

So Similar, So Different – A Corpus-driven Method of English Periphrastic Causatives

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Abstract: With insights of Talmy's claim of Agonist and Antagonist in his force dynamic theory, this paper explores the English periphrastic causatives "Cause" and "Make" in the FLOB corpus (The Freiburg-LOB Corpus of British English). With purpose to figure out the similarities and differences between "Cause" and "Make" with additional semantic features, we introduce the methods of colligation and semantic prosody in corpus-driven analysis to explore and illustrate the distribution of the English periphrastic causatives "Cause" and "Make". The research results indicate that: (1) Based on the colligation of the English periphrastic causatives "Cause" and "Make", Talmy's claim of the distribution of Agonist and Antagonist can be revised with more details in terms of the active and passive voice. That is, the distribution of Agonist and Antagonist keeps similar with each other in the colligations of English periphrastic causatives of "Cause" and "make". Even though the colligations of "Make" are used more often than "Cause", the Antagonist can be foregrounded as the subject and the Agonist is backgrounded as the direct object in the active voice. Meanwhile, the Agonist is foregrounded as the subject and the Antagonist is backgrounded as the direct object or sometimes omitted in the passive voice. (2) Moreover, "Cause" and "Make" bear some differences with regard to their semantic prosody. "Cause" tends to express negative situations, whereas "Make" remains neutral in its descriptions. In a nutshell, this study of English periphrastic causatives "cause & make" falls into the complementary framework of Talmy's theory about force and causation.

Keywords: English Periphrastic Causative, Cause/Make, Colligation, Semantic Prosody, Force Dynamic Patterns, Agonist (AGO), Antagonist (ANT)

1. Introduction

Similar to the cognitive concept of "metaphor", the term of "causation" is also considered as a common phenomenon we live by. Broadly speaking, the concept of "causation" can occur everywhere at anytime, which has alternative expressions in the linguistic representations. According to Wolff, there are five types of causatives – "causal conjunctions (e.g. *because*), prepositions (e.g. *because of*, *thanks to*), resultatives (e.g. *Peter sanded the stick smooth*), lexical causatives (e.g. *Peter broke the branch*), and periphrastic causatives (e.g. *Peter caused the branch to break*)" – in which "lexical and periphrastic causatives are used to express causal relations in many languages" [19].

(1) a. Alice opened the door.

b. Alice caused the door to open.

In the example above, the verb *opened* in (1) a is a kind of

lexical causative while *caused* in (1) b is a kind of periphrastic causative. Based on pioneer linguists' conclusion, such as "[1, 2, 11–13, 18–21]", periphrastic causatives can express causal relations with two verbs, for example in (1) b, one is the matrix verb *caused* in the matrix clause to express the notion of causing event, while the other is the embedded verb *open* in the embedded clause to express the notion of caused event.

Since "Cause" and "Make" can be expressed with the substitution of each other, only "Cause" and "Make" will be discussed on the basis of corpus-driven analysis from the perspective of colligation and semantic prosody in the following sections. In this paper, Section 2 reviews the previous studies with regard to English Periphrastic Causatives. Section 3 introduces the theoretical background (that is, Talmy's force dynamic theory), research questions and methodology used in the paper. Section 4 proceeds to elucidate the similarities and differences of "Cause" and

“Make” in the English Periphrastic Causatives from the perspective of colligation and semantic prosody in corpus linguistics. Finally, Section 5 is the conclusion of this paper.

2. A Brief Literature Review of English Periphrastic Causatives

Early in the 1970s, Baron has pointed out “the importance causation to the underlying structure of human language”, he gives “a general analysis of linguistic expression of causation in English with special attention to periphrastic causative constructions” [1]. In addition, Lakoff & Johnson considered the notion of causation as “[w]e agree that causation is a basic human concept. It is one of the concepts most often used by people to organize their physical and cultural realities” [8]. Shibatani uses the related property to describe the causation situation with the causing event and caused event [12, 13], which has been widely used in many books, such as Talmy’s “*Toward Cognitive Semantics*” [18]. Talmy points out that there are four types of causation according to the participant’s role and change in the related event – physical causation, volitional causation, affective causation and mental causation [17]. Cole further accounts for the direct or indirect object of the matrix clause verb with the case marking in semantic terms [3]. Langacker’s notion of action chain and billiard-ball model, which involve the transition of energy, can explain the prototypical causation in terms of the nature of the entities taking part in the causative process [9]. Kemmer & Verhagen note that “the grammar of causative constructions has inspired what is probably one of the most extensive literatures in modern Linguistics” [7], which provides the the threefold interpretation of Talmy’s causation types – descriptive, methodological and theoretical [17]. Song’s typology of causation (including AND v. PURP v. COMPACT type of causation) is based on the presence of “someone desire or wish”, which can capture the semantic difference between natural and “force” causation [15]. Moreover, Dixon defines the classification of causation much more widely than Song’s from the perspective of semantic parameters, according to which there are two major types of causative constructions – synthetic (such as morphological, zero-marked and compound causatives) and analytic (such as permissive, periphrastic and isolating) [4]. Talmy takes force dynamics into consideration so as to illustrate causation and the relationship of the participant in it [18]. Based on Talmy’s theoretical hypothesis,

Wolff & Song have made five experiments to examine the relationship between the psychological model of causation and the semantic of causal verbs, they find that Talmy’s force dynamic model can provide a better account than focal set models of causation in psychology [21]. Last but not least, Gilquin classifies the causative constructives into ten types according to the Goldberg’ “Pinciple of No Synonymy” in construction grammar -- “[X cause Y Vto-inf, X get Y Vto-inf, X get Y Vpp, X get Y Vprp, X have Y Vinf, X have Y Vpp, X have Y Vprp, X make Y Vinf, X be made Vto-inf, X make Y Vpp]” [6].

As mentioned above, according to the parameters of the force ynamic theory proposed by Talmy [18], there are three main parameters in it – Agonist, Antagonist and the opposition between them – which can be corresponded with the notion of causee (caused event), causer (causing event) and causative situation. These notions will be elaborated in detail in Section 3. In this paper, only the English periphrastic causative verbs such as “*Cause / Make*” are emphasized and analyzed from the perspective of corpus linguistics with corpus-driven method with the purpose to test and reveal more information in Talmy’s related theory of causation.

3. Theoretical Background, Research Questions and Methodology

3.1. Theoretical Background

Talmy’s theory of force dynamics and causation mentioned in Section 2 will be introduced in this section, and based in which the related research question and methodologies emerge later.

First of all, Talmy gives a brief definition of Agonist and Antagonist as in “Borrowing the terms from physiology where they refer to the opposing members of certain muscle pairs, I call the focal force entity the Agonist and the force element that opposes it the Antagonist” [18]. In the system of diagramming used throughout this chapter to represent force dynamic patterns, the Agonist (AGO) will be indicated by a circle and the Antagonist (ANT) by a concave figure”. There are two basic causative situations in the relationship of their oppositions – one is steady-state force dynamic patterns, the other is shifting force dynamic patterns – see the following Figure 1 and Figure 2, [18].

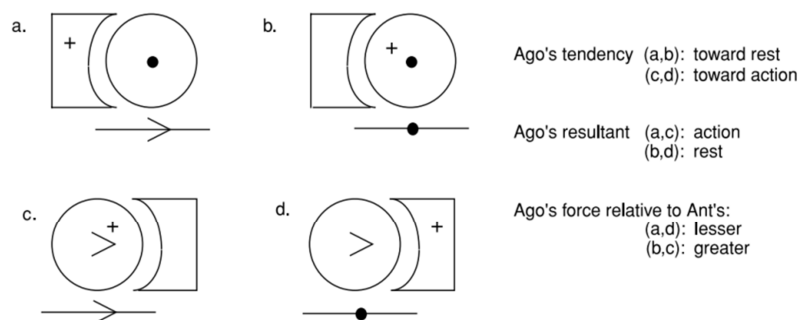


Figure 1. The Basic Steady-state Force dynamic Patterns [18].

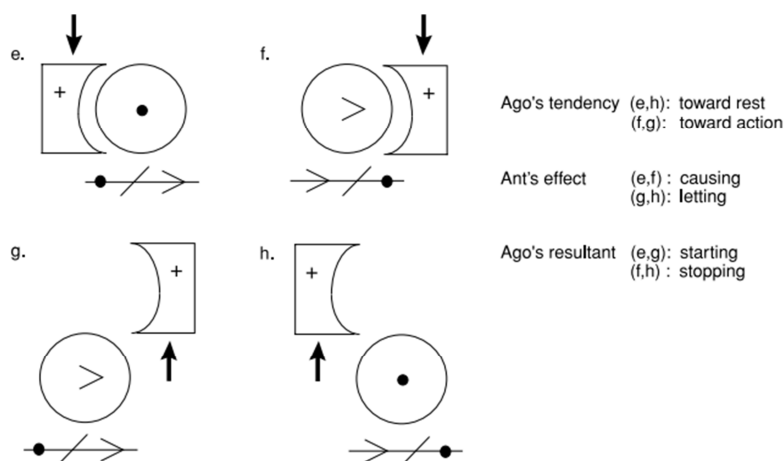


Figure 2. The Basic Shifting Force dynamic Patterns [18].

Based on the corpus-driven method of colligation and semantic prosody, we can figure out the detailed features of Agonist and Antagonist in English periphrastic causatives of “Cause” and “Make”, and then the following research questions can be listed out.

3.2. Research Questions

From the Figures above, when related to the semantics of causation, the Agonist and Antagonist can be corresponded to the related similar notion of causee (or caused event) and causer (or causing event) in causation. Again according to Talmy, he points out that “the Agonist can be foregrounded by subject status, while the Antagonist is backgrounded either by omission or as an oblique constituent with constructions involving intransitive *keep* or prepositional/conjunctive *because (of)*. Alternatively, the same force dynamic patterns can be viewed with the reverse assignment of salience, where the Antagonist is foregrounded as subject and the Agonist backgrounded as the direct object”, from which we can get a conclusion about Talmy’s claim of the property of Agonist and Antagonist as “in the force dynamic patterns, when involving intransitive *keep* or prepositional / conjunctive *because (of)*, Agonist can be foregrounded by subject status and the Antagonist is backgrounded; while in the same force dynamic patterns, Antagonist can be alternatively foregrounded as subject and the Agonist backgrounded as the direct object” [18].

Since the intransitive verb “*keep*” or the prepositional/conjunctive “*because (of)*” bear little contributions to the force dynamic theory, we can obtain Talmy’s another claim, that is, “without involving intransitive *keep* or prepositional/conjunctive *because (of)*, in the force dynamic patterns Antagonist can be foregrounded as subject and the Agonist backgrounded as the direct object”. Therefore, the related research questions are as follows.

- (1) What are the distribution features of English periphrastic causatives “Cause” and “Make” by means of colligation and semantic prosody methods in corpus linguistics? Do they share the distinctive features of Talmy’s force dynamic theory with its Agonist and

Antagonist?

- (2) After figuring out the semantic prosody of the English periphrastic causatives “Cause” and “Make” in the FLOB corpus, what additional features can be found with the properties of Agonist and Antagonist? What are the similarities and differences between “Cause” and “Make”?

3.3. Methodology

In this paper, only the FLOB corpus¹ is selected in this study. Even though it is “corpus-driven” approach that is used in this paper, we still use a semi-automatic method to give a partial yet not exhaustive selection of the extraction in the FLOB corpus, which involves two steps of the selection. The first step is to make the concordances of each English periphrastic causatives, such as “Cause” and “Make”. Meanwhile, the second step is to select the appropriate sentences in the corpus, and then annotate these data. The analytical software of WordSmith 5.0 with the corpus analysis is used in this paper.

4. A Corpus-driven Analysis of English Periphrastic Causatives

The English periphrastic causatives “Cause” and “Make” can share the same deep meaning with regard to causality in causation, and they can also enjoy the common similarities in the surface linguistic representation, they still do exist differences with each other. In order to find those similarities and differences to testify Talmy’s claim of force-dynamics patterns and reveal more detail properties of their Agonists and Antagonists. In this sense, we will explore the colligation and semantic prosody of “Cause” and “Make” with concrete analysis in the following subsections.

¹ The Freiburg update of the LOB corpus (F-LOB) is part of the ‘Brown family’ of corpora. Work on the compilation of F-LOB and its counterpart, the Freiburg-Brown corpus of American English (Frown), began in 1991. Both corpora were intended to match the Brown and LOB corpora as closely as possible in size and composition, with the only difference that they should represent the language of the early 1990s. (see <http://www.helsinki.fi/varieng/CoRD/corpora/FLOB/>)

4.1. Colligation

Regarding the concept of colligation, Firth notes that “[m]eaning by collocation is an abstraction at the syntagmatic level and is not directly concerned with the conceptual or idea approach to the meaning of words” [5]. In addition, Sinclair points out that “Collocation (at present) is the co-occurrence of words with no more than four intervening words,..., Colligation is the co-occurrence of grammatical phenomena, and on the syntagmatic axis our descriptive techniques at present confine us to the co-occurrence of a member of a grammatical class – say a word class – with a word or phrase” [14]. From the above we can indicate that collocation and colligation both concentrate on the “company relationship” of a word. However, the colligation’s company relationship focuses more on the level of grammatical class, which is also the reason why it is selected to be analyzed here.

Furthermore, the FLOB corpus is lead in Wordsmith 5.0 with “Condord” button, then the English periphrastic causatives of “Cause / Make” are selected one by one respectively. See Table 1 and Table 3.

Firstly, we will concentrate on the English periphrastic causatives of “Cause”, we have got 294 concordances after putting and searching the word “cause*”. Since we only the verb forms of “Cause” are taken into consideration, then after deletion of others we can get 112 concordances, and only 20 concordances of them are selected in the Table 1.

Table 1. 20 Examples Selected by Chance in the FLOB corpus on “Cause”.

1	but it immediately	caused	significant somnolence.
2	liability for any loss	caused	by using a defective pro
3	The total number of deaths is	caused	by AIDS in either
4	If a similar process has	caused	the kink at 5 m above the
5	but FXa generated in situ	caused	generation of a band at
6	hundred metres in height	caused	in the past by meteorite
7	geological time-scale which	caused	widespread and severe
8	of which are at least partly	caused	by human activity.
9	advertisement was likely to	cause	considerable offense
10	follow that course which	causes	more pleasure than it
11	diseases were identified	caused	by failure of individual
12	Zones A provision which	caused	us some concern stemmed
13	the fear and anxieties	caused	when offences are commit
14	attack on Dowing Street, all	caused	serious inconvenience
15	into two main groups -those	caused	by abnormal haemoglobins
16	These echoes are	caused	by reflection of the
17	determined to carry out,	cause	and require a much higher
18	to remain extensive, and may	cause	land degradation. If
19	one which we know can	cause	the heart to develop incorrectly.
20	But anxiety can also	cause	you not to take any action

In Table 1, we can find that the constituent of the preposition part of “Cause” can be expressed by nouns (such as loss, deaths, process), pronoun s (such as those, all), which in colligation can be concluded as the forms of [NP+CAUSE+NP, NP+CAUSE+NP+VP,

NP+“BE-CAUSED-BY”+NP]. Furthermore, some of them are active voice and some of them are passive voice, which might change the position of Agonist and Antagonist in the force dynamic pattern in these sentences. Here is the example extracted from Table 1.

- (1) a. It _(ANT) immediately caused significant somnolence _(AGO).
- b. One which _(ANT) we know can cause the heart _(AGO) to develop incorrectly.
- c. The total number of deaths _(AGO) is caused by AIDS _(ANT).

Back to the research question with Talmy’s claim again, “without involving intransitive *keep* or prepositional/conjunctive *because* (of), in the force dynamic patterns Antagonist can be foregrounded as subject and the Agonist backgrounded as the direct object”, we find that only in the active voice within the force dynamic patterns, the Antagonist such as in the example (2) a and (2) b can be foregrounded as subject and the Agonist backgrounded as the direct object, while in the (2) c of the passive voice, the causative situation changes -- the Agonist is foregrounded as subject and the Antagonist is backgrounded as the direct object which is also the logical subject. Thus we can get the conclusion that the causative situation without involving intransitive *keep* or prepositional/conjunctive *because* (of) can be still divided into two considerations -- one is active voice and the other is passive voice -- the former remains the same result while the latter can be viewed with the reverse assignment of salience, and sometimes in the passive voice the Antagonist being backgrounded can be omitted, which can be concluded in the Table 2 clearly in the following.

Table 2. The Distribution of AGO and ANT in the Colligations of “Cause”.

COLLIGATION SALIENCE	Foregrounded	Backgrounded
[NP+CAUSE+NP]	ANT	AGO
[NP+CAUSE+NP+VP]	ANT	AGO
[NP+“BE-CAUSED-BY”+NP]	AGO	ANT

Due to the fact that “Cause” and “Make” share the similar deep meaning of causative situation, the mentioned above is about the “Cause”, then we can check some information about “Make” with the same method of extraction from FLOB corpus. We obtain 2013 concordances of “make*” and “made*”, and only 20 concordances of them are listed out in Table 3.

Table 3. 20 Examples Selected by Chance in the FLOB corpus on “MAKE”.

1	ese two documents	makes	it possible an article
2	This article will	make	no attempt to weave
3	ployment and crime	make	race the prism
4	victory has been done to	make	immigration an incre
5	writ large, will	make	decision-making cumbe
6	e low paid and to	make	the rich pay an extra
7	tion for capitalism is to	make	some gestures
8	ual worker who can always	make	a few pounds
9	ame author, Hamish McRae,	makes	sure in his
10	chief, else you will only	make	the damage worse

11	individualism to	make	it easier to manipulate
12	You don't need to	make	excuses. I like a g
13	No man should be	made	to do something comp
14	deliberately set out to	make	her performance wonderful
15	didn't like and I	made	them towel themselves
16	lent Tunisian sun outside	made	them sweat
17	e they will have	made	no progress had they
18	r of hooks, and he	made	his way along the wo
19	doing his best to	make	not a sound
20	ell, but the weight of it	made	me hesitate. Searchi

From Table 3 we can observe the related forms of “Make” in colligation might be [NP+MAKE+NP, NP+MAKE+NP+VP, NP+MAKE+NP+AP, NP+MAKE+NP+NP, NP+“BE-MADE-TO”+VP]. There are also two voices in them listed in Table 3, one is active and the other is passive with the similar distribution of ANT and AGO of force dynamic pattern as “Cause”, which is concluded clearly in the following example (3) and Table 4.

- (2) a. Who_(ANT) can always make a few sounds_(AGO).
- b. This article_(ANT) will make no attempt_(AGO) to weave.
- c. It_(ANT)'s deliberately set out to make her performance_(AGO) wonderful.
- d. Victory_(ANT) has been done to make immigration_(AGO) an increase.
- e. No man_(AGO) should be made to do something [by others_(ANT)].

Table 4. The Distribution of AGO and ANT in the Colligations of “MAKE”.

Colligation salience	Foregrounded	Backgrounded
[NP+MAKE+NP]	ANT	AGO
[NP+MAKE+NP+VP]	ANT	AGO
[NP+MAKE+NP+AP]	ANT	AGO
[NP+MAKE+NP+NP]	ANT	AGO
[NP+“BE-MADE-TO”+VP]	AGO	ANT

When it is concerned with Talmy's claim of force dynamics, we can go to the conclusion that: in the causative situation of “make”, it can be divided into two situations. One is the active voice, while the other is the passive voice. The former with the four colligations remains foregrounded as subject and the Antagonist is backgrounded as the direct object, whereas the latter can be viewed as the reverse assignment of salience, and sometimes in the passive voice the Antagonist being backgrounded can be omitted.

In a nutshell, the distribution of AGO and ANT in the related force dynamic patterns keeps similar with each other in the colligations of English periphrastic causatives of “Cause” and “make”. Even though the colligations of “Make” spread more widely than “Cause”, the ANT is foregrounded as subject and the AGO is backgrounded as the direct object in the active voice. Meanwhile, the AGO is foregrounded as the subject and the ANT is backgrounded as the direct object or sometimes omitted in the passive voice.

4.2. Semantic Prosody

We can obtain more information from colligations where

lies the semantic prosody. Louw is the first scholar to forward the related idea of semantic prosody that “is attitudinal, and on the pragmatic side of the semantics/pragmatics continuum” (cited from [10]). Then it is much attributed by a lot of linguists such as that Stubbs notes that “there are always semantic relations between node and collocates, and among the collocates themselves” [16], and Sinclair claims that in order to arrive at the semantic prosody, “we have probably come close to the boundary of the lexical item” [14].

The semantic prosody can be divided into three types: positive, negative and neutral, according to which the related statistics is showed in Table 5. The statistics is based on the 20 colligations of “Cause” and “Make” respectively, which are selected by chance from FLOB corpus.

Table 5. The Distribution of Semantic Prosody in “CAUSE & MAKE” Colligations.

Colligation Semantic prosody	Positive	Negative	Neutral
[NP+CAUSE+NP]	0%	75%	25%
[NP+CAUSE+NP+VP]	0%	85%	15%
[NP+“BE-CAUSED-BY”+NP]	0%	80%	20%
[NP+MAKE+NP]	10%	0%	90%
[NP+MAKE+NP+VP]	15%	25%	60%
[NP+MAKE+NP+AP]	20%	10%	70%
[NP+MAKE+NP+NP]	20%	0%	80%
[NP+“BE-MADE-TO”+VP]	15%	0%	85%

From Table 5 we can observe that both of the English periphrastic causatives “cause & make” share the deep meaning of causative situations. However, regarding the surface linguistic representations, the colligations of “Cause” become indicate more negative situations, while the colligations of “Make” remain the neutral situations generally, which can be considered as their additional features of their semantic characteristics corresponding to the second research question.

5. Conclusion

From mentioned above, firstly we find that Talmy's claim of force dynamic patterns of Agonist (AGO) and Antagonist (ANT) can be revised after the corpus-driven analysis of the English periphrastic causatives “cause & make”. That is, without involving intransitive *keep* or prepositional/conjunctive *because (of)*, in the active voice the ANT is foregrounded as subject and the AGO is backgrounded as the direct object, while in the passive voice the AGO is foregrounded as subject and the ANT is backgrounded as the direct object or sometimes omitted. Secondly, there is more detailed information can be figured out found between “Cause” and “Make” from the perspective of semantic prosody where we can observe that “Cause” has much more tendency to be negative and “Make” remains neutral in the linguistic representations of causation.

Furthermore, there are also several limitations in this paper. The first limitation related to the selected corpus. Only FLOB corpus is selected in the corpus-driven analysis, if necessary, the data can be enlarged as possible as we can. In this sense, some other additional features can be figured out in term of the

English periphrastic causatives “cause & make”. The second limitation concerns with the selected English periphrastic causatives, for only “Cause” and “Make” have chosen, beyond which there are also other English periphrastic causatives, such as “let”, “have”, “get”. According to Talmy’s classifications of the corresponding between form and meaning, it can be, to some extent, considered as a set of closed class of linguistic representations. Lastly, the third limitation pertains to the method of introspection. Especially in the classification of semantic prosody, it is based on our introspection and there will inevitably exist some subjective bias.

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