

The *X to where Y* Construction

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0. Introduction

In this paper I present a corpus-based investigation of the English construction illustrated in (1)-(3), which I will call the *X to where Y* (XTWY) construction.¹

- (1) They've messed that up to where it really is a financial burden to pay it.
- (2) It's warm enough to where you can do that kind of bicycling stuff.
- (3) It was a challenge to find time to where we could all do it.

These examples contrast with superficially similar utterances:

- (4) We all kind of migrate back to where mom and dad are from.
- (5) We were going up to where the water was coming down over the rocks.
- (6) After he used it for one year he took it back to where he got it used.

The utterances in (1)-(3) differ from (4)-(6) both structurally and semantically. For instance, the utterances in (4)-(6) contain either an intransitive or causative motion predicate. In each case, the goal of the motion event is expressed by a prepositional phrase headed by *to*, and the goal location is expressed as a nominalized clause in the form of a headless relative clause containing the relative pronoun *where*. These structural properties are illustrated for (4) in (7) below.

- (7) We all kind of migrate back [to [where mom and dad are from]_{NP}]_{PP}

The utterances in (1)-(3), by contrast, do not contain a motion predicate. For instance, the first clause (or X-slot) of (2), *It's warm enough*, is a predicate adjective clause that describes a property. Owing to its stativity, this clause is

¹ Where necessary, the examples have been edited to ensure greater readability: pauses, hesitation markers, false starts, and repetitions have been removed. My thanks to Martin Hilpert, Suzanne Kemmer, Christian Koops, and Sebastian Ross-Hagebaum for their insightful comments on earlier drafts of this work. Needless to say, they are completely absolved of any misuse I have made of their advice.

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incompatible with a goal-denoting prepositional phrase, since directional prepositions indicate a change in location. This incompatibility is illustrated by (8), in which the *wh*-clause refers to a location. Only when a complex preposition containing *to* is substituted does (8) become felicitous, as we see in (9). In this example, the use of *close to* renders a stative locative reading, which can combine with the stativity of the predicate adjective.

(8) *It's warm enough to where the beach is / my parents live / I work.

(9) It's warm enough close to where the beach is / my parents live / I work.

The infelicity of (8) reflects structural differences between utterances such as (4)-(6) and those in (1)-(3). Specifically, in the latter group, the material following *to* is not a headless relative clause functioning as a prepositional complement. If such were the case, a noun phrase would felicitously substitute for the material following *where*, as in (10) below. However, as we see in (11), noun phrase substitution renders examples of the first group infelicitous.

(10) We all kind of migrate back to my parents' hometown.

(11) *It's warm enough to the beach / my parents' house / the office.

So we see that the unstitutability of NPs in utterances such as (1)-(3) illustrates differences in the status of the constituent headed by *to*. If it were a prepositional phrase, its complement could be replaced by a NP. As (11) indicates, however, this is not the case. Moreover, as is illustrated by (8) above, stative clauses do not co-occur with (directional) goal-denoting PPs. Therefore, I propose that in (1)-(3) and similar utterances, *to* does not function as a directional preposition. Instead, *to where* functions as a complex subordinator, expressing an interpositional relation between the preceding and following clauses. In this way, utterances analyzed here as instantiating XTWY differ structurally from superficially similar examples such as (4)-(6). The structure of XTWY tokens is illustrated for (2) in (12) below.

(12) It's warm enough [to where you can do that kind of bicycling stuff]_s

In addition to these syntactic differences, the two sets of examples differ functionally. For instance, as was shown above for (4)-(6), the prepositional phrase denotes a goal, thus expressing a dynamic spatial relation between the subject (or object) of the main clause and a goal location. In (1)-(3), however, the clauses preceding and following *to where* stand in an interpositional, rather than spatial, relation. The two propositions of (1), for example, can be expressed independently, as in (13). In this way, such utterances differ from (4), whose singular propositional content (roughly paraphrased in (14)) depicts a motion event.

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- (13) They've messed that (= credit card interest) up. It is a financial burden to pay it.
(14) We return to our parents' hometown.

As (13) helps illustrate, the propositional content of the first clause stands in relation to that of the second. To bring this relation to the fore, consider the two situations expressed in this paraphrased form of (1). The first proposition depicts a change-of-state event which is viewed unfavorably by the speaker. As a consequence of this change, paying credit card interest has become burdensome. In this way, the situation expressed in the second clause is construed as a result of the change-of-state event in the first clause. This relation is captured by the paraphrase in (15).

- (15) They've messed that up. As a result, it's a financial burden to pay it.

In such utterances, then, we observe an interpropositional relation between the clauses preceding and following *to where*. This relation may be described as one of result or, more precisely in some instances, *construed* result or condition-consequence (as I will discuss in §2.3).

In what follows, I will describe utterances of the type illustrated in (1)-(3) as instantiating a complex construction, *XTWY*, which consists of a lexically-specified element (*to where*) and two slots that typically accept clausal material. (I will discuss exceptions in §2.1). The ensuing discussion will show that the construction functions as a clause-combining strategy, expressing an interpropositional relation between the clauses in the X- and Y-slots. Moreover, we will see that, in a majority of the tokens analyzed, the X-slot receives a scalar interpretation, even in cases in which there is no explicit lexical expression of scalarity. In these instances, the construction imposes a scalar construal on the X-slot content, such that the situation in Y obtains when (i) a process is carried out to a sufficient extent (iteratively or intensely), (ii) a quality changes by a sufficient degree, or (iii) some quality of an event or entity is present to a sufficient degree.

The remainder of this paper is structured as follows. In §1 I briefly describe the data used for the study. I then begin discussing the semantic aspects of the construction in §2.1 by providing an overview of the X- and Y-slots' realizations in attested usage and the relations that obtain between them. §2.2 examines the dynamicity and stativity of the X-slot, followed by a discussion of interpropositional relations in biclausal tokens in §2.3. In §2.4 I describe the scalar quality of X, presenting examples which support analyzing scalarity as a conventionalized aspect of the construction's meaning. I then discuss some of the aspects of the X-slot situation which receive a scalar interpretation.

1. Data

The present paper is based on an analysis of 151 tokens of *XTWY*. These utterances come from two sources, the majority of which were collected from the

Switchboard Corpus (N=134; 88.7%) of telephone conversations (Godfrey and Holliman 1997). An additional sixteen tokens (11.3%), casually observed during conversations with friends, were included in the study. In the following discussion, examples of the construction that come from the *Switchboard* corpus will be marked “SWB.”

2. Semantic Aspects of XTWY

2.1. Overview

The description and analysis put forward here broadly adopt a constructional approach to syntactico-semantic description (Langacker 1987, 1991; Fillmore, et al. 1988; Goldberg 1995; among others). Specifically, I consider (1)-(3) and similar utterances to be instances of a construction in its own right, XTWY, whose unique structural properties (as described above) and associated semantics distinguish it from superficially similar utterances. As the construction’s formal properties have already been discussed, the remainder of this paper will focus primarily on several aspects of the construction’s semantics, including the dynamicity and stativity of X (as well as its event structure more generally), the meaning relation between the clauses in the two constructional slots, X-slot scalarity, and the interplay between these factors. Before we proceed, though, I will describe the structural realizations of the X-slot and the meaning relationship between X and Y for each formal instantiation.

Four types of structures instantiate the X-slot of XTWY: finite and non-finite clauses, NPs, and verb phrases headed by *GET*. Of these, finite clauses constitute the majority (82; 54.2%), followed by VPs headed by *GET* (N= 61; 40.3%), noun phrases (6; 3.9%), and non-finite clauses (2; 1.3%). The Y-slot is invariably realized as a finite clause.

Table 1: Structural instantiations of the X-slot

	N	%	Example
Finite clause	82	54.3	(16) The sunrays baked his brains to where he was super intelligent.
<i>GET</i>	61	40.4	(17) It’s [=Star Trek] gotten more and more to where they are so against anything spiritual. (SWB)
NP	6	4	(18) A sociology course to where a student would get credits if they were to be involved with some kind of community program. (SWB)
Non-finite clause	2	1.3	(19) It was a challenge to find time to where we could all do it. (SWB)
Total	151	100	

As Table 1 indicates, more than half of the tokens have a biclausal structure (N=84; 55.6%). In these utterances, the construction performs a clause-combining function (expressing an interpropositional relation between the two clauses) as we

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see in (16) and (19). For instance, consider (20), in which the two propositions of (16) are presented separately.

(20) The sunrays baked his brains. He was super intelligent.

In this example, which describes an event from a science fiction film, the second proposition is a result of the event depicted in the first; that is, the man became super intelligent as a result of the sun baking his brains. We observe similar relations between the X- and Y-slots in all biclausal examples.

Regarding the second group, where X is instantiated by a VP headed by *get*, we see that such examples differ structurally from biclausal tokens in that the X-slot of this type is occupied by a predicate without a complement. Given the verb *get*'s well-entrenched motion sense, examples such as (17) could be analyzed as a (metaphorical) motion verb that takes a prepositional phrase as complement. Certain aspects of this example and similar utterances, however, support their analysis as instances of XTWY.

For example, in addition to a motion sense, *get* also has a conventionalized change-of-state meaning, as in *to get angry, sleepy, upset*, etc. It is precisely this sense of the verb that we find in the X-slot of (17). In this example, the speaker comments that the show *Star Trek* has increasingly become anti-spiritual. A suitable paraphrase for the first slot would therefore be roughly *It has changed more and more*. The adverbial expression *more and more* in (17) also supports a change-of-state analysis because in its motion sense, *get* does not accept modification by *more*, whereas it does so when expressing a change of state, as we see in the constructed examples (18) and (19).

(21) *I've gotten more and more to where the university is.

(22) I've gotten more and more frustrated.

Thus, (17) is similar to utterances such as (15) and (16) in several ways. First, the verb phrase which instantiates the X-slot of (17) coarsely expresses a change event, the relevant endpoint of which is depicted in the Y-slot. As we will see in §2.2, such a "change-of-state/(construed) result" interpretation overwhelmingly prevails among the tokens. Second, the X-slot predicate receives a scalar interpretation, in part owing to the repeated comparative adverb, as well as the change-of-state semantics of *get*. The discussion in §2.4 will show that, in biclausal examples, the X-slot can receive such a scalar interpretation even in the absence of scalar adverbs or a change-of-state predicate. Therefore, scalarity in the first slot will be analyzed as one part of the construction's conventionalized meaning.

Tokens of the remaining group in Table 1, noun phrases, bear a different relation to the propositional content of the Y-slot. In these utterances, the clause headed by *to where* performs a relativizing function, as we see in (18), repeated in

full here as (23). Owing to limitations on space, it must suffice only to mention and exemplify this infrequent but interesting use of the construction.

- (23) I could see it as a sociology course to where a student would get credits if they were to be involved with some kind of community program. (SWB)

2.2. The X-slot: Dynamicity, Stativity, and Event Structure

The data can further be grouped according to certain semantic properties of the X-slot, including its dynamicity or stativity, as well as whether or not, in those cases where the first clause contains a dynamic predicate, the verb denotes a change of state. Each of these factors bears on the type of interpropositional relation that obtains between the first and second slot of biclausal tokens. Furthermore, as we will see, a “soft” scalar constraint holds on both stative and dynamic non-change-of-state predicates in the X-slot. Table 2 below summarizes the distribution of the three groups discussed in this section: dynamic change-of-state predicates, dynamic non-change-of-state predicates, and stative predicates.

Table 2: Dynamicity, stativity, and change of state in the X-slot

X-slot	N	%	Example
Dynamic	(119)	(78.8)	
<i>Change-of-State</i>	113	74.8	(24) They're getting old enough to where they can help out with the cooking. (SWB)
<i>Non-Change-of-State</i>	6	4	(25) We do it (= buy child designer clothes) to a point but not to where she feels different. (SWB)
Stative	26	17.2	(26) It's illegal enough to where we can't make copies.
(NPs)	(6)	(4)	
Total	151	100	

Roughly three-quarters of the tokens analyzed (N=113; 74.8%) contain a dynamic change-of-state predicate in the first slot. In these utterances, an X-slot participant undergoes a change of state, with the content of Y either following as a (construed) result or simply specifying the endpoint of the change. Examples include (27)-(29).

- (27) You'll have to revise it (= a term paper) to where it'll make a good paper.
 (28) The place (= Soviet Union) has completely turned that much around to where they're not what they used to be. (SWB)
 (29) Styles have certainly changed to where my campus now looks like a typical college campus. (SWB)

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In each of these examples, the change of state is expressed in the X-slot. For instance, in (27), the hypothetical revision involves making corrections to a term paper. As a result of the corrections, the paper will potentially be evaluated more positively. Thus, the change of state in X has a construed result, expressed in Y.

In addition to change-of-state predicates, a small number of examples (N=6; 4%) contain dynamic verbs in the first slot that do not intrinsically denote a state change (such as activity predicates, in the sense of Vendler (1967)). For example, consider (30).

(30) Sometimes I do too much of that (= running) to where my body doesn't feel rested.

Here, performing the X-slot activity "too much" results in a state of fatigue, which is expressed in Y. In this way, the observed change-of-state interpretation—that is, a change from *rested* to *fatigued*—is not reducible to the propositional content of the first clause, but rather is a holistic product of the X- and Y-slots' integration with *to where*. Thus, we see that the construction imposes a change-of-state configuration on the event-state sequence in X and Y above.

It is important to note that in the X-slot of utterances such as (30), in which the predicate does not intrinsically denote a change of state, some aspect of the event receives a scalar interpretation. For instance, the scale in (30) is based on the event's iteration, such that running "too much" has the result expressed in Y. Intensity may also supply the scale, as is indicated by the felicity of (31), constructed on the basis of (30).

(31) Sometimes I run too hard to where my body doesn't feel rested.

We thus observe a "soft" constraint involving scalarity in dynamic, non-change-of-state predicates filling the X-slot.

Excluding noun phrases, the remaining tokens (N=26; 17.2%) contain stative predicates—such as existentials, possessives, and predicate adjective clauses—in the X-slot. The utterances in (32)-(33) illustrate this group.

(32) Nights were cool enough to where they were comfortable. (SWB)

(33) They (= developing neighborhoods in Texas) have just the minimum square footage for lots to where you get a little bit of back yard. (SWB)

In both of these examples, the propositional content of X expresses a state. Specifically, in (32), the first clause depicts a state in which a property of "nights"—that is, their "coolness"—is sufficient for the state in Y to obtain. Thus, nights are judged to be comfortable given a sufficient degree of coolness. Similarly, the possessive clause in the X-slot of (33) expresses a state of sufficiency, in this case an amount sufficient to meet the lower bound of "square footage for lots" in developing Texas neighborhoods. In each example, then, we

see that the X-slot receives a scalar interpretation, such that the sufficiency of a property in (32) and a minimally-sufficient amount of square footage in (33) function as conditions under which the Y-slot situation obtains. This sufficiency of either an X-slot property or, in the case of possessives, an amount of some entity, is present in nearly all examples in which the X-slot clause is stative (N=24; 92.3%), thus constituting a soft constraint similar to the one described above pertaining to dynamic non-change-of-state predicates.

2.3. Interpropositional Relations between X and Y

As was mentioned in §2.1, an interpropositional relation obtains between the first and second slot of biclausal tokens. In such utterances, this relation varies according to the dynamicity or stativity of the X-slot predicate. In this section I will describe and exemplify two interpropositional relations: *result* and *condition-consequence*.

We have seen in a number of examples presented above that when the first slot contains a dynamic predicate (as in (16), (24), (27), etc.), the situation expressed in Y results from the event in X. For instance, consider (34).

(34) Our guild has grown to where we have twenty members. (SWB)

In this example, the X-slot expresses a change-of-state event, namely that of growth or, more explicitly, an increase in group membership. The Y-slot depicts a state in which the guild has come to have twenty members. In this way, Y expresses what we may call the endpoint of the growth event expressed by X. Thus, the two clauses in (34) stand in a result relation, the propositional content of the second clause expressing the relevant endpoint of a change-of-state event predicated in X.

As the use of aspectual terms by different authors may vary somewhat in their designations, some clarification here is necessary. Using the descriptor “change-of-state” in characterizing an event such as “growth” in (34) signifies that the event involves some property changing over time. In the case of (34), this property is the guild’s size. The endpoint of the change is a state in which the property has come to be different in some way. This state will be called the result of the change event.

In (34), we see that the result is expressed in the Y slot. However, in many cases, what is depicted in Y is not the endpoint of a change of state as described above. For example, consider (35).

(35) Styles have certainly changed to where my campus now looks like a typical college campus. (SWB)

Here the speaker comments that students attending his alma mater dress much more informally for class than they once did. The change therefore involves a property of the students, that is, formality of dress, decreasing. What we observe

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in the Y-slot of (35), in comparison with (34), is not the endpoint of this change *per se*, but rather an expression of the speaker's changed perspective of his college. Thus, the speaker's new perspective is construed as resulting from the change of state expressed in X. In cases such as this, then, I will refer to the relation obtaining between X and Y as one of *construed result*, signifying a less direct relation between the change-of-state event and the state expressed in Y than in cases such as (34).

In characterizing the interpropositional relation between a stative clause in X and its clausal counterpart in Y, the notion of result (as defined above) fits poorly, as it designates either the endpoint of a change event or a situation construed as a result of some change. Instead of result, then, the two clauses stand in a *condition-consequence* relation, the X-slot expressing a condition under which the Y-slot situation obtains. This relation is illustrated in (36).

- (36) Probably he or she (= children) is old enough to where they won't tease it.
(=dog) (SWB)

This utterance presupposes that if a child is "old enough" and thus possesses a sufficient degree of maturity, he or she will not tease the pet dog. In this way, the first clause expresses a condition—sufficient maturity—under which the situation depicted by Y follows as a consequence.

As (34)-(36) and the preceding discussion show, biclausal tokens exhibit an interpropositional relation which varies according to the dynamicity of the X-slot predicate. I propose that the relations discussed here, result and condition-consequence, are part of the construction's conventionalized meaning, as we do not observe such relations in superficially similar utterances. Moreover, neither *to* nor *where* function to express these interpropositional relations when used independently of XTWY. It is therefore the construction which expresses the relations present in utterances such as (34)-(36).

2.4. Scalarity

In this section I discuss another aspect of XTWY's meaning: scalarity. As a number of examples above have shown, the X-slot content is oftentimes scalar. For example, in the case of X-slot instantiation by dynamic non-change-of-state predicates and stative predicates, we observe that, in almost every token, some aspect of the situation expressed by the first slot receives a scalar interpretation. Furthermore, as I will demonstrate below, X-slot scalarity is present even in instances where it is not overtly realized, in contrast with (37) below.

- (37) They make things (= clothes) a little bit bigger to where they're not as fitted.
(SWB)

Here, the first slot contains a comparative adjective quantified by "a little bit." Additionally, the process expressed in X is essentially a change-of-state event by

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which clothes become bigger and, consequently, less fitted. Thus both the comparative adjective and the event structure of X enhance the scalar interpretation of the first slot content.

Despite these factors that contribute to the scalarity of X, a number of examples which also receive a scalar interpretation lack both overt lexical expression of scalarity and a predicate with change-of-state semantics. Consider (38), for instance, in which the X-slot predicate is an activity.

(38) He'll be playing to where everything he throws up goes in. (SWB)

Here, the speaker evaluates a basketball player's performance, commenting that at times he plays very well, and consequently makes all of his shots. Of particular interest here is the fact that such an interpretation is not only available, but also clearly intended, despite the lack of any lexical expression of the performance's level of quality. This scalarity is captured by the paraphrase in (39).

(39) He'll be playing *so well that* everything he throws up goes in. (SWB)

Similarly, in (40), the first slot contains no overt lexical expression of scalarity.

(40) I'd be more than glad to pay him if he'd just go out there and do it, and do it to where I don't have to go back and redo it. (SWB)

In this utterance, the speaker comments that she would pay her son to do the yard work provided that he did it to her satisfaction. In other words, the yard work must be done *sufficiently well* so that the speaker does not have to correct it.

As we see in examples (39) and (40) then, the situation depicted by X may receive a scalar interpretation even in the absence of comparative adjectives, scalar adverbs, quantification, or similar strategies for expressing degree or extent. In these utterances, it is the construction that supplies the scalarity, imposing a scalar construal on the X-slot content such that the Y-slot situation obtains as a result or consequence of X's sufficiency. By sufficiency here I mean that some aspect of the situation is construed as being necessarily enough—in terms of iterativity, duration, intensity, amount, etc.—for the situation in Y to obtain. The remainder of this section will focus on which aspect of the first-slot situation receives a scalar interpretation, beginning with those utterances in which the X-slot contains a dynamic predicate.

Table 2 in §2.2 illustrated that, in a majority of the dynamic tokens, the X-slot expresses a change of state. In such utterances, either the process effecting the change or the changed property may receive a scalar interpretation. For instance, consider (41) and (42):

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- (41) The kept boring the block out to where you could get a four hundred small block. (SWB)
(42) They're getting old enough to where they can help out with the cooking. (SWB)

In (41), the process of “boring” is carried out to an extent sufficient for the intended engine modification. Thus, the scale here is based on the duration of a process. The scale in (42), by contrast, measures a gradable property of humans, namely, their age.

The event depicted by dynamic non-change-of-state predicates may receive an intensity interpretation, as we see in (43).

- (43) It (= turtle) bit enough to where I let go [of a ski rope]. (SWB)

Here the speaker is describing a water-skiing trip in which a turtle bit his back while he was in the water. Although the first slot does not contain an adverb such as “hard,” what is graded here is the intensity of the bite, as the preceding discourse, provided below in (43'), indicates.

- (43') ...just as the boat took off a turtle bit me in the middle of the back,
... it didn't hurt too much but it bit enough to where I let go...

In the case of stative clauses, either the property of predicate adjective clauses or the amount of an entity in possessives receives a scalar interpretation. For instance, consider (44) and (45).

- (44) Nights were cool enough to where they were comfortable. (SWB)
(45) They (= politicians) have enough money to where they can do what they want.

The scale in (44) is based on intensity, in this case, a sufficient degree of coolness. In (45), by contrast, the amount of money politicians possess receives a scalar interpretation.

3. Conclusion

In this paper I have presented a corpus-based description of the *X to where Y* construction. As we saw in the introductory discussion, there are non-trivial structural differences between utterances instantiating this construction and those which superficially resemble such utterances. These formal differences parallel semantic ones, such as the expression of interpositional relations including *result* and *condition-consequence*. I have argued that this function of the construction is part of XTWY's conventionalized meaning, as neither *to* nor *where* indicate such relations independent of the construction.

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Concerning the scalarity of X and its relation to Y, I have shown that the situation depicted by Y oftentimes obtains when some aspect of X is present to a sufficient degree. Furthermore, as was demonstrated in §2.4, the situation expressed by X may receive a scalar interpretation, even in those cases where there is no overt expression of scalarity. In such examples, it is XTWY that supplies the scalarity.

References

- Fillmore, C., P. Kay, and M. O'Connor. 1988. Regularity and idiomaticity in grammatical constructions: the case of let alone. *Language* 64:501-38.
- Godfrey, J. and E. Holliman. 1997. *Switchboard Corpus I, Release 2*. Philadelphia: Linguistics Data Consortium.
- Goldberg, Adele. 1995. *Constructions: A Construction Grammar Approach to Argument Structure*. Chicago: University of Chicago Press.
- Langacker, Ronald. 1987. *Foundations of Cognitive Grammar, Vol. 1*. Stanford: Stanford University Press.
- Langacker, Ronald. 1991. *Foundations of Cognitive Grammar, Vol. 2*. Stanford: Stanford University Press.
- Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press.

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