structure (parison) with the temporal preposition *before* between the two reciprocal clauses, we get a call to action directed at NP^A. The order of the phrasing (iconicity of sequence) tells NP^A that there is a chance to perform the action now or else the action will be performed upon them. The ECG framework, which we explore in the following section, is particularly explanatory here since it posits that the construction triggers the hearer to run a simulation for the latter half of the sentence, which, in turn, evokes a sense of urgency and motivates the hearer to take action to avoid the undesirable consequences. We argue that the concept of reciprocity, triggered by antimetabole or antimetalepsis, and the links between the subject, verb, and object that are enforced by parison and mesodiplosis are crucial in order to simulate this type of situation. For example, look at the following examples of the partially filled STOP NP^B BEFORE NP^B STOP NP construction:

(27) Stop the enemies before they stop you (Olukoya)

(28) Stop them before they stop us (International Spy Museum)

(29) Stop dust before it stops you (MineralProducts1)

As soon as the first clause is expressed, the second clause naturally implies that something else is going to stop the listener because of the evoked force dynamics of reciprocity, triggering a sense of urgency.

Next, we look at how rhetorical figures also contribute to the form. We hypothesize that one reason why this construction, in its several variants, is so common is that it is both more salient and more memorable than a blander expression with the “same” meaning. In particular, the repetition schema is evoked by all the figures found in the construction, and research shows that repetition helps us to retain pieces of information more effectively, and the collocation of figures takes advantage of exactly that (Zhan et al.). Recall that one way to define a construction is by the frequency of usage of a particular pattern (Goldberg, *Explain* 5). Since the repetitive structure of the AB BEFORE BA construction makes it easier to remember, it is more likely to be used going forward, and more likely to propagate culturally. Thus, we can see how the collocation of rhetorical figures can drive the form of a construction; the group of figures creates attention-recruiting and memory-impressing patterns that are more likely to be propagated and become constructions. Table 1 shows some of the figures that are associated with the AB BEFORE BA construction:

Table 1: Figures in Examples of the AB BEFORE BA Construction

Antimetalepsis	We must stop the climate crisis before it stops us
Antimetabole	Can Netflix become Disney before Disney becomes Netflix?
Mesodiplosis	We must stop the climate crisis before it stops us
Parison	Can Netflix become Disney before Disney becomes Netflix?

Note: Each coloured constituent represents one element of the figure.

CROSSOVER OF RHETORICAL FIGURES AND EMBODIED CONSTRUCTION GRAMMAR

To make his argument that rhetorical figures and Construction Grammar are linked, Harris utilizes the Embodied Construction Grammar (ECG) framework to describe the chiasmic A OUT OF B BUT NOT B OUT OF A construction, describing sentences like “It is easier to take the boy out of the country than the country out of the boy” (“Grammatical”). Likewise, by looking at the chiasmic AB BEFORE BA construction through the ECG framework, we further develop Turner’s and Harris’s idea that rhetoric and Construction Grammar are intrinsically tied together (Trousdale’s case is more modest). Before we develop our arguments further, we will briefly introduce Embodied Construction Grammar. Then, along the same lines as Harris, we will use ECG to analyze the AB BEFORE BA construction, further demonstrating the benefits of having rhetorical figures inform our understanding of constructions, this time from “within linguistics,” rather than from “within rhetoric.”

A Brief Introduction to ECG

ECG is a Construction-Grammar framework that aims to link together the cognitive aspect of language with computer science. The framework is unique in the way it uses constructions to describe language use (Chang 51). In ECG, a speaker’s utterances are combined with their communicative context to account for the constructions the speaker is instantiating, and to also generate a semantic specification (semspec). The semspec has information about the conceptual schemas being evoked by the utterance and the relationship between the constructions used; it is then utilized to simulate events, actions, objects, relations, and states. After the simulation is complete, the model will update the communicative context and conceptual schemas of the language user (fig. 1). We should keep in mind that the formalism needs to be precise to allow computational implementations; however, this paper focuses more

on using the framework for constructional analysis of the AB BEFORE BA construction than for implementation.

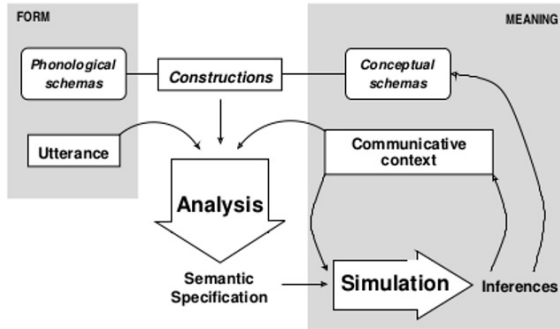


Fig. 1. Overview of the simulation-based language understanding model, consisting of two primary processes: analysis and simulation. (Bergen and Chang, "Simulation-Based Language Understanding" 2)

ECG Analysis of the AB BEFORE BA Construction

In this subsection, we employ the ECG framework and its formalism to outline the AB BEFORE BA construction and to discuss how rhetorical figures can help simplify computation when producing a semantic specification (semspec). As we have argued, there is a core AB BEFORE BA construction, a prototype in exemplar terms, that evokes a sense of urgency conditioned by a negative sentiment. In addition, there are variants of this core construction that add extra information; for example, obligation is emphasized in (13) and (14). To capture that in our analysis, we propose a general construction (fig. 2, next page) that acts as a parent to the more specific variants.

<p>construction A B before B A Chiasmus</p> <p>constructional</p> <p>evokes</p> <p>TEMPORAL RELATION as tr</p> <p>Antimetalepsis as antmps</p> <p>Mesodiplosis as mes</p> <p>Parison as par</p> <p>constituents</p> <p>victim1: NULL REFERRING-EXPRESSION</p> <p>action1, action2: TRANSITIVE VERB</p> <p>victim2, victimizer1, victimizer2: REFERRING-EXPRESSION</p> <p>constraints</p> <p>mes.unit1 ↔ action1</p> <p>mes.unit2 ↔ action2</p> <p>antmps.a2, antmps.b1, antmps.b2: REFERRING-EXPRESSION</p> <p>antmps.b1 ↔ victimizer1</p> <p>antmps.b2 ↔ victimizer2</p> <p>antmps.a2 ↔ victim2</p> <p>par.p1, par.p2: PHRASE</p> <p>par.p1 ← action1 victimizer 1</p> <p>par.p2 ← victimizer2 action2 victim2</p> <p>tr.time: TEMPORAL RELATION</p> <p>tr.time ← before</p> <p>theme: REFERRING-EXPRESSION</p> <p>theme.case ← object</p> <p>agent: REFERRING-EXPRESSION</p> <p>agent.case ← subject</p> <p>form</p> <p>constraints</p> <p>action1_r << victimizer1_r</p> <p>victimizer1_r << before</p> <p>before << victimizer2_r</p> <p>victimizer2_r << action2_r</p> <p>action2_r << victim2_r</p> <p>meaning</p> <p>evokes</p> <p>Horative as hrt</p> <p>hrt.agent ↔ victim1_m ↔ victim2_m</p> <p>hrt.task ↔ action1_m ↔ action2_m</p> <p>hrt.receptient ↔ victimizer1_m ↔ victimizer2_m</p> <p>hrt.when ← immediately</p> <p>self.sentiment ← negative</p>

Fig. 2. ECG formalism for the general ACTION NP^B before NP^B ACTION NP^(A)

Leveraging Chang’s definition of the Referring-Expression construction, we have also introduced a new construction, “Null Referring-Expression” (fig. 3) to account for when the subject of the sentence is inferred, as in examples (27) – (29).

<p>Construction Null Referring-Expression form: null meaning: Referent</p>

Fig. 3. Null Referring-Expression Construction

As these formal descriptions show, in the ECG formalism there are three major sections: constructional, form, and meaning. For the constructional section, everything listed under *constituents* is a child construction that this construction connects. The *evokes* section links the rhetorical figure constructions to our current construction. This is because, as Harris has demonstrated (“Grammatical”), at least some rhetorical figures behave like constructions, as each figure has a general form and a meaning that is triggered by its cognitive affinities (20). However, his suggestion that all rhetorical figures can be handled by Construction Grammar and that the ECG formalism can adequately describe all rhetorical figures is far from being established. In this paper, we are agnostic on that point but we demonstrate that the rhetorical figures we are concerned with can be so represented.

We will not reproduce ECG representations of all the relevant rhetorical figures but figure 4, for the antimetalepsis construction, exemplifies what such representations would look like. In particular, it stipulates that the two pairs of Referring Expressions (A^1 , A^2 and B^1 , B^2) will have the same denotation (sense and reference), but that for at least one of the pairs (the OR is inclusive) the actual words will be different.

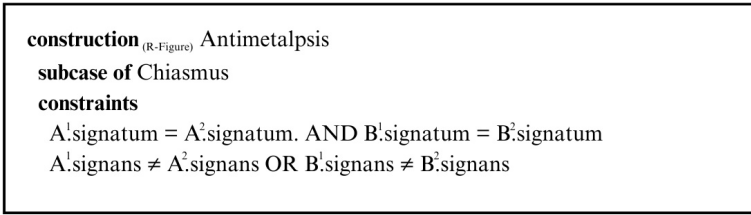


Fig. 4. The Antimetalepsis Construction

So, as represented in figure 4, then, antmps.b1 and antmps.b2 necessarily refer to one entity, and antmps.a1 and antmps.a2 refer to another. The form constraints for the Chiasmus construction (Harris, “Grammatical” 51) of which Antimetalepsis is a subcase, guarantee that the units will follow the lexical order: antmps.a1 (if non-null), antmps.b1, antmps.b2, antmps.a2. Antimetabole would, then, be defined in a similar fashion, with additional lexical requirements. As for mesodiplosis, the form constraints make sure that the predicating constituent is placed in the middle of its clause. Mesodiplosis evokes the repetition schema, which adds the constraint that every unit should have the same basic form. In this case, because mesodiplosis is teaming up with parison and antimetalepsis, it triggers a schema that causes the user to simulate a force–dynamic sense of balance. Finally, parison constrains each clausal unit to follow the same type of syntactic structure, ensuring that the grammatical and semantic roles of A^1 and B^1 are reversed for B^2 and A^2 . The parison construction will activate the meaning schema in this case due to the presence of a chiasitic figure (in this case antimetalepsis). As for the pivotal word *before*, it establishes a temporal relation between the two clauses which we represent through the TEMPORAL RELATION type.

Next, since a construction is a form and meaning pairing, our formalism includes corresponding form and meaning sections. The form section specifies the order of the constituents. Since NP^A can have a null form, we omit putting any constraints on it in the form section of figure 2, and instead, we introduce the constraint in figure 5 when it becomes necessary for those two variants.

<p>Construction Imperative AB Before BA Chiasmus</p> <p>subcase of IMPERATIVE</p> <p>subcase of AB Before BA Chiasmus</p> <p>meaning</p> <p>constraints</p> <p>victim1_m, victim2_m : SECONDPERSONPRON OR FIRSTPERSONPLURALPRON</p> <p>ds.adressee ↔ victim1_m ↔ victim2_m</p> <p>ds.activity ↔ action1_m ↔ action2_m</p>
--

Fig. 5. ECG formalism for NP^A ACTION NP^B BEFORE NP^B ACTION NP^A with (bottom) and without (top) antimetabole

Next, the meaning section specifies the semantic information that is extracted from the construction. The Hortative schema evokes the sentiment of a “call to action” feeling that is evoked by this construction. We also detail where properties in the Hortative schema can fill certain semantic gaps like who the AGENT is, what the task is, etc. (See fig. 6.) We can see this especially clearly in examples (8) and (10) – (12). The last statement in the meaning block conveys the idea that this construction is accompanied by a negative context regardless of what verb is used, as we have seen in examples with verbs like *feel*, *call*, and *see*.

<p>Construction Standard A B Before B A Chiasmus</p> <p>subcase of A B Before B A Chiasmus</p> <p>constructional</p> <p>constituents</p> <p>victim1: REFERRING-EXPRESSION</p> <p>aux: AUXILIARY</p> <p>constraints</p> <p>antmps.a1: REFERRING-EXPRESSION</p> <p>antmps.a1 ↔ victim1</p> <p>par.p1 ← victimizer1 action1 victim1</p> <p>form</p> <p>constraints</p> <p>victim1_f << aux</p> <p>aux << action1_f</p>
--

Fig. 6. ECG Formalism for Imperative ACTION NP^B BEFORE NP^B ACTION NP

Now, with the parent construction defined, we can create child constructions that will inherit all properties from the parent and can override them using the “subcase of” syntax (Chang 13).

In figures 5 and 6, we illustrate the two variants we have discussed. As we stated earlier, “subcase of” indicates the role of inheritance, and any new constraints or meanings we append to inherited values. $V^X NP^B$ before $NP^B V^X NP_{2nd;1pl}$, because it is a command, includes the IMPERATIVE construction defined by Chang (78). One of the meaning schemas that the IMPERATIVE construction evokes is Discourse Space (ds) which allows us to reference concepts happening at the moment of the utterance. As for $NP^A Aux V^X NP^B$ BEFORE $NP^B V^X NP^A$, since we require NP^A and an auxiliary, that goes into our form constraints. We overrode the constraints on *par.p1* and *victim1* by redefining them. For the variants that have lexical repetition, antimetabole is evoked in addition to mesodiplosis, parison, and antimetalepsis, which would give us the construction represented in figure 6.

Now that we have defined the main properties of our general construction and two prominent variants, we will show how rhetorical figures help produce a semspec and assist computation. In order to produce a semspec, one of the first steps is to search for candidate constructions that may account for an utterance. As Bergen and Chang describe it, the most typical approach is to parse bottom-up first (“Simulation-Based Language Understanding” 20); that is, to start with individual word constructions, which provide cues on what other constructions we can evoke to form the utterance.

Since the cued constructions introduce further constraints on each individual constituent, we can also start processing top-down if necessary. One issue that may occur in this process is that there might be ambiguities due to having multiple construction candidates. However, introducing these rhetorical figure constructions will add further constraints on the form and meaning,

thus potentially narrowing down the candidates. Many constructions and constraints should not be regarded as deterministic because the meanings of constructions can change over time (Bergen and Chang, “Embodied Construction Grammar” 188). However, constraints introduced by rhetorical figures can be considered more stable than others. Figural patterns are universal. They are shaped by neurocognitive pattern biases that we all share (as argued in the section “The Origin of Constructions” above). Some evidence for this appears below in the examples of constructions in other languages that are homologous to the English AB BEFORE BA construction. This universal seating of rhetorical figures can also be a helpful heuristic for the computational treatment of constructions.

EXTENSIONS AND CROSS-LINGUAL EXAMPLES

Extensions of the construction and examples across different languages also employ rhetorical figures to add constraints to form and meaning.

Extensions

Extensions of the AB BEFORE BA construction occur when the construction fits into the open slot of another construction. In all such cases, the construction continues to use rhetorical figures to create a sense of urgency and lend a negative sentiment to the second clause, thus retaining its original meaning and form. Let’s look at a few examples.

- (30) I hope humanity exterminates billionaires before they exterminate us. (@NYsocialist1)

Here, “humanity exterminates billionaires before they exterminate us” is a variant of the AB BEFORE BA construction and fits into the clausal complement slot of the VERB + CLAUSAL COMPLEMENT

construction, where the verb slot is filled by the verb *hope* (Goldberg, *Explain* 49). Using antimetalepsis, mesodiplosis, and parison, it still conveys the urgency of the situation, signaling that the speaker knows that if action is not taken soon, the threat of “extermination” hangs over “humanity.”

Somewhat similarly, the AB BEFORE BA construction can be embedded into an iteration of the VERB + CLAUSAL COMPLEMENT construction that we will henceforth refer to as the VERB PHRASE + CLAUSAL COMPLEMENT construction. There are two examples below:

- (31) Help us exterminate cancer before it exterminates any more dear friends... (@KnitChick1979)
- (32) Let’s stop covid before it stops us (Chang-kwang)

In each, a variant of the AB BEFORE BA construction, containing antimetalepsis and mesodiplosis, fills the clausal component slot of the VERB PHRASE + CLAUSAL COMPLEMENT construction. In (31), “exterminate cancer before it exterminates any more dear friends” fills the clausal component slot, and “Help us” acts as the verb phrase. Then, in (32), the verb phrase slot is filled by “Let’s” and the clausal complement slot is filled by “stop covid before it stops us,” which takes a form we have already seen. However, in this example, the first clause is a variant of the IMPERATIVE construction, and *let* is one of the most popular collexemes of the IMPERATIVE construction (Stefanowitsch and Gries 233), so one could also argue that “Let’s stop covid” is an extension of the IMPERATIVE construction, followed by a TRANSITIVE construction.

The AB BEFORE BA construction often co-occurs with the instructional HOW TO V^x NP and X WAYS TO V^x NP constructions, which are mainly used in titles to grab the audience’s attention. Examples include article titles like,

- (33) “5 ways to stop anxiety before it stops you” (Greenberg)

and book titles like,

(34) *How to Kill Stress Before It Kills You* (Culligan)

(35) *How to Control Your Anxiety Before It Controls You* (Ellis)

Similarly to the other extension examples, (33) – (35) use rhetorical figures to create a sense of urgency and compel the audience to read their article or buy their book before it is too late. As such, we can see that the AB BEFORE BA construction commonly co-occurs with myriad different constructions, without losing its meaning or form.

French and Persian

Interestingly, the AB BEFORE BA construction, or homologous constructions to the AB BEFORE BA construction, are a not uncommon cross-linguistic phenomenon.

We have found homologous constructions in two main forms in French: $V^X NP^B AVANT QUE NP^B (NE) NP^A V^X$ and $NP^A V^X NP^B AVANT QUE NP^B (NE) V^X NP^A$. *Avant que* translates to *before*, and the negative particle *ne* is “formal and optional, and used after certain verbs and expressions that have a negative meaning” (Lawless), making explicit the negative sentiment that is more submerged in many of the English examples.

An example of the first instance is a translation of (35) that drops the “How to” segment of the utterance, turning it into the more familiar imperative structure, which can be translated as “Dominate your anxiety before it dominates you.”

(36) Dominez votre anxiété avant qu’elle ne vous domine
(Ellis)

“Dominate your anxiety before it dominates you.”

domin-ez	votre	anxiété	avant	qu=elle	ne	vous	domin-e
dominate-PRS.2PL	your.PL	anxiety	before	comp=3FSG	NEG	you.PL	dominate-PRS.3SG

While this example manifests antimetalepsis, it does not manifest parison or mesodiplosis, which suggests that antimetalepsis might be the primary contributor to the meaning of the construction. It also nicely illustrates how different figures can perform the same function in different languages because of, for instance, local word order differences, since it exhibits an epanalepsis.

An example of the second instance is,

- (37) Nous détruirons le terrorisme avant qu'il ne détruise
l'humanité (Ellis)
“We will destroy terrorism before it destroys humanity.”

nous détruir-ONS le terrorisme avant qu=il ne détruis-e l=humanité
we destroy-FUT.1PL ART terrorism before comp=3MSG NEG destroy-PRS.3SG ART =humanité

The example manifests both antimetalepsis and parison, urging NP^A to take action before “terrorism” destroys “humanity.”

In Persian, too, we have found two main instances of the pattern: BEFORE (NP^B) NP^A V^X, NP^A NP^B V^X and NP^B V^X BEFORE NP^B NP^A V^X. Let’s look at an example of the first instance (Persian is read right-to-left, but we have put the transliteration for both Persian instances in left-to-right order for ease of understanding by English readers. In Persian writing, what might look like an epanaphora to English readers is actually an epiphora in terms of processing. The order of the glosses matches the transliteration order, i.e., is also left-to-right):

- (38) قبل از اینکه شما را پیدا کنند شما را پیدا کنید
(@danielalefsefr)
“Find them before they find you.”

قبل از اینکه شما را پیدا کنند شما را پیدا کنید
qabl az i:n-ke d:n-hd: shomd: rd: pejdb: kon-ænd shomd: d:n-hd: rd: pejdb: kon-i:d
before from DET-COMP DET-PL you.PL DOM find do-PRS.3PL you.PL DET-PL DOM find do-PRS.2PL

This example manifests antimetabole, parison, and epiphora and urges the addressee to find someone before they find them. This is another good illustration of how the functional roles of figures differ among languages. Because of basic word order differences between English and Persian, epiphora serves the same role in Persian that mesodiplosis does in English in constructions of this sort.

Amusingly, an example of the second instance is the title of the Persian translation of Ellis's book *How to Control Anxiety before It Controls You*. As in French, the "how to" is dropped, leaving us with what can be translated as "*Control Your Anxiety before It Controls You.*"

(39) اضطراب خود را کنترل کنید قبل از اینکه شما را کنترل کند
 "Control your anxiety before it controls you."

کند کنترل را شما اینکه از قبل کنید کنترل را خود اضطراب
 ezterv:b-e xod rd: kontrol kon-i:d qebl æz in-ke shomv: rd: kontrol kon-æd
 anxiety-EZ self DOM control do-PRS.2PL before from DET-COMP you.PL DOM control do-PRS.3SG

This example manifests antimetalepsis, not antimetabole, because اضطراب / ezterv:b-e does not repeat; it is implicit in the second clause, a null pronoun very much like the missing *you* in English instances such as (3), (6), (8), and so on. It also manifests epiphora. While the grammatical roles are inverse in the two clauses, there is no parison, again because of the absence of an overt Referring Expression for اضطراب / ezterv:b-e in the second clause, which is again parallel to English instances with null pronouns.

CONCLUSION

Our analysis of the AB BEFORE BA construction shows how rhetorical figures are essential determinants of at least some basic constructions. Much more research is called for, but in addition to the basic data of our argument (and of Harris, "Grammatical"), there are broader conceptual considerations. We know that figures

recruit attention and impress memory, which supports—in fact, enhances—the cognitive usage-based exemplar model Construction Grammar presents. The iconicity dimensions of figures can provide motivation for the form–meaning relation Construction Grammar takes as axiomatic. Further, figures are easily abstractable and describable in Construction Grammar formalisms, such as the formalism associated with ECG.

In the AB before BA Construction, antimetalepsis (or antimetabole) constrains the noun phrases so they must be repeated in reverse order, parison constrains the structure of the two clauses so they must be the same, and mesodiplosis adds an additional constraint that the verb in the middle of each clause must be the same; in this way, the form of the construction is entirely determined by the collocation of these three rhetorical figures. Given the fixed form and the temporal preposition *before*, the meaning, too, is fixed as an urgent call to action meant for the addressee. The inheritance properties of the rhetorical figure constructions also help make the AB BEFORE BA construction easily abstractable, from an ECG perspective. Additionally, we have shown that the rhetorical properties of the construction continue to influence its meaning even when it is combined with other constructions, and that variants exist among other languages as well which leverage chiasmus even if the figurative collocates are different.

The attentional and mnemonic effects of rhetorical figures, in particular, serve a major explanatory dimension that is underdetermined in Construction Grammar. Overall, we are not arguing that all constructions are figured. We are arguing rather that many constructions are figured, and that even many relatively “unfigured” constructions may reflect the neurocognitive pattern biases that figures exploit to grab our attention and burrow into our memories.

Future work on the intersection of rhetorical figures and Construction Grammar should include corpus research. For instance, corpus research on the many verbs that we have not yet tested, e.g., *punch* and *bite*, could be very revealing. Simple *Google* searches of the form **verb* “before” *verb** as well as *Twitter* searches of the form “*verb*” “before” “*verb*” would be a start; however, a more complicated endeavor could include writing scripts based on the ECG formalism to identify examples of the AB BEFORE BA construction in a tagged corpus. From there, we could perform an analysis of the statistical association between the verbs and the constructions, and we could use a resource like WordNet to look at the semantic similarity, as Ellis and Ogden did. This would further test (and, we hypothesize, validate) our abstractions. As our work shows, this kind of study is a natural extension of both rhetorical and linguistic research trajectories that have converged in exciting ways with the development of Construction Grammar and that promise greater insights into language, persuasion, perception, and cognition.

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APPENDIX A: LEGEND OF SYMBOLS USED IN THE
FORMULAE AND TEXT

1	first person
2 (or 2nd)	second person
3	third person
Aux	Auxiliary verb
art	article
comp	complementizer
det	determiner
ds	discourse space
dom	direct object marker
f	feminine
ECG	Embodied Construction Grammar
fut	future tense
m	masculine
neg	negator
NP	Noun Phrase
pl	plural
prs	present tense
semspec	semantic specification
sg	singular

V	Verb
X ⁱ	The numerical superscript indexes referential identity.
X _n	Single numerical subscripts index sequentiality; the subscript can also have the value “null” when there is no phonological (or orthographic) presence for the referent.
X _{nn}	Extended subscripts utilize abbreviations codes for the abbreviated concepts.
(X)	The constituents between the parentheses are optional; they occur in some instances, but not in all.

Note: Any constituents not occurring between parentheses are obligatory; they occur in all instances of the construction.

APPENDIX B: LIST OF VERBS WE HAVE COMMONLY
FOUND WITH THE AB BEFORE BA CONSTRUCTION

<i>annihilate</i>	<i>attack</i>	<i>hug</i>	<i>isolate</i>
<i>become</i>	<i>call</i>	<i>kill</i>	<i>kick</i>
<i>control</i>	<i>destroy</i>	<i>learn</i>	<i>leave</i>
<i>end</i>	<i>exterminate</i>	<i>obliterate</i>	<i>sabotage</i>
<i>feel</i>	<i>find</i>	<i>screw</i>	<i>stop</i>
<i>finish</i>	<i>fuck</i>	<i>take</i>	<i>see</i>
<i>get</i>	<i>hear</i>	<i>manage</i>	

APPENDIX C: OUR DATA, INDEXED BY THE VERB

<i>annihilate</i>	Annihilate the past, before it annihilates you (@_adashofash) why is it so hard to find out ways to completely annihilate it [COVID-19] before it annihilates us? (@SincereIversxn)
<i>attack</i>	Attack panic before it attacks you (Leonard)
<i>become</i>	Uber needs to become Expedia before Expedia becomes Uber (@profgalloway)
<i>call</i>	I'll call it before it calls me (Walter)
<i>control</i>	Control your email (before it controls you) (Beveridge) Control your day before it controls you (Richardson)
<i>destroy</i>	Dear God, please destroy TikTok before it destroys us (@EricNewton2020) Global Warming: destroy it before it destroys you (Behera)
<i>end</i>	We must end the fossil fuel industry before it ends us (@ClimateHuman)
<i>exterminate</i>	Trump's achievement is keeping his repeated campaign promise to use military force to exterminate Isis before Isis exterminates US. (@ardishansen) WE should exterminate the entire Muslim race before Obama exterminates us (@LightHeart114)
<i>feel</i>	Feel the feelings before it feels you (Jamadar)
<i>finish</i>	Idk how, but I'll finish hayfever before hayfever finishes me! (@HenrieVIII) Afghan Elections Dilemma: Finish before it finishes you (Ghanizada)
<i>find</i>	Find him before he finds you (CoSMiiCBLaST; baekhyunniekso)
<i>fuck</i>	Fuck it before it fucks you. (Sir! No Sir!) ⁴
<i>get</i>	We gotta get them before they get us (Terrorstorm) ⁵ I just hope I get it before it gets me (Breaking Barbi) ⁶
<i>hear</i>	A lion can be heard from 5 miles away, so hopefully you hear it before it hears you! (@RemTheBem)
<i>hug</i>	*hugs you before you get a chance to hug them* (@Sir_Spokey)
<i>isolate</i>	Isolate insecurity before it isolates you (de Jong)
<i>kick</i>	Kick cancer before it kicks you (Gupta)

<i>kill</i>	Kill it before it kills you (Morris) “One guy said if someone looked at him the wrong way, he had a voice that said, ‘Kill them before they kill you.’” (Mr.Knick 32)
<i>learn</i>	you better learn discipline now before discipline learns you later..... (@lawyersmitty)
<i>leave</i>	I better leave him before he leaves me (Melissa)
<i>manage</i>	Manage mass tourism before it manages you (Bakker) Manage osteoporosis before it manages you (@CarilionClinic)
<i>obliterate</i>	Obliterate evil from the face of the earth before it obliterates us! (@dougjmac) i will Obliterate the to do list before it obliterates me..... (@centreskies)
<i>sabotage</i>	We will sabotage the presidency before the presidency sabotages the USA and its citizens. (@dsmnla) Anyone with any brains and a love for the UK wants to sabotage Brexit before Brexit sabotages the UK irrevocably. (@cazzacaz63)
<i>see</i>	see it before it sees us (Mayle & Della Valle)
<i>screw</i>	Today is your last chance to screw Brexit before it screws you (@NLebrecht)
<i>stop</i>	Stop malware before it stops you (Trustwave) Stop fusarium before it stops you (Alberta Agriculture and Forestry) Stop Satan before he stops you (Ewanlen) We must stop the climate crisis before it stops us (Guterres, qtd. in Todd)
<i>take</i>	Take control of clutter before it takes control of you (Monte)

NOTES

¹ *Twitter* has rebranded as X, but our data was gathered prior to the name change so we use that terminology in this paper (*Twitter*, *tweet*, etc.).

² While we later base our arguments about attention and memory around neurocognitive pattern biases, which correlate broadly with rhetorical figures and therefore with constructions that are notably figured, we should not discount the effect of sentiment on memory, and the fact that this particular construction has a distinct affective valence.

³ Our definitions are in line with the rhetorical tradition, but we find no single source in the tradition wholly reliable. Scholars participating in the University of Waterloo Rhetoricon Database project are developing a systematic and near-comprehensive ontology of figures, but the project has not yet been published. A beta version of the project's forthcoming website is available at <https://artsresearch.uwaterloo.ca/chiastic/display/>, where many of the definitions we use are stipulated and exemplified.

⁴ From *The Movie Corpus*.

⁵ From *The Movie Corpus*.

⁶ From *The Movie Corpus*.

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