

氏名 (本籍)	かな ざわ しゅん ごと 金 澤 俊 吾 (青森県)
学位の種類	博士 (情報科学)
学位記番号	情 博 第 197 号
学位授与年月日	平成 13 年 3 月 26 日
学位授与の要件	学位規則第 4 条第 1 項該当
研究科、専攻	東北大学大学院情報科学研究科 (博士課程) 人間社会情報科学専攻
学位論文題目	Conflation of Events in Constructions (構文におけるイベントの合成)
論文審査員	(主査) 東北大学教授 福地 肇 東北大学教授 輪田 稔 東北大学教授 関本 英太郎 東北大学助教授 浅川照夫 東北大学助教授 菊地 朗

## ABSTRACT

Through a long history of language studies, much interest has lain in capturing the way in which people recognize things and events in the outer world and describe them in linguistic expressions. It is permitted to say roughly that an event is conveyed by a single sentence which is of particular syntactic construction. So a fruitful task for linguists is to make clear the relationship between the semantic notion of event and syntactic construction. Especially in the 1980's, for example, the study of the semantics of language focused on the lexical meaning of the verb which heads a sentence in an effort to characterize constructions. In the 1990's, Goldberg (1995) assumed that the constructions are semantic units, exhibiting semantic properties which arise from the whole of the syntactic structure, not compositionally determined from substructures.

In studying constructions, linguists have mainly paid attention to the meaning of the verb which enters into the constructions. For example, Randall (1982) elaborates the meaning of the verb which forms resultative constructions, and tries to constrain the possible range of resultative constructions. In addition, Jackendoff (1990) abstracts constructional meanings on the basis of the lexical meaning of the verbs.

In spite of many restrictions that have been proposed in order to restrict the possible sphere of the constructions in English, there are still many problems which should be dealt with. The first is that there are some cases which are free from the semantic restrictions in previous studies. For example, Randall (1982) argues that verbs which occur in resultative constructions are limited to ones which are classified as unaccusative. However, as Verspoor (1997) points out, when the main verbs are unergative, they can occur in resultatives. With respect to depictive constructions, Rapoport (1993) argues that only verbs which imply change of state can appear in depictive constructions. Even if verbs designate change of state of objects, they cannot always appear in depictive constructions, e.g., *break*, *build*, and so on. The second is concerned with thematic relations which are assigned to the host NP of the constructions. Linguists have made much use of thematic labels which are assigned to either the subject or the object NP of the sentence. Thus, Williams (1980) and McNulty (1988) direct their attention to the thematic roles which are assigned to the host NP, and thereby try to restrict the possible set of

depictive predicates. Unfortunately, approaches based on the thematic roles which are inherently specified in each verb run into difficulty. Especially, they cannot explain why host NPs are limited to ones with specific roles. The third comes from the notions of stage-level and individual-level. Generally speaking, whereas a stage-level predicate is supposed to describe a transitory or temporary state of objects, an individual-level predicate is thought to depict an inherent property of objects. Previous studies make use of this notion for characterizing the semantic property of adjectival predicates, but they missed the interaction of the meaning inherent in the constructions with the meaning of an adjectival predicate. Consequently, they cannot clarify why the constructions take some stage-level predicates as their predicates.

Notice that the problems pointed out so far have in common concerns about the lexical property of the verb which heads the construction, i.e., the verbs are unergative or unaccusative; they describe change of the state of entities or not. Analyses in the previous studies have overlooked the lexical properties of other elements than verbs. That is, they have ignored the lexical meaning of an adjective or a preposition which is adjacent to the object NP. Due to this, previous studies on the semantics of constructions pose many problems which cannot be solved satisfactorily.

The purpose of this thesis is to investigate the mechanism of conflation of events in some constructions in English. We deal with the schematic syntactic string, NP-V-NP-AP/PP, and clarify the way in which events are conflated in each construction. In so doing, we assume that the constructions are semantic units, as well as a lexical verb is, and argue that the temporal relations between the events play a crucial role when the conflation of events happens. At the same time, we adopt the Semantic Coherence Principle, which is originally proposed by Goldberg (1995), and propose the Identification Principle. The Semantic Coherence Principle is involved with a semantic restriction on the participant roles associated with the verb and the argument roles of the construction. The Identification Principle concerns with how the events are related to each other at the point in time, a prerequisite for examining the way event conflation occurs in constructions.

In Chapter One, we show that previous studies have incorrectly assumed that the temporal and causal relations between the events play a crucial role in characterizing conflation of events.

Chapter Two deals with the semantics of depictive constructions. We argue that the type of the main verb which appears in depictive constructions cannot constrain the candidates for the host NPs of which the depictive phrase is predicated. Furthermore, thematic roles which are assigned to host NPs cannot be any clue for constraining the possible range of the depictive constructions. Alternatively, we consider the way in which the host NP is involved in the action. We propose that the host NP of a depictive phrase is limited to the one which endures the state denoted by a depictive phrase over the action. This semantic property inherent in depictive constructions affords an excellent insight into the question of why subject-hosted depictive constructions are possible in most of cases whereas object-hosted depictive constructions are highly restricted. The host NP of a depictive phrase is limited to the one which continuously engages in the action from the initial point to the final point in time. In this respect, we cannot find any difference between a subject NP and an object NP. However, they are different from each other with respect to the way in which they are involved in the action. An entity denoted by the subject of the sentence is ordinarily not affected by the action denoted by the main verb. Hence the subject-hosted depictive predicates are possible in most of cases. On the other hand, an entity denoted by the

object of the sentence is ordinarily affected by the action denoted by the verb. Nevertheless, a depictive phrase can be predicated of the object NP, so long as the state denoted by the depictive phrase can be identified at all time, regardless of whether the entity denoted by a relevant NP undergoes change of state. In this way, we can reduce the distribution of depictive constructions to the difference of the way in which the participant is involved in the action.

In Chapter Three, we argue that depictive constructions should be further classified into subtypes, and propose the existence of another type of depictive constructions, i.e., *fake depictive constructions*. The difference between ‘true’ depictive constructions and ‘fake’ depictive constructions lies in what point in time the state denoted by an adjective phrase refers to. Our account, in terms of the temporal relation between the event denoted by the verb and the state denoted by the adjective phrase, can predict the existence of fake depictive constructions. Moreover, it can take care of the case in which *freeze* appears, which is problematic to McNally (1994). Finally, the analysis based on temporal dependency can explain the distribution of fake depictive constructions. Although in previous studies fake depictive constructions have been taken as normal depictive constructions, they are problematic to the analysis proposed by McNulty (1988) and McNally (1994).

Chapter Four discusses the semantics of *way* constructions. Particularly, we argue that the temporal and causal relations between the subevents in the constructions crucially affect their interpretations when the events are conflated in *way* constructions. However, the way in which the events are conflated in cases of means is different from the one in cases of manner. In cases of means, the events are both causally and temporally related to each other. That is, the event denoted by the verb must bear a causal relation to the event designated by the preposition, i.e., a creation of path and the movement of the subject referent. Furthermore, the action denoted by the verb is temporally coextensive with the movement of the subject referent. In cases of manner, on the other hand, there is no causal relation between the event denoted by the verb and the action of the movement. The progress of the event denoted by the verb and that of the movement of the subject referent go in parallel. From this, we can conclude that the difference of the distribution of *way* constructions between the cases of means and the ones of manner can be attributed to the difference of the way in which the events are conflated.

In Chapter Five, we examine the semantic properties of resultative constructions. A claim is made that when conflation of events takes place in resultative constructions, the causal relation between the events must be realized at all points in time. Furthermore, a resultative phrase must bound an event at the final point in time, regardless of the types of verbs which enter into resultative constructions. Because our account appeals to the semantics inherent in resultative constructions, we can correctly delimit the distribution of the host NP of a resultative phrase, without resorting to the syntactic distinction, i.e., whether the NP in question is a direct object or a subject. Since our account takes into consideration the interaction of the meaning of the main verb and the meaning of a resultative phrase, we can explain why the candidates for resultative phrases are limited to subsets of stage-level predicates. The state which a resultative phrase can designate is a state of an entity which is continuously engaged in the action.

To summarize, this thesis makes clear that an approach which is based on the lexical meaning of the verb in the particular constructions is inadequate for characterizing the possible range of constructions, and argues that a constructional approach is required. By recognizing the existence of meaningful constructions, we can clarify

the mechanism of the conflation of events in particular constructions. Specifically, it is argued that temporal and causal relations between the events in each construction are prerequisites for shaping individual constructions. Under our analysis, we can first account for cases which have been left unaccounted for in previous analyses. Secondly, considering the way in which a participant is engaged in the action described by the verb, we can explicate why host NPs in the constructions are limited to the NPs to which specific thematic roles are assigned. For example, in depictive constructions, the participant which can be a host NP must be engaged in the action until the final point in time is reached. Thus, a Goal NP cannot be candidates for a host NP, because the NP is involved in the action only at the final point in time. Finally, our approach based on the temporal and causal relations between the events can assume the tough question of why depictive and resultative predicates are limited to stage-level predicates. The participant which is engaged in the action described by the verb in each construction is involved with the action at the certain time and place. Therefore, the property of objects follows automatically from the candidates for the resultative or depictive predicates.

#### REFERENCES

- Goldberg, Adele. E. (1995) *Constructions: A Construction Grammar Approach to Argument Structure*, The University Chicago Press, Chicago.
- Jackendoff, Ray (1990) *Semantic Structures*, MIT Press, Cambridge, MA.
- McNally, Louise (1994) "Adjunct Predicates and the Individual/Stage Distinction," *The Proceedings of the Twelfth West Coast Conference on Formal Linguistics* 12, 561-576.
- McNulty, Elaine Marie (1988) "The Syntax of Adjunct Predicates," Ph. D. dissertation, University of Connecticut, Storrs.
- Randall, Janet H. (1982) "A Lexical Approach to Causatives," *Journal of Linguistic Research* 2, 77-105.
- Rapoport, Tova R. (1993) "Verbs in Depictives and Resultatives," *Semantics and the Lexicon*, ed. by James Pustejovsky, 163-184, Kluwer Academic Publishers, Dordrecht.
- Verspoor, Conelia Marie (1997) "Contextually-Dependent Lexical Semantics," Ph.D. dissertation, University of Edinburgh.
- Williams, Edwin (1980) "Predication," *Linguistic Inquiry* 11, 203-238.

## 論文審査の結果の要旨

自然言語の意味と統語構造との関係に関する考え方の一つに、構文にはその構成要素の意味に還元できない構文固有の意味が存在する、という構文文法論がある。従来の構文文法論は、構文の意味を主に動詞の語彙的意味と項構造との相関関係から説明しようとしてきたが、本論文は、複数の事象がいかなる時間関係、因果関係をもって一つの構文に複合しているかを実証的に捉え直し、それらの関係によって各種構文の意味的特性を説明しようとする研究であり、全編6章から成る。

第1章は序論であり、先行研究の問題点を指摘すると共に、事象の複合に関する一般的仮説について詳述している。統語上「主語+動詞+目的語+補語」から成る英語の構文は動詞の表わす事象  $e_1$  と補語の表わす事象  $e_2$  の複合構造であり、 $e_1$  および  $e_2$  は構文全体が表わす事象  $E$  の出発時点  $t_0$ 、中間時点  $t_n$ 、終結時点  $t_1$  において、特定の関係を持たなければならない、という原則が提案される。

第2章では、描写構文について、 $E$  への参加者は  $e_2$  の示す状態変化を受けることはなく、また、 $e_1$  と  $e_2$  は時間点  $t_0$ 、 $t_n$ 、 $t_1$  において同時進行する、という二条件を提案する。これらは、従来の研究では未解決のまま残されていた描写補語の主語決定に関する曖昧性を自動的に解決することにつながる重要な考察である。

第3章では、擬似描写構文を取り上げて、これらは描写構文と異なり、 $e_2$  が時間点  $t_0$  においてのみ成立する文であることを明かにしている。従来の研究において、擬似描写構文は描写構文の例外的現象として扱われていたが、本論文の説明原理によって、独立構文としての資格と明示的な意味的説明が与えられることになる。これは重要な知見である。

第4章では、Way 構文に見られる手段解釈と様態解釈の多義性について、事象の複合条件の違いという観点から論じ、経路形成、自発性等の意味の有無を説明することに成功している。

第5章では、結果構文に課される意味的制約を、 $e_1$  と  $e_2$  の使役関係、及び、 $E$  の参加者は終結時点  $t_1$  において  $e_2$  の示す状態変化を受けるという条件によって説明している。

第6章は結論および今後の展望を述べている。

以上要するに、本論文は、一つの事象として認識される構文の意味を複数の原子的事象の複合体として捉え、その複合条件が構文の意味を部分的に決定することを、英語の四つの構文を基に検証したもので、自然言語における意味の統語的実現という視点から情報科学の発展に寄与するところが少なくない。

よって、本論文は博士（情報科学）の学位論文として合格と認める。