Possessive *Have*, Existential *Have*, and Related Phenomena: Binding Relations Represented in Conceptual Structure

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List of Abbreviations

ADE	adessive
COP	copula
DAT	dative
DOC	double object construction
EH	existential *have*
EH-DOC	the DOC counterpart of EH
GEN	genitive
HON	honorifics
LOC	locative
NOM	nominative
OBL	oblique
PH	possessive *have*
PH-DOC	the DOC counterpart of PH
PPC	prepositional phrase construction
PRES	present

Chapter 1

Introduction

1.1. *Have* Constructions and the Double Object Construction

The aim of this thesis is to examine two *have* constructions in English and the corresponding uses of the double object construction in a simplified version of Conceptual Semantics (Jackendoff (1983, 1990, 2002, 2007), Culicover and Jackendoff (2005), Culicover (2009)).

Thus far, many different *have* constructions have been examined by various researchers in various theoretical frameworks (e.g. Benveniste (1966), Bach (1967), Costa (1974), Brugman (1988), Cowper (1989), Brunson and Cowper (1992), Belvin (1993), Langacker (1993, 1995, 2003), Déchaine et al. (1995), Harley (1995, 1997, 1998), Belvin and den Dikken (1997), Partee (1997, 1999), Ritter and Rosen (1997), Nakau (1998), Tham (2005, 2006, 2009)).   The present thesis examines a *have* construction exemplified in (1a) and another *have* construction exemplified in (1b):

(1)   a.   Mike has a wife.

       b.   Mike$_i$ has a hole in his$_i$ shoe.

Have sentences like (1a) are instances of possessive *have* (PH), and those like (1b) are instances of existential *have* (EH).

Not only verbal, pronounced *have* but also unpronounced *have* has been extensively studied (e.g. McCawley (1974), Ross (1976), Pinker (1989), Larson et al. (1997), Harley (2003, 2004), Marušič and Žaucer (2006), Schwarz (2006), Harves (2008), Harves and Kayne (2012)).   For example, intentional transitive verbs like *need* and *want* are assumed to contain

unpronounced *have*s in their representations (e.g. McCawley (1974), Ross (1976), Harves (2008), Harves and Kayne (2012)).[1]

The double object construction (DOC), as exemplified in (2), is another construction that is assumed to contain a *have*-like element in its representation, whether it be semantic or syntactic.[2]

(2)   Mike gave Mary a book.

One reason for this claim is that the indirect and direct objects of the DOC seem to exhibit a *have*-like relation.   Taking (2) for example, the giving event initiated by Mike resulted in Mary having a book.   Observations of this kind have led several researchers to assume a *have*-like element in the representation of the DOC (e.g. Green (1974), Ross (1976), Pinker (1989), Harley (2003)).

One comment on a theory of concealed *have* is in order.   There are roughly two approaches to the issue of concealed, unpronounced *have*.   One is that the verbal *have* is embedded in other constructions.   For example, McCawley (1974) and Ross (1976) assume that verbs like *want* contain the verbal, unpronounced *have* in their syntactic representations. For example, [*want* NP] selects for a covert [*to have* NP] complement clause in the syntax. The unpronounced *have* in this case functions exactly in the same way as the pronounced *have* in *have* constructions.

A second approach hypothesizes that seemingly different constructions are both

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[1]   We briefly deal with verbs like *need* and *want* in the concluding chapter, chapter 6.

[2]   The DOC has also been examined by various researchers in various theoretical frameworks (Green (1974), Oehrle (1976), Baker (1988), Larson (1988, 1990), Pinker (1989), Jackendoff (1990), Goldberg (1992, 1995), Krifka (1999, 2004), Croft (2003), Harley (2003), Beck and Johnson (2004), Pylkkänen (2008), Rappaport Hovav and Levin (2008), Bresnan and Nikitina (2010), Bruening (2010a, b), Ormazabal and Romero (2010, 2012), to name a few).

manifestations of one and the same element.   This approach is taken, for example, by Pinker (1989) and Harley (2003).   Pinker (1989) assumes one and the same element in the semantic representations of both *have* constructions and the DOC.   He assumes that the semantic representation of English *have* constructions like (3a) contains only one function, namely the function HAVE, as presented in (3b):

(3)   a.   Bob has a car.

      b.   [$_{State}$ HAVE ([BOB], [CAR])])]

(Pinker (1989: 190))

The function HAVE takes two arguments.   The first and the second arguments are realized as the surface subject and object, respectively.   He also assumes the same function in the semantic representation of the DOC.   In (4a) and (4b) are given an example of the DOC and its semantic representation, respectively:

(4)   a.   Bob gave Sue a ring.

      b.   [$_{Event}$ ACT ([BOB], [SUE], [$_{State}$ HAVE ([SUE], [RING])])]

(Pinker (1989: 211))

The example in (4a) denotes a situation where the surface subject argument acts on the indirect object argument, resulting in the indirect object argument having the direct object argument.   This is represented in the representation in (4b).

      Working in the generative paradigm, Harley (2003) assumes that the verbal *have* and the DOC share the same element.   She assumes the abstract preposition HAVE, namely P$_{HAVE}$ and hypothesizes that it is incorporated into the BE verb and produces the verbal *have*

(cf. Benveniste (1966), Freeze (1992), Kayne (1993), Guéron (1995)). She also assumes the same preposition P_{HAVE} in the syntactic representation of the DOC. The indirect and direct objects of the DOC appear in specifier position and the complement of this preposition, respectively.

I do follow Pinker and Harley in that certain *have* constructions and the DOC share the same element. Our approach differs from Pinker's in that we do not assume that just one function is responsible for the relation between the subject and object of *have*, and the relation between the indirect and direct objects of the DOC. Aside from advocating different theoretical apparatus, our approach also differs from Harley's in that we do not assume prepositional elements such as P_{HAVE}.

The present thesis deals with the following types of the DOC:[3]

(5) a. Providence gave Mary a child.

b. %This gave him$_i$ several more people at his$_i$ disposal. (*The Money Run*)

The DOC in (5a) and that in (5b) can be regarded as the DOC counterpart of PH and as the DOC counterpart of EH, respectively. In what follows, I call them PH-DOC and EH-DOC for convenience. This thesis argues that PH and PH-DOC share one and the same semantic representation, and that EH and EH-DOC share one and the same semantic representation.

This thesis argues that PH, EH, PH-DOC, and EH-DOC semantically encode the referential dependency of one element on another. Observe, for example, the sentences in (6):

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[3] Some English native speakers find acceptable examples of EH-DOC like (5b), while others do not. The *%* in front of the sentence in (5b) reflects this variability in judgements.

(6)   a.   He has a wife.

        b.   Providence gave him a wife.

(7)   a. He_i has a wife of his_i own.

        b.   Providence gave him_i a wife of his_i own.

Sentences (6a) and (6b) are interpreted as denoting situations described by sentences (7a) and (7b), respectively.　In the case of (6a), the object is referentially dependent on the subject referent; in the case of (6b), the direct object is referentially dependent on the indirect object referent.　These relations are more clearly observed in the sentences in (8), where there are universal quantifiers in the subject and indirect object positions:

(8)   a.   Everyone has a wife.

        b.   Providence gave everyone a wife.

Each member of the sets denoted by the quantifiers in the sentences in (8) has a wife different from any other member's in the same set.　This relation can be represented as in (9):

(9)   a. x_1 has x_1's wife and x_2 has x_2's wife and … and x_n has x_n's wife.

        b. x_1 had/got x_1's wife and x_2 had/got x_2's wife and … and x_n had/got x_n's wife.

                                  ($\{x_1, x_2, … , x_n\}$ = a set of individuals)

The value of the direct object in (8a) covaries with the value of the subject; the value of the direct object in (8b) covaries with the value of the indirect object.

      This referential dependency of one entity upon another is binding relations in the sense of Culicover and Jackendoff (2005).　Culicover and Jackendoff (2005) (C & J (2005)) argue

that binding is a semantic relation, stating that "(f)undamentally, binding is a semantic relation, fixing one phrase's reference in terms of another's," (C & J (2005: 217)) and arguing that this relation is represented over semantic structure.

Their framework takes it that semantic structure represents both prototypical binding relations such as those exhibited by pronouns and reflexives, as exemplified in (10), and those relations demonstrated by constructions such as the *have* constructions and the two uses of the DOC.

(10) a.   Everyone loves his mother.

      b.   Everyone loves himself.

For example, *his* in (10a) and *himself* in (10b) function as bound anaphora. *His* in sentence (10a) and *himself* in (10b) are bound by the quantifiers in the subject positions. Sentence (10a) denotes a situation where there is a different mother per person; sentence (10b) refers to a situation where each member of the set denoted by the quantifier likes himself very much. Thus, the references of bound anaphora are determined intra-sententially; bound anaphora is referentially dependent on its antecedent, which appears within the same sentence. Binding relations in the sense of Culicover and Jackendoff (2005) encompass the relations exhibited by sentences like those in (10) and those demonstrated by the sentences in (8). In prototypical cases such as those in (10), binding relations are represented over both syntactic and semantic structures. In less standard cases, the relations can only be represented over semantic structure. The *have* constructions in question and the two uses of the DOC encode the referential dependency of one element on another, and that dependency is represented only over semantic structure.

This thesis investigates PH, EH, PH-DOC, and EH-DOC in the framework of a

simplified version of Conceptual Semantics (Jackendoff (1983, 1990, 2002, 2007), Culicover and Jackendoff (2005), Culicover (2009)). This theory can appropriately represent binding relations between one element and another. I show that these constructions contain elements that exhibit bound variable-like behaviors like pronouns and reflexives, and claim that the semantic representations of the constructions encode and give rise to these behaviors. This thesis argues that these constructions cannot be fully understood unless one assumes binding relations between one entity and another, and that these relations are best represented over semantic structure.[4]

It should be noted here that not all sentences demonstrate the referential dependence of one element upon another. Observe the sentence in (11), with the verb *know*:

(11)   Everyone knows a {house / wife}.

The sentence in (11) does not refer to situations where each member of the set denoted by the

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[4] It has been observed that there are many different anaphoric elements other than pronouns and reflexives; more specifically, there are many different elements that have both "descriptive content and pronoun-like context-dependence in their meanings" (Partee (1989: 344)). They are not pronouns or reflexives but can be quantified. Examples are *home* (Jackendoff et al. (1993)), *local* (Partee (1989)), *someone else* (Culicover and Jackendoff (1995, 2005)), *same*, *different* (Carlson (1987)), and "all nouns that include relational sense" (Barker (1995)).

One characteristic of these "anaphors" is that they do not correspond with their antecedents formally; nevertheless, they can exhibit bound variable-like behaviors. For example, Jackendoff et al. (1993: 174) observe that *home* can function as a bound variable in cases like (ia); Partee (1989) (cf. Mitchell (1986)) observes that a noun modified by *local* can be quantified in cases like (ib):

(i)   a.   Everybody here wants to go home in time for dinner.   (Jackendoff et al. (1993: 174))
       b.   Every sports fan in the country was at a local bar watching the playoffs.   (cf. Mitchell (1986))

The value of *home* in (ia) covaries with the universal quantifier in subject position, that is, different home per person. The same holds true for the noun modified by *local* in (ib). Sentence (ib) refers to a situation where each member of the set denoted by the quantifier was at his or her local bar and watched the playoffs.

Thus, these "anaphors" can be "bound" by quantifiers just as overt anaphors such as pronouns and reflexives. *Home* and *local* in these cases do not depend on an element external to the sentences in which they appear with respect to their identification; the references of these elements are determined intra-sententially.

quantifier knows a house or wife of his or her own.   In fact, English native speakers find it difficult to understand sentence (11).   These facts indicate that the *have* constructions and the two uses of the DOC encode binding relations between one entity and another.

Furthermore, the *have* constructions and the two uses of the DOC are subject to locality. Consider, for example, (12):

(12)   a.   The girl$_i$'s father$_j$ has {*her$_i$ / his$_j$} (own) group of friends.

       b.   Providence gave Mike's sister a child.

As illustrated in (12a), a pronoun in the object NP, when it appears, has to be anaphoric to a local subject; sentence (12b) describes not a situation in which Mike got a child of his own, but a situation where Mike's sister got a child of her own.   Not all sentences are sensitive to this condition.   Observe (13):

(13)   The girl$_i$'s father$_j$ kicked {her$_i$ / his$_j$ / your} house.

One can do the act of kicking equally to his or her own house and to someone else's house; thus, sentence (13) can contain any pronoun in object position.   In our framework, the locality conditions demonstrated by the *have* constructions and the two uses of the DOC also follow from the semantic specifications of the constructions.

1.2.   Organization

This thesis is organized as follows.   Chapter 2 outlines our theoretical framework, on which the present argument is based.   It outlines basic tenets of Conceptual Semantics and introduces theoretical apparatus which will be employed for the explanation of PH, EH,

PH-DOC, and EH-DOC. Two basic tenets of Conceptual Semantics are (i) that it is a mentalistic theory, and (ii) that it assumes that meaning is decompositional; the semantic representation of a given sentence consists of functions and arguments that they take. Arguments bear semantic roles. This chapter structurally defines the Experiencer role, a semantic role that is taken by the subject of the *have* constructions and the indirect object of the DOC. This chapter also defines binding in conceptual semantics terms and proposes conceptual structures shared by PH and PH-DOC on the one hand, and EH and EH-DOC on the other.

Chapter 3 first overviews two often-made claims pertaining to the *have* constructions: one is that the subject arguments of PH and EH are (human) locations; in terms of semantic roles, they bear only the Location role and do not take any other semantic role. The other is that English *have* has no semantics at all, and that the interpretation of a given *have* sentence is completely determined by the values of the arguments of *have*. Bearing these points in mind, I move on to hypothesize the conceptual structures for PH and EH.

At the end of this chapter, we overview another often-made claim that the construction that we call here PH can be divided into two subclasses, regarding the so-called relationality of a noun in object position. The PH taking a so-called non-relational noun as the surface object is said to denote alienable possession, while the PH taking a so-called relational noun as the surface object is said to denote inalienable possession. This claim entails that the two PHs differ in the volitionality of the subject arguments: the subject of the PH denoting alienable possession refers to a volitional entity, while that of the PH denoting inalienable possession refers to a non-volitional entity. The claim also seems to entail that the subject arguments of the two PHs bear two different semantic roles. Contrary to several previous studies, I demonstrate that there is only one PH, and that the subject argument of PH does not exhibit any volition, regardless of the relationality of a noun in the object NP. The semantic

role taken by the subject argument of PH does not vary in accordance with the relationality of a noun in the object NP.

Chapter 4 examines PH and EH.   This chapter answers the questions raised in chapter 3: the question of whether or not the subject arguments of PH and EH bear only the Location role, and the question of whether or not the verbal *have* lexicalizes certain meanings.   This thesis argues that the subject arguments of PH and EH bear not only the Location role but also the Experiencer role, and that PH and EH do encode a certain meaning.   We examine cases that can be accounted for by assuming that the subject arguments are locations; we also investigate cases that can be explained by assuming that the subject arguments are not merely locations.   The subject arguments of PH and EH bear the Experiencer role by binding another argument.   Both PH and EH encode binding relations between one element and another, and these relations are constructional meanings of PH and EH.   I also demonstrate that the current theory is more adequate than alternative theories.

Chapter 5 investigates PH-DOC and EH-DOC.   I demonstrate that the proposed theoretical framework can explain many different phenomena exhibited by PH-DOC and EH-DOC.   Our framework also elucidates why the verbs *envy* and *forgive,* whose occurrence in the DOC has been claimed to be exceptional and/or idiosyncratic, occur in the DOC; their occurrence in it is motivated.   I then concentrate on the frequently examined question of whether or not the DOC and the corresponding prepositional phrase construction (e.g. *I gave a book to Mary*) encode the same or distinct meanings; I argue that they differ in their meaning.   This claim entails that they have different semantic representations.

Chapter 6 offers concluding remarks.

Chapter 2

Theoretical Background

2.1. Introduction

Chapter 2 outlines our theoretical framework, on which the present argument is based. It outlines basic tenets of Conceptual Semantics and introduces theoretical apparatus which will be employed for the explanation of PH, EH, PH-DOC, and EH-DOC.   Two basic tenets of Conceptual Semantics are (i) that it is a mentalistic theory, and (ii) that it assumes that meaning is decompositional; the semantic representation of a given sentence consists of functions and arguments that they take.   Arguments bear semantic roles.   Conceptual Semantics is a theory of semantics in which the theory called the Parallel Architecture is grounded.   The Parallel Architecture is a linguistic theory developed by Jackendoff (2002, 2007) and Culicover and Jackendoff (2005).   This chapter first overviews the Parallel Architecture briefly.   This chapter also structurally defines the Experiencer role, a semantic role that is taken by the subject of the *have* constructions and the indirect object of the DOC. After that, we briefly take a look at the Causer and Agent roles.   The subject argument of the DOC takes the Causer role.   This chapter also defines binding in terms of conceptual semantics and proposes semantic structures shared by PH and PH-DOC on the one hand, and EH and EH-DOC on the other.   In the framework of Conceptual Semantics, binding relations are represented over semantic structure.

2.2. Conceptual Semantics

The Parallel Architecture is a linguistic theory developed by Jackendoff (2002, 2007) and Culicover and Jackendoff (2005).   The Parallel Architecture assumes that phonological, syntactic, and semantic structures comprise autonomous generative components, and that

there are distinctive primitives and principles of combination to each component. What mediates the relation between two levels of structure is a set of interface components. There are interface rules that deal with word-, phrase-, and sentence-sized structures. These points can be summarized as in (1):

(1)   (Constraint-based generation) The structures of each component are licensed by simultaneously applied component-internal constraints. The relationships among structures in different components are licensed by interface constraints.   (Jackendoff (2009: 650))

There is no concept of sequenced derivation or logical sequence in the Parallel Architecture.

The Parallel Architecture is grounded in a theory of semantics called Conceptual Semantics (Jackendoff (1983, 1987, 1990, 2002, 2007, among others)). There are two basic tenets of Conceptual Semantics: (i) that it is a mentalistic theory, and (ii) that it assumes that meaning is decompositional; the semantic representation of a given sentence consists of functions and arguments that they take, and arguments bear semantic roles. Semantic representation in the theory of Conceptual Semantics is called conceptual structure.

Conceptual structure (CS) is a level of mental structure which represents human conceptualization of the world. Functions are combined to build conceptual structures. In addition, the position that an argument occupies in a given conceptual structure determines the argument's semantic role; that is, a semantic role is a structural concept in Conceptual Semantics. Furthermore, semantic roles that arguments bear in conceptual structures determine the surface realization of the arguments. The basic idea is that the relation between semantic roles and syntactic positions is not random. We thus assume a thematic hierarchy, a syntactic hierarchy, and the default correspondence rules. This section also

explains s(emantic)-selection, the semantic specification of the features of arguments in conceptual structure.   We will turn to each of these one by one.[1]

2.2.1.   Mentalistic Theory

Conceptual Semantics is a mentalistic theory, in that it is a theory of the information that a language user has in his/her mind; a language user employs this information in order to understand utterances.

Traditional philosophy of language stresses the objectivity of language, whereas Conceptual Semantics is meant to study not "ultimate reality," but human concepts.   In (2a) and (2b) are given traditional philosophical formulation of reference and truth, and mentalistic formulation of them, respectively:

(2)   a. Traditional formulation:

i. A phrase P refers to an entity E in the world (or in a possible world).

ii. A sentence S is true if it meets conditions $C_1, \ldots, C_n$ in the world.

b. Mentalistic formulation:

i. A language user LU understands a phrase P to refer to an entity E in the world as LU conceptualizes it.

ii. LU judges a sentence S true if S meets conditions $C_1, \ldots, C_n$ in the world as LU conceptualizes it.

(Jackendoff (2009: 655))

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[1]   Jackendoff (1990, 2007) proposes two distinct levels of tier in a conceptual structure: one is called the "thematic" tier, which represents the location or movement of a theme; the other is called the "action" or "macrorole" tier, which encodes the agent-patient relations in an event.   It is basically the action tier that determines the surface realization of arguments.

This thesis does not assume two distinct levels of tier in a conceptual structure.   But this does not entail that this thesis assumes its invalidity.

Conceptual Semantics treats the apparent objectivity of language in the following way: language users conceptualize the world more or less similarly; as a consequence, language appears to reflect the external, objective world.   In Conceptual Semantics, human conceptualization of the world is represented in a level of mental structure called conceptual structure (CS).   It consists of functions and arguments that they take, and represents meanings of words, phrases, and sentences.   Since Conceptual Semantics, in which conceptual structure is assumed, is a mentalistic theory, conceptual structure "encodes the world as human beings conceptualize it" (Jackendoff (2007: 92)) and does not reflect the external world directly, either.   As mentioned in the previous section, it is independent from syntactic and phonological structures.

2.2.2.   Decompositional Nature of Meaning: Functions and Semantic Roles

Conceptual Semantics takes it that meaning is decompositional.   Meanings of verbs, phrases, and constructions are decomposed into functions and arguments that they take. Functions are combined and build conceptual structures.   Here are some of the functions that have been investigated within Conceptual Semantics:

- Functions that encode spatial location, motion, and orientation.   They all take two arguments: a Theme (the object being located or in motion) and a Place or Path: BE (Theme, Place), GO (Theme, Path), etc.
- Functions that encode Locations and Paths relative to a reference object: AT(X), IN(X), ON(X), TO(X), FROM(X), TOWARD(X), NEAR(X), etc.
- Causative functions that encode a Causer (a Causer or an Agent) being causally connected to an Effect (another Event): CAUSE (Causer/Agent, Effect), LET (Causer, Effect), HELP (Causer, Effect), ENABLE (Causer, Effect), and others.

Let us present two conceptual structures for intransitive verbs.   For example, sentence (3a) has a conceptual structure like the one represented in (3b):

(3)   a.   Max is in Africa.

       b.   [$_{State}$ BE ([$_{Thing}$ MAX], [$_{Place}$ IN ([$_{Thing}$ AFRICA])])]

The verb *is* corresponds to the State-function BE.   The subject of the sentence corresponds to the first argument of BE, and the PP corresponds to the second argument.   The second argument comprises the Place-function IN and its complement, which is realized as the complement of the preposition.   The complement of IN bears the Location role, and it functions as a reference object relative to which the first argument of BE is located.

Another example is given in (4).   Sentence (4a) has a conceptual structure like the one represented in (4b):

(4)   a.   John ran into the room.

       b.   [$_{Event}$ GO ([$_{Thing}$ JOHN], [$_{Path}$ TO ([$_{Place}$ IN ([$_{Thing}$ ROOM])])])]

The verb *ran* corresponds to the Event-function GO, entailing that this is a sentence expressing motion.   The subject of the sentence corresponds to the first argument of GO, and the PP corresponds to the second argument.   The second argument itself decomposes into the Path-function TO and its argument, namely Place; the Place argument is in turn composite: the

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Place-function IN takes a Thing as its argument, which is realized as the complement of the preposition.

Some conceptual structures for transitive verbs comprise a function and a location- or motion-denoting structure embedded under it. For example, the sentence in (5a) has the conceptual structure represented in (5b):

(5) a. Harry buttered the bread.

b. [$_{Event}$ CAUSE ([$_{Thing}$ HARRY], [$_{Event}$ GO ([$_{Thing}$ BUTTER], [$_{Path}$ TO ([$_{Place}$ ON ([$_{Thing}$ BREAD])])])])]

(Jackendoff (1990: 54), with modifications)

In this case, a motion-denoting structure is embedded under the function CAUSE. The subject of the sentence corresponds to the first argument of CAUSE, and the direct object corresponds to the complement of the function ON. In this case, the verb filles in the first argument of GO with information; that is to say, the first argument of GO is not connected to either the subject or the object of the verb.

The arguments of functions bear *thematic roles* or *semantic roles*, which is meant to capture the compositionality of meaning by treating a situation in terms of the roles played by characters appearing in the situation. In Conceptual Semantics, a semantic role is a structural concept, entailing that an argument's semantic role is determined by the position that it occupies in a given conceptual structure. For example, Theme is the first argument of functions like BE and GO, that is, functions that encode spatial location, motion, and orientation. Place is the second argument of function BE, and it in turn has as its internal structure a location-denoting function and the complement it takes. The complement of a location-denoting function bears the Location role. Path is the second argument of function

GO, and it in turn has as its internal structure the function TO and the complement it takes. The complement of TO bears the Goal role.

Semantic roles that we are mainly concerned with here are Theme, Location, Experiencer, Causer, and Agent. Theme is "the character whose location, motion, or change is being asserted;" Location is the place at which Theme exists. The Experiencer role is given different definitions by different researchers; in the next section, we define it. We then move on to a brief discussion on the Causer and Agent roles. We differentiate these two roles: Causer is a character that brings about an event and is not necessarily volitional. Agent, on the other hand, is typically a volitional entity and hence a human being who volitionally brings about an event.

2.2.2.1. Experiencer

An Experiencer is an entity that is involved in a situation regardless of the referent's volitionality (cf. Nakau (1991: 340-341, 1994: 322, 1998: 97)). This thesis proposes that the Experiencer role is taken by the first argument of the function EXP(ERIENCE), which is realized as the subject of *have* and the indirect object of the DOC.[2] Following Nakau (1994), I propose the conceptual structure in (6), where the function EXP(ERIENCE) embeds a location-denoting structure:

(6) $[_{\text{State}} \text{EXP} ([X_i], [_{\text{State}} \text{BE} ([Y], [_{\text{Place}} \text{AT} ([e_i])])])]$ (cf. Nakau (1994: 321))

This structure will be explained in detail later in this section. I assume that the Experiencer role is locative, to which we now turn.

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[2]   Nakau (1994: 323) hints at both the subject of *have* and the indirect object of the DOC bear the same semantic role.

The inherently locative nature of experiencers has been pointed out by many researchers (Verma and Mohanan ed. (1990), Arad (1998), Landau (2010), etc.). Landau (2010), for example, observes examples across languages showing it. For instance, he observes that the experiencer can be expressed as the container where the mental state resides, as exemplified in (7):

(7)   There is in me a great admiration for painters.   (after Arad (1998: 228))

Here, the experiencer *me* is marked by a location-denoting particle. This option is extremely common and productive cross-linguistically. Landau (2010) presents examples from Hebrew ((8)) and Navajo ((9)):

(8) a. yeš   be-Gil eyva   gdola klapey soxney   bituax.
         there-is in-Gil rancor great toward agents-of insurance
         'Gil has a great rancor toward insurance agents.'   (Landau (2010: 11))

     b. yeš   be-tox Rina tšuka   amitit le-omanut.
         there-is inside Rina passion real   to-art
         'Inside Rina there is a real passion for art.'   (Landau (2010: 11))

(9) a. shil   hóóyéé.
         with-me, became fear
         'I am terrified.'

     b. shil   yá' át' ééh.
         with me, it is good
         'I like it.'

                                                          (after Jelinek and Willie (1996: (36, 37)))

In the above examples, experiencers are marked by location-denoting particles that can be translated into *in*, *inside*, and *with* in English.

According to Landau, subject experiencer verbs in some languages almost exclusively take these kinds of locative forms. For example, Irish and Scots Gaelic do not employ nominative experiencers; they employ instead oblique experiencers, introduced by locative particles. Consider Irish examples in (10) and Scots Gaelic examples in (11):

(10) a. Tà fuath do Y ag X.

      is hatred to Y at X

      'X hates Y.'

   b. Tà eagla roimh Y ar X.

      is fear before Y on X

      'X is afraid of Y.'

             (after McCloskey and Sells (1988: 181 (76a, 77a)))

(11) a. Is   toil   leam   filmichean.

      COP.PRES pleasure with-me films

      'I like films / films are leasing to me.'

   b. Tha   gaol aig Catriona air Padraig.

      Be.PRES love at Catriona on Padraig

      'Catriona loves Padraig.'

             (Landau (2010: 12))

These morphological markings suggest that (subject) experiencers can be conceived as locations.

Subject experiencers in English are locative as well, although they are not marked by

location-denoting particles.　　Landau (2010) notes that Speas (1990) observes the contrasts in the following data:

(12)　a.　　　I got angry but it went away.

　　　b.　??I laughed but it went away.

(13)　a.　　　I tried to remember his name, but it wouldn't come to me.

　　　b.　??I tried to write his name, but it wouldn't come to me.

<div align="right">(after Speas (1990: 80-81))</div>

The experiencer subject in (12a) functions as a location from which a theme moves away, unlike the non-experiencer subject in (12b); the experiencer subject in (13a) functions as a location toward which a theme moves, unlike the non-experiencer subject in (13b). According to Speas, these data indicate that it is strictly syntactic whether or not a given language marks experiencer subjects with location-denoting particles.　　Conceptually, she argues, experiencer subjects are locations.

　　　The present thesis assumes that the locative nature of experiencers is guaranteed at the level of conceptual structure.　　Nakau (1994) proposes that subject experiencer verbs, that is certain transitive verbs, have conceptual structures like (14):

(14)　　　　　$[_{\text{State}}\ \text{EXP}\ ([X_i],\ [_{\text{State}}\ \text{BE}\ ([Y],\ [_{\text{Place}}\ \text{AT}\ ([e_i])])])]$　　　　　　　(= (6))

The Experiencer role is assigned to the first argument of the function EXP(ERIENCE).　　The function EXP(ERIENCE) appears in structures like (14), where it takes as its second argument a location-denoting structure; structure (14) has the structure [Y BE [AT X]] embedded under the function EXP(ERIENCE).　　The complement of function AT serves as a reference object

relative to which the first argument of BE is located.   The complement of AT bears the

Location role.   In this structure, an argument is both the first argument of EXP and the

complement of AT at the same time, which is indicated by the same subscript *i*; the first

argument of the function EXP simultaneously takes both the Experiencer and Location roles.[3]

The complement of AT is empty, which is indicated by *e*.   The first argument of EXP is

mapped onto the surface subject or the surface indirect object.   The first argument of BE

bears Theme.[4]

2.2.2.2.   Causer and Agent

Let us briefly discuss the Causer and Agent roles.   The discussion here will be of use

in chapter 5.   They are two distinct semantic roles, and only the Agent role requires its bearer

to be volitional.

The Causer role is taken by an argument denoting a person, thing, or event that makes

something happen.   A Causer argument need not be a human being or volitional entity.

Observe the sentences in (15):

---

[3]   Jackendoff (1990, 2007) hypothesizes the idea that one argument can bear two distinct semantic roles.

[4]   The idea that an argument is both the first argument of EXP and the complement of AT at the same time is essentially the same as the ideas reflected in representations proposed by Jackendoff (1983).   Jackendoff (1983: 192) proposes the conceptual structures for *keep*, *give up/relinquish*, and *obtain*:

(i)   a.   Amy kept the doll.
        b.   [CAUSE ([**AMY**], [STAY ([DOLL], [$_{Place}$ AT ([**AMY**])])])]
(ii)   a.   Amy gave up/relinquished the doll.
        b.   [LET ([**AMY**], [GO ([DOLL], [FROM ([**AMY**])])])]
(iii)   a.   Beth obtained the doll.
        b.   [CAUSE ([**BETH**], [GO ([DOLL], [TO ([**BETH**])])])]

(Jackendoff (1983: 192), with modifications, bold mine)

In these conceptual structures, one function embeds a location- or motion-denoting structure, where the complement of AT, FROM, or TO denotes the same referent as the first argument of the function that embeds a location- or motion denoting structure.

(15) a.   Unemployment is a major cause of poverty.

      b.   Drinking and driving is one of the most common causes of traffic accidents.

Both sentences in (15) describe situations where a state of affairs or an event constitutes a cause of something.   When a human being constitutes a cause of something, he or she does not demonstrate volition in spite of his or her potential to do so.   Consider (16):

(16)   Mike is a major cause of their separation.

On the other hand, an Agent is typically a volitional entity and hence a human being who volitionally brings about an event.   The present thesis assumes that the subject argument of the prepositional phrase construction exemplified in (17) bears the Agent role:

(17)   Mike gave an apple to Mary.

Sentence (17) describes a situation where the subject argument volitionally gave a physical entity to another person.   In cases like these, the subject argument bears the Agent role.

The present thesis assumes that there are two different types of CAUSE.   One type of it requires its first argument to be a Causer, and the other type of it requires its first argument to be an Agent.   The semantic representation for the DOC contains the former, and that for the prepositional phrase construction contains the latter.

2.2.3.   Thematic Hierarchy and Linking Rules

Semantic roles that arguments bear in conceptual structures determine the surface realization of the arguments.   The basic idea is that the relation between semantic roles and

syntactic positions is not random.　　We assume a thematic hierarchy in (18a), a syntactic hierarchy in (18b), and the default correspondence rules given in (19):

(18)　a.　　Thematic hierarchy

　　　　　　Causer/Agent > Patient/Experiencer/Undergoer/Beneficiary > Theme > other

　　　　　　(Location/Goal/Source, etc.)

　　　　　　　　　　(cf. Jackendoff (1990: 258), Culicover and Jackendoff (2005: 185))

　　　b.　　Syntactic hierarchy

　　　　　　$[_S$ NP …] (Subject) > $[_{VP}$ V NP …] (1st Object) > $[_{VP}$ V … NP …] (2nd

　　　　　　Object) > $[_{VP}$ V … Oblique]

　　　　　　　　　　(cf. Jackendoff (1990: 258), Culicover (2009: 153))

(19)　　　　Linking (Default)
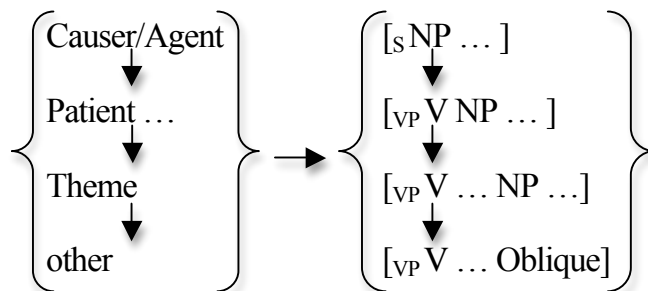
　　　　　　　　　　(cf. Culicover (2009: 152))

The hierarchies and the default linking rules concern the correspondences between semantic roles and NP arguments on syntactic structure.　　The idea is that "the highest available role is mapped to the highest available [syntactic position]" (Culicover (2009: 155)).　　If there are two roles, the higher role is mapped to Subject, and the lower role is mapped to Object.　　If there is only one role, it is mapped to Subject.　　Here are some examples of sentences and the semantic roles taken by the arguments:

(20) a.   John opened   the window.

Agent   patient

b.   John ran.

Agent

<div align="right">(Culicover and Jackendoff (2005: 185), with modifications)</div>

Different researchers propose different thematic hierarchies.   In particular, the relative ordering of Theme and Goal has been debated actively.   Some argue that Theme is higher than Goal on the hierarchy (e.g. Larson (1988), Grimshaw (1990), Hale and Keyser (1993), Baker (1996, 1997)), and others argue that Goal is higher than Theme (e.g. Aoun and Li (1989), Kaga (2007)).   There is also a third type of approach that assumes the hierarchy of Agent > Affected Goal > Theme > Unaffected Goal, in which there are two Goal roles, affected and unaffected (e.g. Bresnan and Kanerva (1992), Koizumi (1995)).   The thematic hierarchy that we assume in (18a) is a third type one.

2.2.4. S-selection

The specification of the features of arguments in CS is called s(emantic)-selection.   For example, the agent argument of the verb *say* is semantically specified as human and the theme argument as linguistic; similarly, the agent argument of the verb *think* is semantically specified as animate and the theme argument as propositional.   Their rough CS representations appear in (21):

(21) a.   *say*

[SAY (AGENT:X[HUMAN], THEME:Y[LINGUISTIC])]

b.　　*think*

　　　　[THINK (AGENT:X[ANIMATE], THEME:Y[PROPOSITION])]

(Culicover (2009: 169))

　　　　The differential acceptability of the sentences in (22) can be accounted for in terms of s-selection.　Consider (22):

(22)　a.　　Two days elapsed.　　　　　　　　　　(Culicover (2009: 170))

　　　b.　* George elapsed.　　　　　　　　　　(Culicover (2009: 170))

The subject of the verb *elapse* is s-selected as a period of time.　While *two days* in (22a) denotes it, *George* in (22b) does not, leading to the difference in acceptability.　The s-selection of the subject argument is satisfied in (22a) and violated in (22b).

2.3.　Binding

　　　　Here we first define binding in conceptual semantics terms and see its representation over conceptual structure.　We follow Culicover and Jackendoff (2005) in that binding is to fix the reference of one phrase in relation to the reference of another and is a semantic relation. In the framework of Conceptual Semantics, binding relations can be represented over conceptual structure alone, entailing that a bindee can be represented in conceptual structure alone.　The syntactic counterpart of a bindee may appear in syntactic structure.

2.3.1.　Definition

　　　　Culicover and Jackendoff (2005) state that "(f)undamentally, binding is a semantic relation, fixing one phrase's reference in terms of another's" (Culicover and Jackendoff (2005:

217)).　　Accordingly, the present study defines binding as follows:

(23)　　　　binding:

X binds Y if and only if the reference of Y is fixed in terms of the reference of X.

In other words, X binds Y iff Y is referentially dependent on X.　　The present thesis employs the term "reference" as a cover term for "reference" in its strict sense and for "identity."　　That is to say, Y depends on X with respect to its identification.[5]　　The present study deals with sentences in which the binding defined in (23) applies between the subject or indirect object of a sentence and an element within the same sentence other than the subject or indirect object. I employ the terms *binding* and *to bind* in the sense just defined throughout the thesis.

2.3.2.　Relationality of Nouns

　　Let us briefly examine here the relationality of nouns.　　What has often been dealt with in the discussion on referential dependency is relational nouns, since the reference of a relational noun is, by definition, determined in relation to the reference of another entity. Relational nouns are defined as follows:

(24)　　　　Relational nouns are logically not one-place predicates but correspond to predicates with two or more arguments (i.e. to relations). (Löbner (1985: 293))

---

[5]　Culicover and Jackendoff (2005: 217) themselves employ the term "identity."　　Binding relations in the sense of them encompass the identification of one element with another.　　For example, binding also encompasses control in their framework.　　It is argued that the identity of the try-er in sentence (i) determines the identity of the leaver in sentence (i):

(i)　　　　Pat tried to leave.　　　　　　　　　　　　　(Culicover and Jackendoff (2005: 217))

It is sometimes claimed that the relationality of a noun is lexically specified; there is a clear dichotomy between relational and non-relational nouns.[6] That is, certain nouns are lexicalized as relational nouns and others are lexicalized as non-relational nouns.

This thesis assumes that the relationality of a noun is more or less context-dependent, and that there are many different contexts that trigger a relational reading of nouns. For example, Vikner and Jensen (2002) argue that prenominal genitive NPs like *the girl's* and *my* coerce a shift of the meaning of the following non-relational noun, and make the noun relational. This shift of the meaning is clearly demonstrated in example (25) by Löbner (1985):

(25)   When I enter a furniture shop and ask for "a table" I use *table* as a sortal noun. As such it contains certain conventional characteristics concerning size, shape, height, and proportions (among others), that distinguish tables from beds, trunks or an orange box. But if John invites Mary to his sort of improvised room, it may well happen that he points to an orange box and tells Mary: "**This is my table.** Please, take a seat." (Löbner (1985: 293), bold mine)

Löbner (1985) argues that the noun *table* in the above example serves as a relational noun; the orange box in question contextually plays the role that a table plays. In the context in (25), only sentence (26a) is acceptable, and sentence (26b) is unacceptable. Observe (26):

(26) a.   This is my table.

      b.   * This is a table.

---

[6]   For how previous studies have dealt with relational nouns or the relationality of nouns, see Löbner (1985), Partee (1989, 1997, 1999), Barker (1995), Burton (1995), Partee and Borschev (1998), Vikner and Jensen (2002), etc.

Sentence (26b) is defining something that is not a table as a table and thus cannot be employed in the context in (25).　In this case, it is clear that the possessive determiner *my* makes the noun *table* relational.

　　　Similar cases are observed in the *V the body-part particle* construction, which requires the element following the verb to be a body-part of the subject referent.　Observe (27):

(27)　a.　　John$_i$ laughed his$_i$ head off.

　　　b.　　Mary$_i$ laughed her$_i$ head off.

In this construction, however, the element following the verb need not strictly be a body-part of the subject referent.　Observe (28):

(28)　a.　　He has worked his **socks** off and he'll get his reward.

　　　　　　　　　　　　　　　　　　　　　　　　(Iwata (2014: 16), bold mine)

　　　b.　　"Happy Game," for instance, has a chorus about celebrating the end of an

　　　　　　unhappy relationship, a state of affairs that in "Immigrants … " days would

　　　　　　have seen the band crying their **guitars** out at high speed for three minutes or

　　　　　　so.　　　　　　　　　　　　　　　(Iwata (2014: 18), bold mine)

The nouns *socks* and *guitars* in the sentences in (28) contextually function as relational nouns.

　　　The data in (29) also support the postulation that the relationality of nouns is more or less context-dependent.　It is observed in the data in (29) that a so-called relational noun, mother, serves as a non-relational noun.　Observe (29):

(29) a.   a new mother   (Partee and Borschev (1998: 237))

      b.   I met a lot of new mothers at the supermarket today.

Partee and Borschev (1998: 237) (cf. de Jong (1987: 280)) note that (29a) denotes "a woman who has recently given birth to her first child," in which case the noun is not relational.   Thus in (29b), the determination of the referents of the object of the verb *meet* does not depend on the subject referent; that is to say, the subject referent does not have a lot of new mothers. These data indicate that the relationality of nouns can change in accordance with the contexts in which they appear, and that their relationality is hence more or less context-dependent.

2.3.3. Representation

Jackendoff (1987, 1990) and Culicover and Jackendoff (2005) assume that binding relations are represented over conceptual structure.   Consider (30):

(30)   CS: X_i^α binds $[\alpha;Y]_j$

            corresponds to | |

            Syntax NP_i [NP; anaphor]$_j$

                                        (Jackendoff (1987: 407, 1990: 65),

                                        Culicover and Jackendoff (2005: 375))

A binder binds a variable in CS, which is notated by the Greek letters.   The binder and the bound variable in CS correspond to an antecedent and an anaphor in syntax, respectively.

The essential point in the framework of Conceptual Semantics is that binding relations can be represented in conceptual structure alone, entailing that a bindee is represented in conceptual structure alone.   The syntactic counterpart of a bindee may appear in syntactic

structure.   For example, the bindee in the sentence in (31) is present only in the conceptual structure:

(31)   Mr. Weissman's an American.   **They** do things differently **there**.

(*Gosford Park*, bold mine)

They and *there* in (31) denote Americans and (in) America, respectively.   If *Mr. Weissman* refers to a Canadian, for example, *they* and *there* in the second sentence will refer to Canadians and (in) Canada, respectively.   In this case, *there* exhibits a bound-variable-like behavior.   The bindee in this case does not correspond to the binder formally; thus, the bindee is present only in conceptual structure.

Partee (1989: 353-354) also observes a case where the word *there* exhibits a bound-variable-like behavior.   Observe (32):

(32)   In all my travels, whenever I have called from any place for a doctor, one has
            arrived **there** within one hour.   (Partee (1989: 353-354), bold mine)

In this case, the value of *there* covaries with the value of a place from which the subject referent calls for a doctor.

2.4.   Conceptual Structures

Taking into account the semantic definition of binding and its representation over conceptual structure, the present study proposes the following conceptual structures:

(33) a. $[_{\text{State}} \text{EXP} ([X^{\alpha}]_i, [_{\text{State}} \text{BE} ([Y (\alpha)], [_{\text{Place}} \text{AT} (e_i)])])]$

b. $[_{\text{State}} \text{EXP} ([X^{\alpha}], [_{\text{State}} \text{BE} ([Y], [_{\text{Place}} \text{AT} ([Z (\alpha)])])])]$

Possessive *have* (PH) and PH-DOC have the conceptual structure in (33a); existential *have* (EH) and EH-DOC have the conceptual structure in (33b). More specifically, PH has the structure in (33a); PH-DOC has the structure in (33a) embedded under another function. EH has the structure in (33b), which I propose on the basis of the discussion by Nakau (1998). EH-DOC has the structure in (33b) embedded under another function.

It is specified as a constructional meaning that the first argument of EXP in structure (33a) binds the first argument of BE, and that the first argument of EXP in structure (33b) binds the complement of AT. The structures in question thus differ in the position of the bindee. In terms of s(emantic)-selection discussed in section 2.2.4, these specifications are s-selections imposed on the first arguments of EXPs in these structures.

An argument containing a bindee and an argument that is empty are different. There is a phonetic form of an argument containing a bindee, whereas there is no phonetic form of an empty argument. For example, the first argument of BE in structure (33a), which contains a bindee, is represented as $Y(\alpha)$. Similarly, the complement of AT in structure (33b), which contains a bindee, is represented as $Z(\alpha)$. An argument containing a bindee depends on another entity with respect to its identification. On the other hand, an empty argument has no phonetic form available whose reference is determined in relation to another entity. For example, the complement of AT in structure (33a) is represented as (e), which does not have any representation of arguments such as Y or Z.

I assume that the situation denoted by the relation between the first argument of EXP and its second argument is *not* spatio-temporally limited when the CS contains the [AT (e)] part, where the complement of AT is empty. In this case, the relation between the first

argument of EXP and its second argument tends to refer to an atemporal state of affairs. I also assume that the situation denoted by the relation between the first argument of EXP and its second argument is spatio-temporally limited when the CS contains the $[AT ([Z (\alpha)])]$ part, where the complement of AT is *not* empty. In this case, the relation between the first argument of EXP and its second argument tends to refer to a temporary and hence iterative situation. Verbs and constructions having the conceptual structures in (33) belong to a class of predicates that have both possessive and spatial uses (cf. Jackendoff (1983: 192)).

In the framework of Conceptual Semantics, conceptual structures for related uses of predicates or constructions can be unified into one entry (Jackendoff (1990: 81)). The CSs in (33) are unified into a single entry, as shown in (34):

(34) $[_{\text{State}} \text{EXP} ([X^{\alpha}]_{\{i\}}, [_{\text{State}} \text{BE} ([Y (\{\alpha\})], [_{\text{Place}} \text{AT} ([\{Z (\alpha)\}]_{\{i\}})])])]$

The curly-bracketed elements are mutually exclusive. Either the first argument of EXP binds the first argument of BE, or else it binds the complement of AT. The speaker has this one entry stored in his or her mind. This entry is reserved in English for states of affairs where a character is connected to a location-denoting proposition.

2.5. Semantic Roles

I propose subclassification of the semantic role Experiencer into Possessor and Experiencer$_2$. When the first argument of EXP binds the first argument of BE, it bears the Possessor role; when it binds the complement of AT, it bears the Experiencer$_2$ role. The first argument of EXP in structure in (33a) bears the Possessor role and that in structure in (33b) takes the Experiencer$_2$ role. Look at (35):

(35) a. $[_{\text{State}} \text{EXP} ([\text{Possessor}^{\alpha}]_i, [_{\text{State}} \text{BE} ([Y (\alpha)], [_{\text{Place}} \text{AT} (e_i)])])]$

b. $[_{\text{State}} \text{EXP} ([\text{Experiencer}_2^{\alpha}], [_{\text{State}} \text{BE} ([Y], [_{\text{Place}} \text{AT} ([Z (\alpha)])])])]$

For purposes of comprehensibility, I use the semantic role labels to identify the first argument of EXP. For convenience, I use the term Experiencer$_1$ to designate the superordinate semantic role into which fall semantic roles with more specific characteristics, such as Possessor and Experiencer$_2$.[7]

2.6. Summary

Chapter 2 has outlined our theoretical framework, on which the present argument is based. We have seen basic tenets of Conceptual Semantics and introduced theoretical apparatus which will be employed for the explanation of PH, EH, PH-DOC, and EH-DOC. Conceptual Semantics is a mentalistic theory, and it assumes that meaning is decompositional, assuming functions and arguments that they take. Arguments in turn bear semantic roles.

This chapter has defined the Experiencer role, a semantic role that is taken by the subject argument of the *have* constructions and the indirect object of the two uses of the DOC. The Experiencer role is taken by the first argument of the function EXP(ERIENCE). The function EXP appears in a structure in which it embeds a location-denoting structure such as [Y BE [AT X]].

This chapter has also defined binding relations in conceptual semantics terms and proposed conceptual structures shared by PH and PH-DOC on the one hand, and EH and EH-DOC on the other.

The next chapter will overview problems unique to PH and EH.

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[7] The notion that there is one semantic role into which several semantic roles with explicit characteristics are categorized is similar to the notion of macro-role vs. micro-role by Van Valin and Lapolla (1997).

Chapter 3

Semantic Roles of the Subject Arguments of PH and EH
and Their Conceptual Structures

3.1. Introduction

This chapter first overviews two often-made claims concerning *have* constructions: (i) one is that the subject arguments of PH and EH are (human) locations; in terms of semantic roles, they bear only the Location role and do not take any other semantic role, and (ii) the other is that English *have* has no semantics at all and the interpretation of a given *have* sentence is completely determined by the values of its arguments.

The present thesis argues against these claims.   I argue that the subject arguments of PH and EH bear not only the Location role but also the Experiencer role, and that PH and EH do encode a certain meaning.   These specifications are encoded in the conceptual structures for PH and EH, which I propose in this chapter.

At the end of this chapter, we overview another often-made claim that the construction that we call here PH can be divided into two subclasses, regarding the so-called relationality of a noun in object position.   The PH taking a so-called non-relational noun as the surface object is said to denote alienable possession, while the PH taking a so-called relational noun as the surface object is said to denote inalienable possession.   This claim entails that the two PHs differ in the volitionality of the subject arguments: the subject of the PH denoting alienable possession refers to a volitional entity, whereas that of the PH denoting inalienable possession refers to a non-volitional entity.   This claim also seems to entail that the subject arguments of the two PHs bear two different semantic roles.   Contrary to this claim, which is argued for by several previous studies (e.g. Belvin (1993), Harley (1998)), I demonstrate that there is only one PH, and that the subject argument of PH does not exhibit any volition.   The

subject argument of PH bears one and the same semantic role regardless of the relationality of a noun in the object NP.

3.2.   Two Often-Made Claims

Let us overview two often-made claims pertaining to *have* constructions.   One is that the subject arguments of PH and EH are (human) locations, and that they bear only the Location role and do not take any other semantic role; the other is that English *have* has no lexical meaning at all, and that the interpretation of a given *have* sentence is completely determined by the values of its arguments.   We turn to each of these claims one by one.

3.2.1.   Hypothesis that Subject Arguments of PH and EH Are Locations

The subject arguments of both PH and EH have often been considered to be (animate) locations; in terms of semantic roles, they have often been considered to bear only the Location role and not to take any other semantic role.   This section overviews this argument. We first look at the claim pertaining to PH and then move on to the discussion concerning EH.

Cross-linguistically, possessors have been claimed to be (animate) locations.   This claim is fundamentally based on a claim of the following kind by Benveniste (1966):

(1)   *Avoir* n'est rien autre qu'un *être+à* inversé.   (Benveniste (1966: 197))

'*To have* is nothing other than an inverse *to be-to*'   (Benveniste (1971: 171))

This claim entails that the subject argument of the predicate *have* is nothing but the complement of the preposition in a location-denoting structure, in which the complement refers to a location; the subject of *have* is thus "the location of a state" (Benveniste (1971: 171)).   *Have* looks transitive, but its subject referent does not act on the object referent.   The

35

verb merely denotes a relation between entities. Benveniste observes that possessive relations are often encoded by location-encoding structures and/or morphemes, and claims that it is a manifestation of possessive relations being a subclass of locative relations. The following claim made by Lyons (1977: 473-474) explicitly argues that locative relations include in them possessive relations.

(2)   "… the term 'possessive', as it is traditionally employed by linguists, is somewhat misleading: it suggests that the basic function of the so-called possessive constructions that are found in languages is the expression of possession or ownership … It can be argued that so-called possessive expressions are to be regarded as a subclass of locatives (as they very obviously are, in terms of their grammatical structure, in certain languages)."

Cross-linguistically, locative and possessive sentences tend to employ particles and/or predicates that have the same phonetic forms, or locations and possessors can be marked by the same particle or case (e.g. Gruber (1965/1976), Benveniste (1966), Lyons (1967), Anderson (1971), Costa (1974), Clark (1978), Ostler (1979), Jackendoff (1983, 1987, 1990), Pinker (1989), Freeze (1992), Kayne (1993), Guéron (1995), Kageyama (1996), Harley (2003), Langacker (2003), Tham (2009)). Particles denoting spatial proximity are employed to mark possessors, and copulas and predicates denoting existence are employed to mark possessive relations. We look at examples from Japanese, Hindi, Finnish, and Scots Gaelic one by one.

Both locative and possessive sentences in Japanese employ the particles *ni* and *ga*, and the predicate *iru* or *aru*. For instance, *Koen* 'park' in (3a) denotes a location at which the boy exists; thus, it is said that *Taro* in (3b) can also be regarded as a location at which his sister

exists:

(3)   a.   Koen-ni   otokonoko-ga   iru

               park-postposition   boy-NOM   exist

               'There is a boy in the park.'

      b.   Taro-ni   imoto-ga   iru

               Taro-DAT   sister-NOM   exist

               'Taro has a sister.'

In this case, the particle *ni* encodes both location and possessor.

In Hindi, the postposition *(-ke) paas* 'near' encodes both spatial proximity and possession.   Observe (4):

(4)   a.   raam   baazaar-ke paas   hai

               Ram-NOM   market-OBL.GEN near   be-PRES

               'Ram is near the market.'   (Tham (2005: 2))

      b.   raam-ke paas   ek hii   makaan hai

               Ram-OBL.GEN near   one only building be-PRES

               'Ram has/owns only one building.'   (Mohanan (1994: 179))

The Adessive case in Finnish, which encodes a range of spatial configurations, encodes possessors.   Consider (5):

(5) a. pöydä-llä   on kynä

table-ADE   COP pencil

[+LOC]

'There is a pencil on the table.'

b. Liisa-lla   on mies

Lisa-ADE   COP man

[+ LOC]

'Lisa has a husband.'

(Freeze (1992: 577))

These sentences employ copulas as predicates.

In Scots Gaelic, locative and possessive copular sentences look identical.   Observe (6):[1]

(6) a. Tha a' mhin   anns a' phoit.

COP   the oatmeal   in   the pot

'The oatmeal is in the pot.'

b. Tha   peann   aig Mairi.

COP   pen   at Mary

'Mary has a pen.' (lit. 'A pen is at Mary.')

(Freeze (1992: 580-581))

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[1]   In Scots Gaelic, existential copular sentences look identical to locative and possessive sentences as well.   An example of existential copular sentences appears in (i):

(i)   Tha   mhin   anns   a'   phoit.
          COP   oatmeal in   the pot
          'There is oatmeal in the pot.' (lit. 'Oatmeal is in the pot.')   (Freeze (1992: 581))

These data have been argued to support the claim that possessors are (animate) locations.

Let us return to the discussion of PH and EH.   In terms of semantic roles, the subject arguments of both PH and EH can be considered to bear the Location role.   In fact, Jackendoff (1983) hypothesizes the CS in (7) for a construction that we call PH here, where the complement of the function AT is the possessor.   Look at (7):

(7) $[_{State}$ BE $_{Poss}$ ([Thing], $[_{Place}$ AT $_{Poss}$ ([Thing])])]   (Jackendoff (1983: 192))

This representation entails that the possessive relation is conceptualized as the possessum existing at the possessor, which is a purely localistic view (Gruber (1965/1976)).   He postulates that conceptual structures for locative and possessive sentences share the same structure and the same functions, and differ only with respect to semantic fields in which the functions apply.   The functions in the structure of locative sentences apply in the semantic field of Location; those of possessive sentences in the field of Possession, which is indicated by the subscript *Poss* in structure (7).

Similarly, some studies have claimed that the subject argument of EH is a (human) location (e.g. Costa (1974), Jackendoff (1987), Culicover (2009)).   For example, Jackendoff (1987: 382-383) observes that the subject of EH in (8a) denotes the same referent as that of the complement of the preposition, which bears the semantic role Location.

(8)   a.   The box$_i$ has books in it$_i$.   (Jackendoff (1987: 382), with modifications)

      b.   There are books in the box.   (Jackendoff (1987: 382))

From this observation, he concludes that the subject argument of EH also bears only the Location role.   In addition, he considers sentences like (8a) to be apparently synonymous

with *there* constructions such as (8b).   The entity occurring in the subject position of EH appears as the complement of the preposition in the *there* construction, which takes the Location role.   This fact further supports the assumption that the subject of EH bears the Location role.

Thus, these morphological and/or structural markings seem to indicate that the subject arguments of both PH and EH are (animate) locations.   Now the present thesis pursues the following question:

(9)   Are the subjects of PH and EH (human) locations?   In terms of semantic roles, do they bear the semantic role Location and Location alone?

Some studies have argued that the semantic roles taken by the arguments of the *have* constructions in question and the locative sentences in English are fundamentally the same (e.g. Jackendoff (1987)); others have claimed that the *have* constructions in English differ from the locative sentences with respect to the semantic roles taken by their arguments (e.g. Pinker (1989)).   However, there is little agreement as to the semantic role or roles that the subject arguments of PH and EH bear.

I do argue that the subject arguments of both PH and EH bear the Location role.   I also argue that the subject arguments in question bear simultaneously not only the Location role but also the Experiencer role.   As we saw in section 2.1, a semantic role is a structural concept, entailing that an argument's semantic role is determined by the position that it occupies in a given conceptual structure.   Thus, I assume that the conceptual structures for PH and EH specify that the subject arguments of PH and EH bear two semantic roles simultaneously.

3.2.2. (Semantic) Underspecification

It has been noted that English *have* is semantically underspecified (e.g. Belvin (1993), Harley (1997), and Ritter and Rosen (1997)).   Some even argue that English *have* has no lexical semantics at all, and that the interpretation of a given *have* sentence is completely a by-product of values of its arguments.   For example, Bach (1967), dealing with both *be* and *have*, states the following:

(10)   It has often been said that *be* has no meaning by itself but only in connection

            with *Predicate,* the passive construction, and so on.   The same is true of

            HAVE.   The two forms are distinguished syntactically from most true verbs

            by the fact that they have no selectional restrictions in themselves, but occur

            in constructions where selections reach across from subject to 'object' or

            complement.   Likewise, from a semantic point of view, their contribution to

            the meaning of the sentence is determined completely by the items that they

            link.   (Bach (1967: 476-477))

Bach continues to note that the sentence *I have a house* expresses ownership.   When a person and a house are linked by the verb *have,* he notes, they create the interpretation of the person owning the house.   A similar claim is made by Cowper (1989).   Cowper (1989: 89) notes, in the discussion on sentence (11), that "in the absence of any particular knowledge about Michael and his relationship to cars, we interpret [(11)] as involving simple possession."

(11)   Michael has a car.

Now a couple of simple questions arise: why is it that the sentence given by Bach and

sentence (11) should exhibit such interpretations if *have* has no meaning at all; why is it that the simple juxtaposition of two nouns results in denoting ownership or simple possession? If *have* had no lexical semantics, sentences like (11) could in principle mean anything (cf. Brugman (1988: 47)), but in fact it does not and cannot.

Not only PH but also EH is constrained as well. The PP in EH cannot contain a pronoun referring to an entity other than the subject referent (Nakau (1991: 337)), as illustrated in (12a):

(12) a.   The desk$_i$ has a book on {it$_i$ / *them}.

b.   I put a book on {my / his} desk.

On the other hand, sentence (12b), with the verb *put*, does not exhibit such a constraint. Furthermore, sentence (13) cannot successfully instantiate EH.

(13)   * The table$_i$ has a pencil on a book on it$_i$.   (Belvin and den Dikken (1997: 168))

One might suppose that the subject in (13) cannot syntactically bind an anaphor because it is too deeply embedded in the PP. However, this claim is argued against by the data in (14) observed by Belvin and den Dikken (1997), in which the binder can syntactically bind the anaphor that is deeply embedded in the PP. Consider (14):

(14) a.   Everyone$_i$ should concentrate on the pencil on the book on his$_i$ table.

b.   Everyone$_i$ hates it when there is a spider crawling around on the hat on his$_i$ head.

(Belvin and den Dikken (1997: 168))

It follows from these facts that EH is (semantically) constrained.

Here, another question arises: why is there such a constraint in EH? If *have* had no meaning at all, sentence (12a) could in principle contain any pronoun in the PP, but in fact it cannot.

This thesis argues that these interpretation and constraint stem from the semantic encoding of PH and EH; the semantic specifications of PH and EH give birth to the interpretation and the constraint presented above. PH specifies that the surface object is referentially dependent on the surface subject. Thus, when the object denotes a car or house and the subject denotes a human being, for example, the car or house is considered to be the human being's car or house. This interpretation is that of ownership or simple possession as noted by Cowper (1989). EH, on the other hand, specifies that the complement of the preposition is referentially dependent on the surface subject; the constraint found in (12a) follows from this encoding. These specifications are represented at the level of conceptual structure. Brugman (1988: 51) notes that "having either a general or an abstract meaning is not the same as having no meaning," and we follow her in this respect.

It should be emphasized here that de Jong (1987: 280), dealing with *have* sentences with relational nouns in object position such as *I have brothers*, points out that it is *have* that triggers the relational reading of nouns, not relational nouns themselves. This thesis extends this idea to cases where there are so-called non-relational nouns in object position.

3.3. Conceptual Structures for PH and EH

The CSs for PH and EH are represented as in (15a, b), respectively:

(15)   a. $[_{State} \text{ EXP } ([X^{\alpha}]_i, [_{State} \text{ BE } ([Y (\alpha)], [_{Place} \text{ AT } (e_i)])])]$

       b. $[_{State} \text{ EXP } ([X^{\alpha}], [_{State} \text{ BE } ([Y], [_{Place} \text{ AT } ([Z (\alpha)])])])]$

In the representations in (15a, b), binding relations are expressed by the Greek letters. For a better understanding, we present examples of PH and EH in (16a) and (17a), and their CS representations in (16b) and (17b), respectively:

(16) a. John has a wife.

 b. [EXP ([JOHN$^\alpha$]$_i$, [BE ([WIFE (α)], [AT (e$_i$)])])]

(17) a. You have a hole in your shoe.

 b. [EXP ([YOU$^\alpha$], [BE ([HOLE], [AT ([SHOE (α)])])])]

For ease of reference, the subscripts *State* and *Place* are omitted in the (b) representations. PH and EH differ with respect to the position of the bindee in the second argument of EXP: the first argument of EXP in PH, which is mapped onto the surface subject, binds the first argument of BE, which is mapped onto the surface object. On the other hand, the first argument of EXP in EH binds the complement of the function AT, which is mapped onto the complement of the preposition. These are s(emantic)-selections imposed on the first arguments of EXPs in these structures. The first argument of EXP in PH bears the Possessor role, while that in EH bears the Experiencer$_2$ role. In both PH and EH, the factor ensuring that the first argument of EXP is connected to the situation denoted by the structure [Y BE [AT X]] is the binding relation in the sense of the present theory.[2]

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[2] It has also been noted that English *have* is thematically underspecified and does not assign a thematic role to its subject, and that the subject gets its interpretation by being related to some other constituent in the same sentence (Belvin (1993), Harley (1997), Ritter and Rosen (1997)). For example, Harley (1997: 77), taking sentences like (i) for example, notes that "the 'location' interpretation for the subject of *have* is impossible without coreference with an embedded pronoun."

(i) The table$_i$ has a book on its$_i$ table.

The present thesis adopts the idea that the subject argument of *have* gets its interpretation or semantic role by being related to some other element in the same sentence. Possessor is a semantic role taken by an argument

EH has the structure in (15b), which I propose on the basis of the discussion by Nakau (1998). Nakau (1998) argues that EH is an Experiencer construction. Nakau (1998: 101) claims that the subject argument of EH bears the Experiencer role by establishing a connection with the situation denoted by the elements following *have*. The present thesis argues that the connection is established by the first argument of EXP binding the complement of AT. Furthermore, this thesis argues that not only EH but also PH is an Experiencer construction.[3]

Note that in constructions like EH, in which the argument bearing Experiencer$_2$ and the argument bearing Location are realized as different linguistic elements, it is binding that guarantees the subject argument bearing both Experiencer$_2$ and Location. That is, the bindee is an element within the complement which takes the semantic role Location. The bindee refers back to the binder, and it ensures that the first argument of EXP bears not only the Experiencer role but also the Location role (cf. Nakau (1998: 88)).

I assume that the situation denoted by the relation between the first argument of EXP and its second argument is *not* spatio-temporally limited when the CS contains the [AT (e)] part, where the complement of AT is empty. In this case, the relation between the first argument of EXP and its second argument tends to refer to an atemporal state of affairs.

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that binds the first argument of BE; Experiencer$_2$ is a semantic role taken by an argument that binds the complement of AT.

[3] Belvin (1993), Harley (1997), and Ritter and Rosen (1997) argue that EH is analogous to the experiencer *have* construction exemplified in (i):

(i) She$_i$ had [her$_i$ camera confiscated by the police]. (Washio (1997: 51))

In this construction, the subject referent is thought of as affected by the event denoted by the elements following *have*. For convenience, I call the elements following *have* (i.e. those bracketed in (i)) complements to *have*. The claim made by Belvin, Harley, and Ritter and Rosen is based on the observation that the experiencer *have* construction requires an element referring back to the subject in its complement. In the case of (i), it is *her* in the complement. Nakau (1991, 1998), making similar observations, also argues for this claim.

In addition, the relation of identity between the subject and the complement of the experiencer *have* construction is also claimed to be a semantic relation (Nakau (1991, 1998), Belvin (1993), Belvin and den Dikken (1997), Washio (1997), and Takeuchi (2013c)).

Therefore, PH tends to refer to a state of affairs that holds over a relatively long period of time. I also assume that the situation denoted by the relation between the first argument of EXP and its second argument is spatio-temporally limited when the CS contains the [AT ([Z (α)])] part, where the complement of AT is *not* empty. In this case, the relation between the first argument of EXP and its second argument tends to refer to a temporary and hence iterative situation. Therefore, EH tends to refer to a temporary and hence iterative situation.

The CSs for PH and EH are unified into a single entry, as shown in (18):

(18) $[_{\text{State}} \text{EXP} ([X^{\alpha}]_{\{i\}}, [_{\text{State}} \text{BE} ([Y (\{\alpha\})], [_{\text{Place}} \text{AT} ([\{Z (\alpha)\}]_{\{i\}})])])]$

The curly-bracketed elements are mutually exclusive. Either the first argument of EXP binds the first argument of BE, or else it binds the complement of AT. The speaker has this one entry stored in his or her mind.

3.3.1.   PH

PH exhibits a binding relation between the first argument of EXP, which is mapped onto the surface subject, and the first argument of BE, which is mapped onto the surface object. In other words, the reference of the first argument of BE is fixed in relation to the first argument of EXP. For example, the sentences in (19), where there are universal quantifiers in the subject positions, exhibit binding relations between the subjects and objects. Consider (19):

(19) a.   Everyone has a house.

      b.   Everyone has a wife.

That is to say, each member of the set denoted by the quantifier has a house or wife different from any other member's in the same set; the values of the direct objects covary with the values of the subjects.   This relation can be represented as follows:

(20) x_1 has x_1's house or wife and x_2 has x_2's house or wife and … and x_n has x_n's house or wife.   ($\{x_1, x_2, … , x_n\}$ = a set of individuals)

Furthermore, the sentences in (21) imply the meaning expressed in (22), not the meaning expressed in (23), where the asterisks indicate that the sentences in question do not express the meaning conveyed by the sentences in (21):

(21) a.   John has a house in a New York suburb.

      b.   I have a sister in Northern Ireland.

(22) a.   John's house is in a New York suburb.

      b.   My sister is in Northern Ireland.

(23) a. * There is a house in a New York suburb.

      b. * There is a sister in Northern Ireland.

This fact indicates that the identity of the (surface) object referent is determined in relation to the subject referent.   Thus, these data support the existence of a binding relation in PH, as represented in (15a).[4]

Note that the binding relation in the sense of this thesis is *not* observed in sentences with verbs like *know*.   Observe (24):

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[4]   This diagnostics is proposed by Takeuchi (2011).

(24)　　　　Everyone knows a {house / wife}.

The sentence in (24) does not refer to situations where each member of the set denoted by the quantifier knows a house or wife of his or her own.　In fact, English native speakers find it difficult to interpret sentence (24).　These facts indicate that PH is associated with binding relations between one entity and another.[5]

　　One advantage of hypothesizing (15a) as CS for PH is that it enables us to account for the fact that PH exhibits the definiteness restriction, a restriction against definite NPs in the object position of PH (Costa (1974), Heine (1997), Harley (2004), Tham (2006), among others).　Observe (25):

(25)　a.　　John has {a / *the} car.　　　(Heine (1997: 35), asterisk added by the author)

　　　b.　　John has {a / *the} sister.　　　　　　　　　　　(cf. Tham (2006: 137))

The definite articles in the object NPs of the sentences in (25) hinder the referents of the NPs from being fixed in relation to the subject referents, since the definite articles in this particular position cannot be anaphoric to the subject referents (cf. Guéron (2003: 212-213)).[6, 7]

　　This restriction is also observed in sentences with body-part nouns in the object position. Consider (26):

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[5]　Working in the generative paradigm, Ritter and Rosen (1997: 309-315) postulate a null pronominal in the object NP of PH that refers back to the subject, regardless of the relational status of the noun in the NP. Although their assumption is a syntactic one, it seems to be motivated by semantics and/or pragmatics, especially when they deal with cases where there is a so-called non-relational noun in the object NP.　Morita (2003) makes a similar suggestion.　For a discussion against Morita, see Takeuchi (2013b).　In addition, Harley (1998) admits a syntactic binding relation in instances of PH with a relational noun in the object NP.

[6]　Harley (2004: 259) notes that Jacqueline Guéron (p.c.) observes the definiteness restriction demonstrated by the construction that we call here PH.

[7]　The sentences *Judy has the car* and *John has the wife* are acceptable as instances of EH.　See the discussion in section 3.4.

(26) a.　　John raised {a / *the} hand.　　　(Guéron (2003: 192), with modifications)

　　b.　　Philip stubbed {a / *the} toe.

　　c.　　The poor boy lost {a / *the} mind.　　(Helke (1973: 10), with modifications)

The body-part nouns in the sentences in (26) are referentially dependent on the subject referents; therefore, the facts given in (26) support the claim that PH exhibits a binding relation between the subject and object.　 The use of the definite article in the object position of the sentences in (26) is permitted only when the noun phrase in which it appears denotes a body-part of someone other than the subject referent.

　　This restriction is not observed in sentences which are not expected to demonstrate binding relations between the subject and object.　 Observe (27):

(27) a.　　John owns {a / the} house.

　　b.　　Philip saw {a / the} car.

　　c.　　The poor boy broke {a / the} chair.

What matters here is the lexical meanings of verbs appearing in these sentences, namely *own*, *see*, and *break*.　 The subject of the act of owning and something owned can exist independently of each other; in other words, the reference of an object owned need not be determined in relation to the reference of a person who owns it.　 Similarly, the subject of the act of seeing and something seen can exist independently of each other; the reference of an object that is seen need not be determined in relation to the reference of an person who sees it. In a similar vein, the subject of the act of breaking and something broken can exist independently of each other; the reference of a thing broken need not be determined in relation to the reference of a person who breaks it.

The present framework also enables us to account for the restriction of occurrence of a pronoun in the object NP of PH.　PH has the following restrictions: (i) a pronoun in the object NP, when it appears, must refer back to the subject referent; (ii) a coordinate constituent as a whole functions as an antecedent for a pronoun in the object NP; and (iii) a pronoun in the object NP must be anaphoric to a local subject.　These restrictions are also observed in the body-part constructions, supporting the claim that PH exhibits a binding relation between the subject and object.　Let us examine these cases one by one.

When it appears, a pronoun in the object NP in PH and in the body-part constructions must refer back to the subject referent.　Observe (28) and (29):

(28)　　　　He$_i$ has {his$_i$ / *her / *their} (own) house.

(29)　a.　　He$_i$ raised {his$_i$ / *her / *their} hand.

　　　b.　　The poor boy$_i$ lost {his$_i$ / *her / *their} mind.

((a), Guéron (2003: 192), with modifications,

(b), Helke (1973: 10), with modifications)

The pronouns *her* and *their* in the object NPs of the sentences in (28) and (29) hinder the referents of the NPs from being determined in relation to the subject referents, since they refer to entities distinct from the subject referents.

This restriction is not demonstrated by sentences which are not expected to exhibit binding relations.　Observe (30):

(30)　a.　　He$_i$ owns {his$_i$ / her / their} house.

　　　b.　　He$_i$ saw {his$_i$ / her / their} car.

　　　c.　　He$_i$ broke {his$_i$ / her / their} chair.

One can own, see, and break entities that belong to someone else; thus, pronouns referring to entities distinct from the subject referents can freely occur in the object NPs of the sentences in (30).

Furthermore, in PH and in the body-part constructions, a coordinate constituent as a whole functions as an antecedent. Consider (31) and (32), where the subscript *k* is intended to mean *the girl and the boy*:

(31) The girl$_i$ and the boy$_{j,k}$ have {*her$_i$ / *his$_j$ / their$_k$} (own) {car(s)/weaknesses}.

(32) a. The girl$_i$ and the boy$_{j,k}$ raised {*her$_i$ / *his$_j$ / their$_k$} hand.

   b. The girl$_i$ and the boy$_{j,k}$ lost {*her$_i$ / *his$_j$ / their$_k$} mind.

(Helke (1973: 11), with slight modifications)

In the sentences in (31) and (32), the constituent coordinated by *and* as a whole functions as an antecedent for the pronoun in the object NP.

This restriction is not demonstrated by sentences which are not expected to exhibit binding relations, either. Observe (33), where the subscript *k* is intended to mean *the girl and the boy*:

(33) a. The girl$_i$ and the boy$_{j,k}$ own {her$_i$ / his$_j$ / their$_k$} car(s).

   b. The girl$_i$ and the boy$_{j,k}$ saw {her$_i$ / his$_j$ / their$_k$} car(s).

   c. The girl$_i$ and the boy$_{j,k}$ broke {her$_i$ / his$_j$ / their$_k$} chair(s).

The reasoning applied to the sentences in (30) applies to the sentences in (33).

Furthermore, pronouns in the object NP have to be anaphoric to a local subject. Consider (34) and (35):

(34)   The girl$_i$'s father$_j$ has {*her$_i$ / his$_j$} (own) {car / group of friends}.

(35)   a.   The girl$_i$'s father$_j$ raised {*her$_i$ / his$_j$} hand.

       b.   The girl$_i$'s father$_j$ lost {*her$_i$ / his$_j$} mind.

                                        (Helke (1973: 11), with slight modifications)

In these cases, *girl* cannot be an antecedent for pronouns in the object NP.

   This restriction is not demonstrated by sentences which are not expected to exhibit binding relations, either.   Observe (36):

(36)   a.   The girl$_i$'s father$_j$ owns {her$_i$ / his$_j$} house.

       b.   The girl$_i$'s father$_j$ saw {her$_i$ / his$_j$} car.

       c.   The girl$_i$'s father$_j$ broke {her$_i$ / his$_j$} chair.

The restrictions observed in (25), (28), (31), and (34) all follow from the semantic encoding of PH: the surface object in PH is specified to be referentially dependent on the surface subject.

   A prototypical example of a binding relation between the surface subject and object will be a sentence whose direct object is a reflexive pronoun.   Given that PH exhibits a binding relation between the subject and object, it is expected that PH behaves in the same way as sentences where there is a reflexive pronoun in object position.   This expectation is borne out by the data in (37):

(37)   a.   The girl's father washes {*herself / himself}.

       b.   The girl and the boy wash {*herself / *himself / themselves}.

As illustrated in (37a), a reflexive pronoun in object position must be anaphoric to a local

subject; as illustrated in (37b), a coordinate constituent as a whole functions as an antecedent for a reflexive pronoun.

3.3.2.　EH

EH exhibits a binding relation between the first argument of EXP, which is mapped onto the surface subject, and the complement of AT, which is mapped onto the complement of the preposition.　In other words, the reference of the complement of AT is fixed in relation to the reference of the first argument of EXP.　This relation is clearly observed in the sentences in (38), where there are universal quantifiers in the subject positions:

(38)　a.　　　Everyone$_i$ has your name on his$_i$ hat.

　　　b.　　　Everyone$_i$ has Colin Powell at his$_i$ disposal.

Each member of the set denoted by the quantifier in (38a) has someone else's name on his hat; the value of the complement of the preposition covaries with the value of the subject.　This relation can be represented as follows:

(39)　　　　　x_1 has your name on x_1's hat and x_2 has your name on x_2's hat … and x_n has

　　　　　　　your name on x_n's hat.　　　　　　　　($\{x_1, x_2, \ldots, x_n\}$ = a set of individuals)

Sentence (38b) denotes a situation where each member of the set named by the quantifier has Colin Powell at his own disposal.

Furthermore, the reference of the (surface) object in EH is fixed independently of the reference of the subject, indicating that it is not relational and is not bound to the subject referent.　Observe (40)-(42), where the asterisks in (41) indicate that the sentences do not

express the meaning conveyed by the sentences in (40):

(40) a.   John$_i$ has a hole in his$_i$ shoe.

       b.   The table$_i$ has a book on it$_i$.

(41) a. * John$_i$'s hole is in his$_i$ shoe.

       b. * The table$_i$'s book is on it$_i$.

(42) a.   There is a hole in John's shoe.

       b.   There is a book on the table.

The instances of EH in (40) do not imply the meaning expressed in (41), but the meaning expressed in (42).   These data indicate that PH and EH differ in the position of the bindee: PH has a bindee in the object NP, while EH has one in the complement of the preposition.

      The present framework also enables us to account for the restriction of occurrence of a pronoun in the PP of EH.   In EH, (i) a pronoun in the PP, when it appears, must refer back to the subject referent; (ii) a coordinate constituent as a whole functions as an antecedent for a pronoun in the PP; and (iii) a pronoun in the PP must be anaphoric to a local subject.   Let us examine these cases one by one.

      A pronoun in the PP, when it appears, must refer back to the subject (Nakau (1991: 337)).   Consider (43):

(43)   He$_i$ has a hole in {his$_i$ / *her} shoe.   (cf. (12a))

This restriction is not found in sentences which are not expected to exhibit binding relations:

(44)   a.   He$_i$ put a book on {his$_i$ / her / their} desk.

         b.   He$_i$ hid a book under {his$_i$ / her / their} bed.

What matters here is the lexical meanings of verbs appearing in these sentences, namely *put* and *hide*. The subject of the act of putting and the place on which something is put can exist independently of each other; in other words, the reference of a place where something is put need not be determined in relation to the reference of a person who puts it there. Similarly, the subject of the act of hiding and the place where something is hidden can exist independently of each other; in other words, the reference of a place where something is hidden need not be determined in relation to the reference of a person who hides it there.

     Furthermore, a coordinate constituent as a whole functions as an antecedent for a pronoun in the PP. Observe (45), where the subscript k is intended to mean a coordinate constituent as a whole:

(45)   a.   The boy$_i$ and the girl$_{j,k}$ have holes in {*his$_i$ / *her$_j$ / their$_k$} shoes.

         b.   This desk$_i$ and that one$_{j,k}$ have holes in {*its$_{i,j}$ / their$_k$} legs.

This restriction is not found in sentences which are not expected to exhibit binding relations. Observe (46), where the subscript k is intended to mean a coordinate constituent as a whole:

(46)   a.   The boy$_i$ and the girl$_{j,k}$ put books on {his$_i$ / her$_j$ / their$_k$} desk(s).

         b.   The boy$_i$ and the girl$_{j,k}$ hid books under {his$_i$ / her$_j$ / their$_k$} bed(s).

     Furthermore, a pronoun in the PP must be anaphoric to a local subject; that is, EH is also subject to locality considerations. Consider (47):

(47) a.   John$_i$'s mother$_j$ has a hole in {*his$_i$ / her$_j$} shoe.

     b.   John$_i$'s desk$_j$ has a book on {*him$_i$ / it$_j$}.

John in (47) cannot be an antecedent for a pronoun in the PP.   This restriction is not observed in sentences that are not predicted to demonstrate binding relations.   Observe (48):

(48) a.   The girl$_i$'s father$_j$ put a book on {her$_i$ / his$_j$} desk.

     b.   The girl$_i$'s father$_j$ hid a book behind {her$_i$ / his$_j$} desk.

The restrictions observed in (43), (45), and (47) all follow from the semantic encoding of EH: the complement of the preposition in EH is specified to be referentially dependent on the surface subject.

3.4. Classification

Let me discuss here the classification of the *have* constructions under discussion. Some might argue that sentences such as *You have the book* and *Mary has the wallet* instantiate the construction that we call here PH; however, we claim that they instantiate EH.

PH and EH differ in the situation denoted by the relation between the first argument of EXP and its second argument, namely the [Y BE [AT X]] part.   The CS for PH contains the [AT (e)] part, where the complement of AT is empty.   Therefore, PH expresses an atemporal, abstract relation between the first argument of EXP and its second argument, and tends to refer to a state of affairs holding over a relatively long period of time and hence cannot be recurrent. On the other hand, the CS for EH contains the [AT ([Z (α)])] part, where the complement of AT is *not* empty.   Therefore, EH expresses a temporal, spatial relation between the first argument of EXP and its second argument, and tends to refer to a temporary and hence

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iterative situation.

As observed by Costa (1974), certain *have* sentences can instantiate EH even though there is no PP appearing in surface structure. For example, sentences such as *John has the books* and *John has Mary's wallet* instantiate EH, with their [AT ([Thing (α)])] part, which is to be realized as the PP, not being realized in surface structure for contextual reasons (cf. Nakau (1998)). This claim entails that *Judy has the car* and *John has the wife* in (25) in section 3.3.1 can be acceptable as instances of EH. A possible context for the former is one in which someone asks his wife why they cannot use the car, and she answers that her sister, Judy, is in a shopping mall and has the car in question at her disposal and is currently using it; a possible context for the latter is one in which the subject referent has kidnapped a wife of someone else's understood contextually and has her at his disposal.

This classification is supported by the data in (49-51):

(49) a. * He frequently has a house.   (cf. Ichijo (2011: 85))

      b. * He frequently has a wife.   (cf. Ichijo (2011: 85))

(50) a. * He always has a house.   (cf. Costa (1974))

      b. * He always has a wife.   (cf. Costa (1974))

(51) a. * Sometimes he would have a house.   (cf. Ichijo (2011: 85))

      b. * Sometimes he would have a wife.   (cf. Ichijo (2011: 85))

      c. * Sometimes this room would have a secret door. (cf. Ichijo (2011: 85))

As illustrated in (49) and (50), the adverbs of frequency, *frequently* and *always*, cannot appear with PH; similarly, as illustrated in (51), PH cannot co-occur with one use of the modal auxiliary *would* that denotes habits in the past. On the other hand, EH can co-occur with both the frequency adverbs and this particular use of *would*. Observe (52-54):

(52) a. She$_i$ frequently has a mug in her$_i$ hand.   (cf. Ichijo (2011: 85))

    b. The table$_i$ frequently has a lamp on it$_i$.   (cf. Ichijo (2011: 87))

(53) a. She$_i$ always has a mug in her$_i$ hand.   (cf. Costa (1974))

    b. The table$_i$ always has a lamp on it$_i$.   (cf. Costa (1974))

(54) a. Sometimes he$_i$ would have a gun with him$_i$.   (Ichijo (2011: 85))

    b. Sometimes the table$_i$ would have a beautiful lamp on it$_i$.   (Ichijo (2011: 87))

As is evident in (55-57), the *have* sentences that we have just classified as EH can also co-occur with these elements, validating our classification:

(55) a. John frequently has the books.

    b. John frequently has Mary's wallet.

(56) a. John always has the books.

    b. John always has Mary's wallet.

(57) a. Sometimes John would have the books.

    b. Sometimes John would have Mary's wallet.

The data in (55-57) are also consistent with the observation made above that the object referent of EH is fixed independently of the subject referent.

    Let us present another diagnostic of the classification of PH and EH. Observe (58-60):

(58) a. * He has a house for the day.

    b. * He has a wife for the day.

(59) a. He$_i$ has a bag on his$_i$ back for the day.

    b. The table$_i$ has a lamp on it$_i$ for the day.

(60) a.   John has the car for the weekend.

b.   John has Mike's wife for the weekend.

As illustrated in (58-60), the expression *for the day/weekend* can co-occur only with EH.   PH expresses a rather atemporal relation between the first arguments of EXP and BE, and that relation cannot easily be bounded by expressions denoting limited (short) duration.   On the other hand, EH expresses a spatio-temporally limited relation between the first argument of EXP and its second argument, and that relation can easily be bounded by expressions denoting limited (short) duration.[8]

Now that we have seen different relations that PH and EH express, let us move on to discuss another often-made claim that there are two subclasses of *have* expressing possession. We will argue that it is illusory.

3.5.   One Possessive *Have* or Two Possessive *Have*s?

At the end of chapter 3, we overview another often-made claim that the construction that we call here PH can be divided into two subclasses, regarding the so-called relationality of a noun in object position.   The PH taking a so-called non-relational noun as the surface object is said to denote alienable possession, while the PH taking a so-called relational noun as the surface object is said to denote inalienable possession.   This claim entails that the two PHs differ in the volitionality of the subject arguments: the subject of the PH denoting alienable possession refers to a volitional entity, while that of the PH denoting inalienable possession refers to a non-volitional entity.   This claim also seems to entail that the subject arguments of the two PHs bear two different semantic roles.   Contrary to this claim argued

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[8]   Sentence (58a) is acceptable in a situation where the subject referent has rented a house for special purposes (e.g. for a special party) for a day or two.   This interpretation is that of EH.

for by several previous studies (e.g. Belvin (1993), Harley (1998)), I demonstrate that there is only one PH, and that the subject argument of PH does not exhibit any volition. I thus claim that the subject argument of PH bears one and the same semantic role regardless of the relationality of a noun in the object NP.[9]

3.5.1. Conjoinability

We first consider the conjoinability of so-called relational and non-relational nouns in the object position of PH; the fact that these two kinds of nouns can be coordinated in this particular position indicates that there is only one PH. Consider the examples in (61) from Partee (1997):

(61) a. John has piles of money and no living relatives.　　　(Partee (1997: 469))

　　 b. John has a good job, a nice house, a beautiful wife, clever children, and plenty of money (and an ulcer).　　　　　　　　　　　　　　(Partee (1997: 469))

Partee (1997) notes that it is difficult to posit two different *have*s on the basis of the conjoinability shown in (61). In (61a), for example, the relation between *relatives*, a relational noun, and *John* can be regarded as inalienable, while the relation between *money*, a non-relational noun, and *John* can be regarded as alienable. Regardless of this possible distinction, however, the two nouns or the two noun phrases can be coordinated. It follows from this fact that the two nouns are of the same kind, and that one and the same *have* expresses both relations. Sentence (61b) refers to the same type of situation.

The validity of this claim is demonstrated by the non-conjoinability of a (non)relational noun and an eventive noun. PH cannot be used in the progressive form, as illustrated in (62):

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[9]　This sub-section is based on the discussions in Takeuchi (2013c) and Takeuchi (2014).

(62) a. * Mary is having a house.

      b. * Mary is having a husband.

On the other hand, *have* sentences where there is an eventive noun in the object NP as exemplified in (63) can be used in the progressive form, as illustrated in (64):

(63) a.   Mary has a party.

      b.   Mary has an exhibition.

(64) a.   Mary is having a party.   (Ritter and Rosen (1997: 303))

      b.   Mary is having an exhibition.   (Ritter and Rosen (1997: 303))

In the case of (63), the nouns *party* and *exhibition* make the sentences eventive, as noted by Harley (1998) and Ritter and Rosen (1997).   In this way, the difference between (non)relational nouns and eventive nouns is responsible for the (im)possibility of the progressive form.   It is clear that these two types of nouns function differently when occurring in the object position of *have* sentences.   Given that they are different in nature, it is expected that they cannot be coordinated in the object position of *have*.   This expectation is borne out by the data in (65):

(65) a. * Mary has a house and a(n) {party / exhibition}.

      b. * Mary has a husband and a(n) {party / exhibition}.

The data in (65) indicate that so-called relational and non-relational nouns in the object position of PH function identically and support the claim that there is only one PH.

3.5.2. Control or Volitionality of the Subject

It seems to be assumed that possessing something by choice (i.e. alienable possession) entails that the possessor can intentionally both establish and cancel his or her relation to the possessee (e.g. Pinker (1989), Belvin (1993), Harley (1998), Tham (2005, 2006)).   In the discussion on alienable possession, this entailment has been considered to be an instantiation of the concept of control.   For example, Belvin (1993) states that the relation under discussion instantiates the following concept of control defined by Authier and Reed (1991):

(66)   By ''control'' we refer to the possibility of canceling what is denoted by the predicate if the subject of this predicate decides to stop doing it.

(Authier and Reed (1991: 202))

Similarly, Pinker (1989) gives the following definition of alienable possession:

(67)   Perhaps an alienable possessed object is construable as having an inherent tendency to move away from the owner, but the owner exerts a stronger opposing force keeping it with him and allowing him to do with it what he pleases.   (Pinker (1989: 145))

He calls "control" a force that prevents an alienable object from moving away from the owner. Among the previous studies that advocate this view on alienable possession, it seems to be only Harley (1998) that presents linguistic evidence supporting the claim, to which we now turn.

In order to support her claim, Harley (1998) uses as evidence the interpretation of *have*

sentences containing locally free, non-reflexive -*self* forms.[10]   Consider the sentences in (68):

(68) a.   Pinnochio$_i$ had milk poured on him$_i$.   (Harley (1998: 204))

      b.   Pinnochio$_i$ had milk poured on himself$_i$.   (Harley (1998: 204))

On the basis of observations made by Zribi-Hertz (1995), Harley assumes that the antecedent for a locally free -*self* form is a volitional entity.   For example, she observes that sentence (68a) is two-way ambiguous and has both the experiencer and causative interpretations, while sentence (68b), where there is a locally free -*self* form, is not ambiguous and has only the causative interpretation.   That is, (68a) has both an interpretation that the subject referent was affected by the event denoted by the elements following *have* (the experiencer interpretation) and one that he arranged for the event to happen (the causative interpretation).   Sentence (68b) has only the latter interpretation.   Furthermore, sentence (69a), she claims, has only the causative interpretation; sentence (69b) is not acceptable even as an instance of the causative use, since the subject argument is inanimate and thus cannot arrange anything.

(69) a.   Calvin$_i$ has a bee on himself$_i$.   (Harley (1998: 206))

      b. * The oak tree$_i$ has a nest in itself$_i$.   (Harley (1998: 206))

She presents sentence (70) and argues that instances of possessive use of *have* denoting alienable possession can contain a locally free -*self* form, and that it thus serves as evidence

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[10]   A locally free, non-reflexive -*self* form is one that is free within its so-called local binding domain and is differentiated from a reflexive one, which is exemplified in (i):

(i)   a.   Mary$_i$ thinks John$_j$ blamed {himself$_j$ / *herself$_i$}.   (Hirose (2009: 147))
      b.   John$_i$ likes Mary$_j$'s picture of {herself$_j$ / *himself$_i$}.   (Hirose (2009: 147))
      c.   John$_i$ blamed {himself$_i$ / *him$_i$}.   (Hirose (2009: 147))

that the subject argument of this use of *have* is a volitional entity.

(70)   Calvin_i has a fancy red Porsche which comfortably seats both Mary and

            himself_i.   (Harley (1998: 206))

She also postulates that the subject of possessive use of *have* denoting inalienable possession is not volitional, and that it is thus predicted that a locally free *-self* form cannot appear in instances of this use.   She argues that this prediction is borne out by the data in (71):

(71) a.   ??John_i has a large red nose which is exaggerated in the picture of himself_i

            hanging in the entrance hall.

      b.   ??John_i has a terrible cold, and everyone is avoiding both his_i wife and himself_i.

                                                                         (Harley (1998: 207))

       In the following section, we examine several uses of locally free *-self* forms, on which the discussions in sections 3.5.2.2.1 and 3.5.2.2.2 will be based.

3.5.2.1.   Locally Free *-Self* Forms

       Simply put, as many previous studies (e.g. Cantrall (1974), Zribi-Hertz (1989), Baker (1995)) have pointed out, locally free *-self* forms have many different uses.   The *-self* forms in (70) on the one hand and in (68b) and (69a) on the other instantiate different uses.   The former and the latter are instances of the contrastive/emphatic use and the viewpoint use, respectively.   It is only the viewpoint use of *-self* forms that requires its antecedent to be volitional.   In this section, we examine these two uses of *-self* forms one by one.

3.5.2.1.1.   Contrastive/Emphatic Use

In this section, I examine the contrastive/emphatic use of locally free -*self* forms.   This use of -*self* forms does not require its antecedent to be a volitional entity.   The discussion here will be of use in the discussion in section 3.5.2.2.1.

The -*self* form in sentence (70) is an intensive (Baker (1995)).   Baker notes that intensives are appropriate only in contexts where emphasis or contrast is desired.   Observe -*self* forms of this use:

(72)   The queen invited {me/ *myself/ both Max and myself} for tea.

                                        (Reinhart and Reuland (1993:675), with modifications)

(73)   a.   This paper was written by Ann and myself.   (Ross (1970: 228))

         b.   ??This paper was written by myself.   (Ross (1970: 228))

(74)   a.   Klinkhorn left Miami in 1953.   For some time there had been an

                estrangement *between his wife and himself.*

         b.   Guerrero's friends made their peace with the junta.   *As for himself*, there was

                little he could do but await arrest and the inevitable firing-squad.

                                                        (Leech (1980: 72), italics mine)

The use of the -*self* forms in the sentences in (72) and (73) is licensed in contexts in which the -*self* forms are coordinated with other entities.   Two entities are coordinated and thus focused relative to entities that are not made explicit; as a result, the existence of the two entities is emphasized.   Following Baker (1995), we call this use of -*self* forms the contrastive/emphatic use.   What one finds in the sentences in (74) is expressions that make salient a contrastive relation of entities to other entities (Hirose (2009)).   They are *between his wife and himself* and *as for himself* in (74a) and (74b), respectively.

It is further observed that the contrastive/emphatic use of *-self* forms does not require its antecedent to be volitional.   Consider (75):

(75) a.   John$_i$ had an impossible plan suggested to Mike and himself$_i$ by the scientist.

      b.   Mary$_i$ had the rules of the game explained to John and herself$_i$ by the teacher.

Each sentence has a *-self* form in its complement, the elements following *have*, and admits the experiencer reading, whose subject is non-volitional.   One can see that the sentences in (75) instantiate the experiencer use by examining the contexts given in (76), where they are embedded:

(76) a.   John works for the government of the United States of America.   A highly contagious virus was found in several states.   John thought that it had to be eradicated.   He went to a scientist he knew with his colleague, Mike, and asked for help.   Then **he$_i$ (=John) had an impossible plan suggested to Mike and himself$_i$ by the scientist.**   They (John and Mike) said that it was unrealistic, but the scientist insisted that it was a good plan.

      b.   (At school) Mary had to participate in a game.   She didn't know the rules of the game and was thus puzzled.   Her little brother, John, didn't know them either.   Then, **she$_i$(=Mary) had the rules of the game explained to John and herself$_i$ by the teacher.**   They enjoyed the game.

In each discourse in (76), the plausible interpretation of the *have* sentence is that of experiencer, not that of causative.

3.5.2.1.2. Viewpoint Use

In this sub-section, I investigate the viewpoint use of -*self* forms, another use of locally free -*self* forms. I demonstrate that this use of -*self* forms requires its antecedent to be volitional, which will be of importance in the discussion in section 3.5.2.2.2.

Let us first introduce the viewpoint use of -*self* forms. Consider (77):

(77) a. The adults$_i$ in the picture are facing away from us, with the children placed behind {themselves$_i$ / them$_i$}.

b. The house$_i$ in the picture is facing away from us, with an elm tree behind {it$_i$ / *itself$_i$}.   (Cantrall (1974: 146-147))

When *themselves* is used in (77a), the referents of the children are placed behind the referents of the adults; on the other hand, when *them* is used, there are two interpretations available: the one just mentioned, and the one where the referents of the children are hidden from the person viewing the picture. The exact interpretation is determined by the context in which the sentence is uttered. It is also known that sentence (77b), where the subject referent is inanimate, cannot include a -*self* form of the viewpoint use, since it is difficult for the speaker to take the point of view of inanimate entities.

The difference in interpretation just observed is made explicit in the following diagnostic. Observe (78):

(78) a. John$_i$ is happy that Anne has {come / ??gone} so far to see himself$_i$.

(Levinson (2000: 321))

b. John$_i$ is happy that Ann has {come / gone} so far to see him$_i$.

The fact that only *come*, not *gone*, co-occurs with the *-self* form in (78a) is accounted for by assuming that the *-self* form in question instantiates the viewpoint use. Given that the *-self* form in (78a) instantiates the viewpoint use, sentence (78a) is depicted from the point of view of John, the antecedent for the *-self* form. The use of the perspectival indicator *come* is licensed only when the speaker takes the point of view of the goal; in (78a), the goal is the referent of the *-self* form, namely John. Accordingly, only the co-occurrence of the *-self* form with the verb *come* is acceptable. On the other hand, pronouns do not impose any restriction pertaining to the viewpoint of the antecedent; accordingly, sentence (78b) co-occurs with both the verbs.

Not only is the antecedent for *-self* forms of this use animate, but also it is volitional. Cantrall (1974: 158) argues that the appropriateness of the sentences in (79) rises, as the chance increases that the verb requires its subject referent to have a will.

(79) a. ?*Halley's comet$_i$ has a glowing tail behind itself$_i$.

b. ??Halley's comet$_i$ leaves a glowing tail behind itself$_i$.

c. ? Halley's comet$_i$ spreads a glowing tail behind itself$_i$.

d. Halley's comet$_i$ spreads its$_i$ glowing tail behind itself$_i$.

Furthermore, the observation by Kuno (1987: 153) also validates the claim made by Cantrall. Consider (80):

(80) a. John$_i$ pulled the blanket over him$_i$.

b. John$_i$ pulled the blanket over himself$_i$.

He notes that sentence (80b) implies that the subject referent tried to cover himself up with the

blanket in order to hide under it, while sentence (80a) has no such implication.

Given that the -*self* forms in the sentences in (68b), (69a), and (69b), repeated here as (81a-c), instantiate the viewpoint use, it naturally follows that (81a) and (81b) admit only the causative reading, and that (81c) is not acceptable as an instance of the causative use.

(81) a.   Pinnochio$_i$ had milk poured on himself$_i$.

       b.   Calvin$_i$ has a bee on himself$_i$.

       c.   * The oak tree$_i$ has a nest in itself$_i$.

Being the antecedents of -*self* forms of the viewpoint use, the subject referents in (81a) and (81b) are volitional and thus can arrange the situations denoted by the complement; being inanimate, the subject referent in (81c) cannot be volitional and thus cannot do the act of arranging situations to happen.

3.5.2.1.3. Interim Summary

In section 3.5.2.1.1, we have considered the contrastive/emphatic use of locally free -*self* forms, whose antecedent need not be volitional.   I will use this use of -*self* forms in the discussion in section 3.5.2.2.1.   In section 3.5.2.1.2, we have considered the viewpoint use of locally free -*self* forms, whose antecedent must be volitional.   I will use this use of -*self* forms as evidence for the absence of volitionality on the part of the subject of PH in section 3.5.2.2.2.

3.5.2.2. Arguing for the Non-volitionality of the Possessor of PH

In this section, I first clarify that the pieces of evidence presented by Harley (1998) do not function as supporting her claim.   I then argue for the non-volitionality on the part of the possessor of PH regardless of the type of possession conveyed.

In section 3.5.2.2.1, I invalidate Harley's data by showing that PH can contain -*self* forms of the contrastive/emphatic use irrespective of the type of possession. In section 3.5.2.2.2, I demonstrate that PH cannot contain -*self* forms of the viewpoint use, which indicates that its subject, the antecedent for a -*self* form, does not exhibit volition. In section 3.5.2.2.3, I further demonstrate the non-volitionality on the part of the possessor of PH on the basis of its behavior in other diagnostics.

3.5.2.2.1. Invalidating Harley's Examples

As we saw in section 3.5.2, Harley employs sentence (70), repeated here as (82a), as evidence for the presence of volitionality on the part of the subject of PH denoting alienable possession.

(82) a. Calvin$_i$ has a fancy red Porsche which comfortably seats both Mary and himself$_i$.

b. Calvin$_i$ has a fancy red Porsche which comfortably seats {him$_i$ / *himself$_i$}.

She also presents the examples in (71), repeated here as (83), as evidence for the absence of volitionality on the part of the subject of PH denoting inalienable possession.

(83) a. ??John$_i$ has a large red nose which is exaggerated in the picture of himself$_i$ hanging in the entrance hall.

b. ??John$_i$ has a terrible cold, and everyone is avoiding both his$_i$ wife and himself$_i$.

Now, a brief comment on these examples is in order. As the occurrence of *both* suggests, the -*self* form in sentence (82a) is an instance of the contrastive/emphatic use; the

sentence in (82b), where a -*self* form cannot appear solely, further illustrates the validity of the view that the -*self* form in (82a) instantiates this use.

Furthermore, the sentences in (83) should not be dealt with in a parallel fashion with sentence (82a), since the sentences differ in the environments where -*self* forms appear. While a -*self* form occurs in a restrictive relative clause in (82a), it appears in the NP headed by *picture* in (83a). In (83b), it is the sentence following the *have* sentence that contains one, not even the *have* sentence itself. Therefore, we cannot verify the validity of Harley's claim on the basis of the sentence in (82a) and the sentences in (83).

One cannot determine whether or not the subject of PH exhibits volition by examining its instances containing -*self* forms of the contrastive/emphatic use, since this use of -*self* forms does not require its antecedent to be volitional (recall the discussion in section 3.5.2.1.1). Furthermore, the present study observes that -*self* forms of the contrastive/emphatic use do occur in PH regardless of whether its instance denotes so-called alienable or inalienable possession. Observe the sentences in (84) and (85), where there is a -*self* form in the same environment as in (82a):

(84) a. Mike$_i$ has a dog which always welcomes both his$_i$ wife and himself$_i$.

       b. Mike$_i$ has a dog which always welcomes {him$_i$ / *himself$_i$}.

(85) a. Mike$_i$ has a sister who loves both their father and himself$_i$ deeply.

       b. Mike$_i$ has a sister who loves {him$_i$ / *himself$_i$} deeply.

The sentences in (84) express so-called alienable possession; those in (85) inalienable possession. The facts illustrated in the (b) sentences in these data, where a -*self* form cannot occur solely, support the view that the -*self* forms in the (a) sentences are instances of the contrastive/emphatic use.

We have pointed out the non-validity of the sentences in (82a) and (83) as evidence for the presence of volitionality on the part of the possessor of PH denoting alienable possession. PH, whether it denotes so-called alienable or inalienable possession, can contain -*self* forms of the contrastive/emphatic use, which do not require their antecedent to be volitional.

3.5.2.2.2. Non-occurrence of the Viewpoint Use of -*Self* Forms in PH

In section 3.5.2.1.2, we saw that the viewpoint use of -*self* forms requires its antecedent to be volitional. If it is the case that the subject of PH denoting alienable possession is volitional, as argued for by previous studies, it is expected that its instances can contain a -*self* form of the use under discussion. The data, however, indicate the contrary; that is, PH, whether it denotes so-called alienable or inalienable possession, cannot contain -*self* forms of this use. Observe (86):

(86) a. Mike$_i$ has a dog which always welcomes {him$_i$ / *himself}. (= (84b))

b. Mike$_i$ has a sister who loves {him$_i$ / *himself} deeply. (= (85b))

Sentence (86a) expresses so-called alienable possession; sentence (86b) so-called inalienable possession. It is illustrated in (86) that the difference between two types of possession, if any, does not affect the behavior of a -*self* form of this use.

Furthermore, PH cannot contain -*self* forms of the viewpoint use even when there is an antecedent-perspective phrase *according to X* (Levinson (2000: 321)), which can induce the occurrence of -*self* form of this use, as illustrated in (87) (cf. Levinson (2000: 321)):

(87) a. According to John$_i$, the paper was written by himself$_i$.

b. * Speaking of John$_i$, the paper was written by himself$_i$.

Observe (88):

(88) a. * According to John$_i$, he$_i$ has a house which always relaxes himself$_i$.

b. * According to John$_i$, he$_i$ has a wife who always welcomes himself$_i$.

On the basis of these examples, I conclude that the possessor of PH does not exhibit volition, regardless of whether it denotes so-called alienable or inalienable possession.

3.5.2.2.3. Further Evidence

The non-volitionality on the part of the subject argument of PH is demonstrated by other phenomena. The observation by Givón (1975) is of use. Givón notes that sentence (89a) is acceptable only under circumstances in which it expresses the meaning shown in (89b). That is, the referent of the surface object of *tell* must be volitional enough to cause the event denoted by the infinitival clause to happen.

(89) a. We told him to be examined by the committee. (Givón (1975: 66))

b. We told him to go and get examined by the committee. (Givón (1975: 66))

Given that the subject argument of PH is not volitional, it is predicted that PH cannot be embedded under the verb *tell*. This prediction is borne out by the data in (90):

(90) * I told Mary to have a {car / husband}.

Furthermore, PH cannot be used as an imperative, which is licensed when the subject argument of a sentence denotes a voluntary referent (cf. Culicover and Jackendoff (2005:

428)).   Observe (91):

(91)   * Have a {car / wife}!

These facts suggest the absence of volitionality on the part of the subject argument of PH; there is no evidence supporting its presence.

The present study thus argues that there is only one PH, in which both so-called relational and non-relational nouns can equally occur in object position.   I also argue that the subject argument of PH does not exhibit any volition, regardless of the type of a noun occurring in object position.

Note in passing that there is no volitionality observed on the part of the subject argument of EH, either.   Observe (92) and (93):

(92)   * Calvin had a bee on himself.   (Harley (1997: 84))

(93)   a.   * I told Mary$_i$ to have a hole in her$_i$ shoe.

         b.   * Have a hole in your shoe!

As Harley (1997) observes, the viewpoint use of -*self* form cannot occur in EH, as illustrated in (92).   Sentence (92) is acceptable only as an instance of the causative use of *have*, which we have briefly discussed in section 3.5.2.2.1.   As illustrated in (93), instances of EH cannot be embedded under the verb *tell* or be used as an imperative.   These data make it clear that the subject argument of EH as well as that of PH does not exhibit any volition.

3.6.   Summary

This chapter has first overviewed two often-made claims pertaining to *have*

constructions: (i) one is that the subject arguments of PH and EH are (human) locations and thus bear only the Location role and do not take any other semantic role, and (ii) the other is that English *have* has no semantics at all and the interpretation of a given *have* sentence is completely a by-product of the values of its arguments. This thesis has argued against these claims.

This thesis has proposed, in section 3.3, conceptual structures for PH and EH. These structures specify that the first arguments of the function EXP(ERIENCE), the surface subjects, bear not only the Location role but also the Experiencer role. The subject arguments of PH and EH bear the Experiencer role by binding another argument. Binding relations are constructional meanings of PH and EH.

At the end of this chapter, we have overviewed another often-made claim that the construction that we call here PH can be divided into two subclasses, regarding the so-called relationality of a noun in the object position. Contrary to this claim, which is argued for by several previous studies (e.g. Belvin (1993), Harley (1998)), I have demonstrated that there is only one PH, and that the subject argument of PH does not exhibit any volition. I have claimed that the subject argument bears one and the same semantic role regardless of the relationality of a noun in the object NP.

On the basis of the discussions in chapters 2 and 3, we will examine PH and EH in the next chapter.

Chapter 4

Possessive *Have*, Existential *Have*, and Related Phenomena

4.1. Introduction

Now, I show that the theoretical apparatus outlined in the previous two chapters can explain various phenomena pertaining to PH, EH, and constructions that share characteristics with PH or EH. This chapter answers the questions raised in sections 3.2.1 and 3.2.2: (i) the question of whether or not the subject arguments of PH and EH bear only the Location role, and (ii) the question of whether or not *have* has any meaning at all.

The subject arguments of PH and EH bear two different semantic roles simultaneously: Location and Experiencer. We examine cases that can be accounted for by assuming that the subject arguments are locations; we also investigate cases that can be explained by assuming that the subject arguments are not merely locations. The subject arguments of PH and EH bear the Experiencer role by binding another argument. In other words, some phenomena exhibited by PH and EH can be explained by considering the [Y BE [AT X]] part of their CSs; the other phenomena can be accounted for by considering the binding relation between the first argument of the function EXP and either argument in the [Y BE [AT X]] part.

Binding relations between the subject and another entity are constructionally specified meanings of PH and EH. The first argument of EXP in PH, the surface subject, binds the first argument of BE, the surface object; the first argument of EXP in EH binds the complement of AT, the complement of the preposition. These specifications are s(emantic)-selections of the first argument of EXP and are represented at the level of conceptual structure.

Nakau (1998: 101) claims that the subject argument of EH bears the Experiencer role by establishing a connection with the situation denoted by the elements following *have*.

When that connection is not established, he claims, the subject argument cannot take the Experiencer role, and the sentence is not acceptable as an instance of EH. The present discussion on EH is based on his claim; the present thesis argues that the connection is established by the first argument of EXP binding the complement of AT. When the first argument of EXP cannot bind the complement of AT, the argument in question cannot bear the Experiencer role, and the sentence is not acceptable as an instance of EH.

Nakau (1998) argues that EH is an Experiencer construction. This thesis argues that not only EH but also PH is an Experiencer construction.

The definition of binding should be recalled here:

(1)   binding:

X binds Y if and only if the reference of Y is fixed in terms of the reference of X.

In other words, X binds Y iff Y is referentially dependent on X. The present thesis employs the term "reference" as a cover term for "reference" in its strict sense and for "identity." That is to say, Y depends on X with respect to its identification.

Sections 4.2 and 4.3 discuss PH and EH, respectively. Section 4.4 demonstrates that the current theory is more adequate than alternative theories.

4.2. Possessive *Have*

This sub-section focuses on PH and related phenomena. In the present framework, PH has the CS represented in (2):

(2) $[_{\text{State}} \text{EXP} ([\text{Possessor}^{\alpha}]_i, [_{\text{State}} \text{BE} ([\text{Y} (\alpha)], [_{\text{Place}} \text{AT} (e_i)])])]$

For purposes of comprehensibility, I use the semantic role label to identify the first argument of EXP. The function EXP in the CS for PH in (2) takes as its second argument the location-denoting structure [Y BE [AT X]], entailing that PH has locative characteristics, as well as characteristics of its own. The complement of function AT serves as a reference object relative to which the first argument of BE is located. The first argument of the function EXP in (2) simultaneously takes both Possessor and Location; an argument is both the first argument of EXP and the complement of AT at the same time, which is indicated by the same subscript i. The complement of AT is empty, which is indicated by e. The first argument of BE bears Theme. The factor ensuring that the first argument of EXP is connected to the situation denoted by the [Y BE [AT X]] part is the binding relation in the sense of the present theory.

Section 4.2.1 examines locative characteristics of PH; this sub-section investigates cases whose acceptability is determined by the [Y BE [AT X]] part. Section 4.2.2 investigates non-locative characteristics of PH; this sub-section examines cases whose acceptability is determined by the binding relation between the first arguments of EXP and BE. The discussions in these sections clarify that locative situations can be easier to express than possessive situations (cf. Harley (2003: 37)); in other words, situations expressible by the [Y BE [AT X]] part are less restricted than those by the relation between the first argument of EXP and its second argument. Section 4.2.3 shows that our framework can offer a unified account of possessive sentences that are thought of as deriving from different sources.

4.2.1. Subject Argument of PH as Location

Locative and possessive sentences have one commonality: both denote a relation between two entities and one of them serves as a reference point relative to which the other is construed. The present study captures this commonality by postulating that the CS for

possessive sentences, that is, that for PH, contains as its part a location-denoting structure.

As Talmy ((1983: 230-233), (2000: 182-185)) (cf. Langacker (1993)) notes, when language relates two objects in space, one object serves as a reference point for the other. Observe (3) and (4), where the # in the (b) examples indicates that the examples are less natural than the counterparts:

(3) a. The bike is near the house.   (Talmy (1983: 231))

     b. # The house is near the bike.   (Talmy (1983: 231), # added by the author)

(4) a. [BE (BIKE) [AT (HOUSE)]]

     b. # [BE (HOUSE) [AT (BIKE)]]

The rough CSs of the sentences in (3) are given in (4).   As is clear from (3), it is more natural for the location of a bike, which is smaller and more movable, to be understood or construed relative to the location of a house, which is larger and more permanently located.   That is, the complement of the preposition in locative sentences like those in (3) functions as a reference point for the subject argument.   As shown in (4), this construal is directly reflected in the conceptual structure [Y BE [AT X]], where the complement of AT serves as a reference point for the first argument of BE.   The complement of AT is realized as the complement of the preposition; the first argument of BE as the subject.   The CS of sentence (3a) presented in (4a) refers to an acceptable situation, making sentence (3a) acceptable; on the other hand, the CS of sentence (3b) presented in (4b) refers to an unacceptable situation, making sentence (3b) unacceptable.

The same holds true for PH.   Observe (5):

(5)   a.   The house has three bedrooms.

        b.   * The three bedrooms have a house.

(6)   a.   [BE (BEDROOMS) [AT (HOUSE)]]

        b.   # [BE (HOUSE) [AT (BEDROOMS)]]

(7)   a. $[EXP (HOUSE)_i^{\alpha} [BE (BEDROOM(\alpha)) [AT (e_i)]]]$

        b.   * $[EXP (BEDROOM)_i^{\alpha} [BE (HOUSE(\alpha)) [AT (e_i)]]]$

The [Y BE [AT X]] part of sentence (5a) is given in (6a); the whole CS representation of the sentence is given in (7a). The [Y BE [AT X]] part of sentence (5b) is given in (6b); the whole CS representation of the sentence is given in (7b). The different acceptability of the sentences in (5) originates from the different acceptability of the situation named by the second argument of EXP, namely the [Y BE [AT X]] part, of the sentences. It is natural that the larger entity, a house, functions as a fixed reference point relative to which the smaller entities, bedrooms, are construed. The [Y BE [AT X]] part of sentence (5a) is given in (6a); sentence (5a) takes *house* as the complement of the function AT and *bedrooms* as the first argument of the function BE. This ensures that the existence of *bedrooms* is construed relative to the existence of *house*. The situation denoted by the [Y BE [AT X]] part of sentence (5a) is acceptable, rendering the sentence acceptable. As for (5b), the [Y BE [AT X]] part of sentence (5b) is given in (6b); sentence (5b) takes *bedrooms* as the argument of the function AT and *house* as the first argument of the function BE. This makes the existence of *house* construed relative to the existence of *bedrooms*, which is less natural and more difficult. The situation named by the [Y BE [AT X]] part of sentence (5b) is unacceptable, contributing to the unacceptability of the sentence. In this way, the commonality between locative and possessive sentences can be captured.

      Similar examples are in the following:

(8) a.   The plane has four engines.

    b.   * The four engines have a plane.

(9) a.   [BE (ENGINES) [AT (PLANE)]]

    b.   # [BE (PLANE) [AT (ENGINES)]]

(10) a.   [EXP (PLANE)$_i^\alpha$ [BE (ENGINES(α)) [AT (e_i)]]]

    b.   * [EXP (ENGINES)$_i^\alpha$ [BE (PLANE(α)) [AT (e_i)]]]

The [Y BE [AT X]] part of sentence (8a) is given in (9a); the whole CS representation of the sentence is given in (10a). The [Y BE [AT X]] part of sentence (8b) is given in (9b); the whole CS representation of the sentence is given in (10b). The difference in acceptability of the sentences in (8) originates from the difference in acceptability of the situations expressed by the [Y BE [AT X]] part of the sentences. It is more natural for planes to function as a reference point relative to which engines are construed than vice versa. The second argument of EXP of sentence (8a) is given in (9a); sentence (8a) takes *plane* as the complement of AT and *engines* as the first argument of BE. This ensures that the plane in question functions as a reference point for engines. The [Y BE [AT X]] part of sentence (8a) denotes an acceptable situation, making the whole sentence acceptable. As for (8b), the second argument of EXP of sentence (8b) is given in (9b); sentence (8b) takes *engines* as the complement of AT and *plane* as the first argument of BE. This makes the engines a reference point for the plane, which is less natural and less likely. The [Y BE [AT X]] part of sentence (8b) denotes an unacceptable situation, making the whole sentence unacceptable. The differential acceptability of the sentences in (5) and (8) does not originate from the relation between the first argument of EXP and its second argument. We turn in the next section to cases whose acceptability is determined by this relation.

4.2.2. Subject Argument of PH Not Being Mere Location

In this section, we examine cases whose acceptability is determined by the relation expressed between the first argument of EXP and its second argument. When the first argument of EXP binds the first argument of BE and bears the Possessor role, the sentence is acceptable; when it cannot bind the argument and cannot bear the role in question, the sentence is unacceptable. For example, a part of a whole can be bound by the whole; by definition, being a part of a whole necessitates the dependence of the part on the whole with respect to its identification. This theoretical assumption accounts for the acceptability of examples given in this sub-section.

Let us observe the sentence in (11a):

(11) a.   * This desk has a book.   (cf. Belvin (1993: 65))

      b.   * [EXP (DESK)$_i^{\alpha}$ [BE (BOOK(α)) [AT (e$_i$)]]]

(12) a.   There is a book on the desk. / A book is on the desk.

      b.   [BE (BOOK) [AT (DESK)]]

The unacceptability of sentence (11a) stems from the unacceptable relation between the first arguments of EXP and BE, which is represented in (11b). Since books are not easily considered to be a part of a desk, the first argument of EXP cannot bind the first argument of BE and thus cannot bear the Possessor role. In this case, the s(emantic)-selection of the first argument of EXP is violated; thus, the sentence is unacceptable. The proposition denoted by the [Y BE [AT X]] part of (11a) does not contribute to the unacceptability of the sentence, since books can be spatially located on desks, which is shown in (12).

The s-selection of the first argument of EXP can be satisfied by pragmatic factors. For example, sentences like (11a) can be acceptable in a situation of a meeting room where there

have to be a book and a pencil on every desk.   Observe (13):

(13)   This desk has a book, but not a pencil.   (Takeuchi (2013a: 64))

Since this particular situation contextually makes a book and a pencil parts of a desk, the first

argument of BE can be bound by the first argument of EXP.   Hence the first argument of

EXP can take the Possessor role, and the sentence is acceptable.   In this case, the s-selection

of the first argument of EXP is contextually satisfied.[1]

        Let us look at another set of examples:

(14) a.   * This table has a lamp.   (Déchaine et al. (1995: 87, fn. 3))

      b.   This table has no lamp.   (Déchaine et al. (1995: 87, fn. 3))

Déchaine et al. (1995) note that sentence (14a) is unacceptable only in a context in which

having a lamp is not expected, and that sentence (14b) is acceptable as an instance of PH in a

context in which it is expected that having a lamp is one of the characteristics of a table.   In

other words, only in the latter case can the first argument of BE, the surface object, be

regarded as one of the parts of the first argument of EXP, the surface subject.   Only in the

latter case can the binding relation in the sense of the present thesis be established between the

first arguments of EXP and BE.   Hence the first argument of EXP can take the Possessor role,

and the sentence is acceptable.   In the case of (14b) as well, the s-selection of the first

argument of EXP is contextually satisfied.

        The [Y BE [AT X]] parts of the sentences in (14) do not contribute to the difference in

acceptability.   The [Y BE [AT X]] part can capture either the presence or the absence of a

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[1]   This discussion is based on Takeuchi (2013a).

lamp on a table, as exemplified in (15) and (16):

(15) a.   There is a lamp on this table. / A lamp is on this table.

      b.   There is no lamp on this table. / No lamp is on this table.

(16)   [BE (LAMP) [AT (TABLE)]]

The [Y BE [AT X]] parts of the sentences in (14) denote acceptable situations.

      The discussion thus far has clarified that locative situations can be easier to express than possessive situations; in other words, situations expressible by the [Y BE [AT X]] part are less restricted than those by the relation between the first argument of EXP and its second argument (cf. Harley (2003: 37)).   For example, the unacceptability of the (a) sentences in (11) and (14), repeated here as (17a) and (17b), originates from the unacceptable relation denoted between the first arguments of EXP and BE.

(17) a.   * This desk has a book.

      b.   * This table has a lamp.

The [Y BE [AT X]] parts, on the other hand, denote acceptable situations, as exemplified in *There is a book on this desk* and *There is a lamp on this table*.   That is to say, when the relation expressible by the [Y BE [AT X]] part is acceptable, it does not necessarily entail that the relation between the first arguments of EXP and BE also refers to an acceptable situation. The acceptability of the former relation does not entail the acceptability of the latter relation.

      On the other hand, when the relation expressed between the first arguments of EXP and BE is acceptable, the [Y BE [AT X]] part also refers to an acceptable situation.   Consider sentence (5a), repeated here as (18):

(18)   The house has three bedrooms.

In (18), the relation expressed between the first arguments of EXP and BE is acceptable.   A house can be construed as a whole of which bedrooms are parts; the reference of the first argument of BE can be determined in relation to the reference of the first argument of EXP. In this case, the [Y BE [AT X]] part of the sentence also refers to an acceptable situation, as exemplified in *There are three bedrooms in the house*.

Furthermore, when the [Y BE [AT X]] part denotes an unacceptable situation, the relation expressed between the first arguments of EXP and BE is also unacceptable. Consider sentence (5b), repeated here as (19):

(19)   * The three bedrooms have a house.

The [Y BE [AT X]] part of sentence (19) refers to an unacceptable situation, as exemplified in *There is a house in three bedrooms*.   In this case, the relation denoted between the first arguments of EXP and BE is not acceptable, either.   Bedrooms cannot be easily construed as a whole of which a house is a part; the reference of the first argument of BE cannot be determined in relation to the reference of the first argument of EXP.   The unacceptability of the relation expressed by the [Y BE [AT X]] part entails the unacceptability of the relation expressed between the first arguments of EXP and BE.   Thus, locative relations are expressible more easily than possessive relations.

In sections 4.2.1 and 4.2.2, we have seen not only locative characteristics of PH but also non-locative characteristics.   These characteristics can appropriately be captured by assuming a conceptual structure where the function EXP(ERIENCE) embeds a location-denoting structure.   More specifically, the locative characteristics can be captured by assuming the [Y

BE [AT X]] part in the CS, and the non-locative characteristics can be captured by assuming the binding relation between the first arguments of EXP and BE.

4.2.3. English and Japanese Possessive Sentences

The proposed structure can provide a unified account of possessive sentences that are thought of as deriving from different sources.   Some possessive verbs are derived from verbs that express the existence of an entity, and others are derived from verbs that denote the action of grabbing or holding (Heine (1997), among others).   The Japanese possessive verbs, *iru* and *aru*, are examples of the former, and the English possessive verb, *have*, is an example of the latter.   Sentence (20) is an instance of the possessive sentence in Japanese.

(20)   Taro-ni   kodomo-ga   aru / iru.

Taro-DAT child-NOM   exist

'Taro has a child.'

In the possessive sentence in Japanese, the possessor and possessee are marked by dative case and nominative case, respectively.   The dative case marker *ni* has the same phonetic form as a particle that refers to a location.   The possessive sentence in Japanese employs verbs that originally denote the existence of an entity, and the possessor is marked by a particle that has the same phonetic form as is used to mark a location.   Given these two points, it seems reasonable to hypothesize that the possessive sentence in Japanese has a CS containing the functions BE and AT.

The English *have* can also be considered to be derived from a predicate whose semantic representation contains the structure [Y BE [AT X]].   For example, Payne (2009: 112) notes that the diachronic derivation of *have* from *grab* or verbs of similar meaning may be justified

by claiming that a sentence like (21a) can have a CS like that in (21b):

(21) a.　　Mary grabbed the book.

　　　b.　　[(MARY) CAUSE [[(BOOK) GO [TO (MARY)]] & [(BOOK) BE [AT

　　　　　　(MARY)]]]

(Payne (2009: 112))

The structure in (21b) means that an agent acts on an entity and causes it to come to her, which results in a situation in which the entity stays at the agent.　Jackendoff (1987: 379) also postulates a similar inference rule.　Look at (22):

(22)　　　　If X GO to Y, then at some time X BE at Y.

This kind of inference is reflected in the structure in (21b); the structure of the resultant state in (21b) contains the functions BE and AT.

　　　It should be noted here that the possessor of the possessive sentences of both Japanese and English is realized in subject position.　With regard to the possessive sentence in Japanese, this is confirmed by subjecthood tests such as subject honorification ((23)) and the reflexive binding of *zibun* 'self' ((24)), both of which have been utilized to pick out the subject of a sentence.

(23) a.　　Yamada-sensei-ni　　kodomo-ga　o-ari-ni-naru / irassharu

　　　　　　Yamada-Prof.-DAT　　child-NOM　　HON-exist-HON-HON / exist

　　　　　　'Prof. Yamada has a child.'　　　　　　　　　(cf. Kishimoto (2000: 57))

b. * Bokuno-ototo-ni   kodomo-ga   o-ari-ni-naru.

My-brother-DAT   child-NOM   HON-exist-HON-HON

'My brother has a child.'   (cf. Shibatani (1978: 190))

(24) a.   Taro$_i$-ni   zibun$_i$-no   kodomo-ga   aru / iru.

Taro-DAT self-GEN   child-NOM   exist

'Taro$_i$ has his$_i$ own child.'

b. * Zibun$_i$-no   tomodachi-ni   kodomo$_i$-ga   aru / iru.

self-GEN   friend-DAT   child-NOM   exist

'His$_i$ own friend has a child$_i$.'

(Kishimoto (2000: 65), with slight modifications)

These commonalities exhibited by possessive sentences in English and Japanese can be captured by assuming a conceptual structure where the location-denoting structure [Y BE [AT X]] is embedded under the function EXP, whose first argument is mapped onto the surface subject.   By assuming this structure, we can capture in a parallel fashion possessive sentences that are thought of as deriving from different sources.[2]

4.3. Existential *Have*

Now, I move on to EH and related phenomena.   In the present framework, EH has the CS represented in (25):

(25)   [$_{State}$ EXP ([Experiencer$_2$^{α}], [$_{State}$ BE ([Y], [$_{Place}$ AT ([Z (α)])])])]

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[2]   The possessive sentences in Japanese and English seem to share many properties.   Kishimoto (2000) notes that possessive sentences in Japanese exhibit the definiteness restriction; Takezawa (2003) argues that possessive sentences in Japanese and English have very similar syntactic structures.

For purposes of comprehensibility, I use the semantic role label to identify the first argument of EXP. The function EXP in the CS for EH in (25) takes as its second argument the location-denoting structure [Y BE [AT X]], entailing that EH has locative characteristics, as well as non-locative characteristics. The complement of function AT serves as a reference object relative to which the first argument of BE is located. The first argument of the function EXP in (25) simultaneously takes both Experiencer$_2$ and Location. Note that in constructions like EH, in which the argument bearing Experiencer$_2$ and the argument bearing Location are realized as different linguistic elements, it is binding that guarantees the subject argument bearing both Experiencer$_2$ and Location. That is, the bindee is an element within the complement which takes the semantic role Location. The bindee refers back to the binder and it ensures that the first argument of EXP bears not only the Experiencer role but also the Location role (cf. Nakau (1998: 88)). The first argument of BE bears Theme.

The present thesis proposes the structure in (25) for EH on the basis of the discussion by Nakau (1998). Nakau (1998) argues that EH is an Experiencer construction, though he does not propose conceptual structures for EH and their functions. Nakau (1998: 101) claims that the subject argument of EH bears the Experiencer role by establishing a connection with the situation denoted by the elements following *have*. When that connection is not established, he claims, the subject argument cannot bear the Experiencer role, and the sentence is not acceptable as an instance of EH. The present discussion on EH is based on his claim; the present thesis argues that the connection is established by the first argument of EXP binding the complement of AT. When the first argument of EXP cannot bind the complement of AT, the argument in question cannot bear the Experiencer role, and the sentence is not acceptable as an instance of EH. This proposal pertains to the discussion not in section 4.3.1 but in section 4.3.2.

Section 4.3.1 examines locative characteristics of EH; this section investigates cases

whose acceptability is determined by the [Y BE [AT X]] part. Section 4.3.2 investigates non-locative characteristics of EH; this section examines cases whose acceptability is determined by the binding relation between the first argument of EXP and its second argument.

4.3.1. Subject Argument of EH as Location

Not only PH but also EH has locative characteristics. The complement of AT functions as a reference point relative to which the first argument of BE is located. The locative characteristics are created by the [Y BE [AT X]] part of the CS for EH.

The difference in acceptability between the sentences in (26) originates in the difference in acceptability of the proposition named by the [Y BE [AT X]] part of each sentence:

(26) a. This drawer$_i$ has the winter socks in it$_i$. (Costa (1974: 14))

b. * The winter socks$_i$ have this drawer around them$_i$. (Costa (1974: 14))

(27) a. [BE (SOCKS) [AT (DRAWER)]]

b. # [BE (DRAWER) [AT (SOCKS)]]

(28) a. [EXP (DRAWER$^\alpha$) [BE (SOCKS) [AT (α)]]]

b. * [EXP (SOCKS$^\alpha$) [BE (DRAWER) [AT (α)]]]

(27a) and (27b) roughly represent the CSs of the second arguments of EXP of the sentences in (26a) and (26b), respectively. (28a) and (28b) roughly represent the whole CS representations of the sentences in question. Since the CS representation reflects human conceptualization, the present theory can account for the facts observed in the sentences in (26) as follows: one understands the location of socks relative to a drawer, which is larger and more permanently located than socks. Similar examples are given in (29):

(29) a.　　　That house$_i$ has a car behind it$_i$.

　　　b.　*　The car$_i$ has a house in front of it$_i$.

(30) a.　　　[BE (CAR) [AT (HOUSE)]]

　　　b.　#　[BE (HOUSE) [AT (CAR)]]

(31) a.　　　[EXP (HOUSE$^\alpha$) [BE (CAR) [AT (α)]]]

　　　b.　*　[EXP (CAR$^\alpha$) [BE (HOUSE) [AT (α)]]]

(30a) and (30b) roughly represent the CSs of the second arguments of EXP of the sentences in

(29a) and (29b), respectively.　　(31a) and (31b) roughly represent the whole CS

representations of the sentences in question.　　A house can easily function as a reference point

relative to which the location of smaller entities is understood.　　The different situations

denoted by the [Y BE [AT X]] parts contribute to the different acceptability of the sentences in

(29).

　　　Furthermore, the present framework predicts that both sentences in (32) are acceptable.

Consider (32):

(32) a.　　　The cupboard$_i$ has a chest of drawers behind it$_i$.　　　　　　(Costa (1974: 15))

　　　b.　　　The chest$_i$ of drawers has a cupboard in front of it$_i$.　　　　(Costa (1974: 15))

(33) a.　　　[BE (CHEST OF DRAWERS) [AT (CUPBOARD)]]

　　　b.　　　[BE (CUPBOARD) [AT (CHEST OF DRAWERS)]]

(34) a.　　　[EXP (CUPBOARD$^\alpha$) [BE (CHEST OF DRAWERS) [AT (α)]]]

　　　b.　　　[EXP (CHEST OF DRAWERS$^\alpha$) [BE (CUPBOARD) [AT (α)]]]

The structures in (33) roughly represent the [Y BE [AT X]] parts of the CSs of the sentences

in (32).　　The structures in (34) roughly represent the whole CS representations of the

sentences.   As Costa (1974: 14-15) notes, a cupboard and a chest of drawers are almost the same size.   Thus both can function as a reference point for each other.   In sum, the speaker can conceptualize the situation denoted by the sentences in (32) the other way around much more easily than that denoted by sentences like those in (26) and (29).   Similar examples are as follows:

(35)   a.   The motorcycle$_i$ has a bicycle behind it$_i$.

       b.   The bicycle$_i$ has a motorcycle behind it$_i$.

(36)   a.   [BE (BICYCLE) [AT (MOTORCYCLE)]]

       b.   [BE (MOTORCYCLE) [AT (BICYCLE)]]

(37)   a.   [EXP (MOTORCYCLE$^{\alpha}$) [BE (BICYCLE) [AT (α)]]]

       b.   [EXP (BICYCLE$^{\alpha}$) [BE (MOTORCYCLE) [AT (α)]]]

The structures in (36) roughly represent the [Y BE [AT X]] part of the CSs of the sentences in (35).   The structures in (37) roughly represent the whole CS representations of the sentences. Both a motorcycle and a bicycle can be considered to be able to function as a reference point for each other.   Therefore, the [Y BE [AT X]] parts of both the sentences in (35) represented in (36) denote acceptable situations, rendering the sentences acceptable.

4.3.2.   Subject Argument of EH Not Being Mere Location

       The relation expressed between the first argument of EXP and the complement of AT can determine the acceptability of instances of EH.   When the first argument of EXP can bind the complement of AT and can bear the Experiencer$_2$ role, the sentence is acceptable; when it cannot bind the argument and cannot bear the role in question, the sentence is

unacceptable.[3]   For example, a part of a whole can be bound by the whole; by definition, being a part of a whole necessitates the dependence of the part on the whole with respect to its identification.   This theoretical requirement accounts for the acceptability of examples given in this sub-section.

Let us observe the data in (38):

(38)   a.   Your sock$_i$ has a hole in its$_i$ toe.   (Costa (1974: 16))

   b.   * Your toe$_i$ has a hole in its$_i$ sock.   (Costa (1974: 16))

(39)   a.   [EXP (SOCK$^\alpha$) [BE (HOLE) [AT (TOE(α))]]]

   b.   * [EXP (TOE$^\alpha$) [BE (HOLE) [AT (SOCK(α))]]]

The rough CSs of the sentences in (38) are given in (39).   As with the sentences examined in the previous section, one may find that the difference in acceptability between the sentences in (38) can be explained by considering the second argument of EXP of the sentences, namely the [Y BE [AT X]] part.   However, a hole can be spatially located relative both to a toe and to a sock, as exemplified in (40) and (41):

(40)   a.   There is a hole in the toe.

   b.   There is a hole in the sock.

(41)   a.   [BE (HOLE) [AT (TOE)]]

   b.   [BE (HOLE) [AT (SOCK)]]

Therefore, the difference found in (38) cannot be explained by merely considering the second

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[3]   In order to account for the acceptability of EH, Nakau (1998) proposes the concept of direct participant: an entity participating directly in the situation denoted by the elements following *have*.   The present thesis formulates the condition for an entity to directly participate in the situation in question.

argument of EXP.

The present study's account is as follows: a sock can function as a whole of which a toe is a part. Thus, the reference of a toe can be fixed in relation to the reference of a sock. Only in the (a) sentence in (38) can the complement of AT be bound by the first argument of EXP. The first argument of EXP can bear the Experiencer$_2$ role and the sentence is acceptable. In this case, the s(emantic)-selection of the first argument of EXP is satisfied. On the other hand, it is difficult to construe a toe as a whole of which a sock is a part. In this case, the first argument of EXP in (38b) cannot bind the complement of AT; it cannot take the Experiencer$_2$ role; and the sentence is unacceptable. In this case, the s-selection of the first argument of EXP is violated.[4]

Similar examples are observed in the following:

(42) a.   That house has a TV in the kitchen.

b.   * That kitchen has a TV in the house.

A house can easily be considered to be a whole of which a kitchen is a part. Thus, in (42a), the reference of the complement of the preposition can be fixed in relation to the reference of the subject. On the other hand, the subject referent of sentence (42b) cannot bind the complement of the preposition, since it is difficult to regard a house as a part of a kitchen. Therefore, the subject in (42b) cannot bear the Experiencer$_2$ role, and the sentence is unacceptable. The s-selection of the first argument of EXP is satisfied in (42a) and violated

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[4]   The difference in acceptability can also be explained in Nakau's (1998) idea of direct participant, which is mentioned in footnote 3. The sock is necessarily connected in a situation in which there is a hole in its toe; the sock directly participates in the situation denoted by the elements following *have*. On the other hand, a toe of a sock is not necessarily connected in a situation in which there is a hole in the sock, since there can be a hole anywhere in a sock. In the latter case, the toe in question is not a direct participant in the situation denoted by the hole and sock. Thus, the sentence is unacceptable. The acceptability of all the sentences in this sub-section can be accounted for by his idea.

in (42b).

It has been observed that the subject argument of EH refers to a whole and the complement of the preposition denotes its part (Costa (1974), Nakau (1998)).   Within our framework, the reason for this whole-part requirement exhibited by EH is that it is not ensured for the first argument of EXP to bind the complement of AT when the complement in question denotes not a part but a whole.

Note that the existence of a formal or syntactic binding relation between the first argument of EXP and the complement of AT does not necessarily entail that the first argument of EXP can bear the Experiencer$_2$ role.   In both sentences in (38), there is a formal or syntactic binding relation between the subject and an element within the PP, and yet the sentences differ in acceptability.   What is crucial here is the establishment of a whole-part relation between the first argument of EXP and the complement of AT.   When the subject denotes a whole of which an element within the PP is a part, the subject can bear the Experiencer$_2$ role, and the sentence is acceptable.

As we have just seen, it is a whole-part relation, a semantic relation, that counts in licensing EH, entailing that there need not be a formal correspondence between the subject and an element within the PP.   For example, the complements of the prepositions in the sentences in (43) show a bound-variable-like behavior, even though they do not correspond to the subjects formally.   Observe (43):

(43)   a.   Bill has a hole in the heart.

        b.   The tree has a mushroom on the trunk.

The sentences in (43) are licensed as instances of EH as long as the complement of the

preposition is understood as constituting a part of the subject referent.[5]   The complements of

the prepositions in (43) exhibit a bound-variable-like behavior, as is clearly observed in (44):

(44)   a.   Everyone has a hole in the heart.

       b.   Every tree has a mushroom on the trunk.

(44a) describes a situation where each member of the set denoted by the subject has a hole in

his or her heart; (44b) describes a situation where each tree in the set denoted by the subject

has a mushroom on its trunk.

       Here is another example of this kind:

(45)   They have a lot of colleges around there.

The subject in (45) refers generically to people living in the area denoted by the PP realized as

an adverbial phrase (cf. Langacker (1995: 73)).   To put it differently, the PP in (45) refers to a

location which the subject referents inhabit.   When the subject denotes Bostonians, for

example, the PP denotes Boston, and when the subject refers to Londoners, the PP refers to

London.   In these cases, the PP exhibits a bound-variable-like behavior.   If there is no such

correspondence between the subject and the PP, the sentence cannot instantiate EH, as

illustrated in (46):

(46)   * They (= Bostonians) have a lot of colleges around there (= in London).

In (46), the subject is intended to denote Bostonians and the PP is intended to denote London,

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[5]   Nakau (1998) will explain data like those in (43) by claiming that the Experiencer role is a pragmatic concept.

in which case the PP cannot function as a bound variable. Since there is no formal correspondence between *they* and *around there* in (45), the bound-variable-like behavior displayed by the PP is attributed to the semantic specifications of EH.

Sentence (47a) parallels sentence (45):

(47) a.　　　We have a lot of coyotes around here.　　　　　(Langacker (1995: 73))

　　　b.　 * We (= Americans) have a lot of coyotes around here (= in Japan).

The subject of (47a) refers generically to people living in the area denoted by the PP realized as an adverbial phrase (Langacker (1995: 73)); to put it differently, the PP in (47a) refers to a location which the subject referents inhabit. In this case, the PP functions as a bound variable. As illustrated in (47b), if there is no such correspondence between the subject and the PP, the subject cannot bind the PP and cannot bear the Experiencer$_2$ role, and the sentence is unacceptable.

As we have seen thus far, the first argument of EXP in EH binds the complement of the function AT, which in turn is the second argument of the function BE. This requirement can provide an explanation for the unacceptability of the sentences in (48); in both examples, the first argument of EXP does not bind the complement of AT, which is the second argument of BE. The rough semantic representations of the sentences in (48) are given in (49):

(48) a.　 * The table has a book on the TV.

　　　b.　 * The table$_i$ has a pencil on a book on it$_i$.　 (Belvin and den Dikken (1997: 168))

(49) a.　 * [EXP (TABLE), [BE (BOOK), [AT (TV)]]]

　　　b.　 * [EXP (TABLE$^{\alpha}$), [BE (PENCIL), [AT (BOOK), [AT (α)]]]]

As the structure in (49a) demonstrates, the first argument of EXP of sentence (48a) cannot bind the complement of AT, since the complement in question denotes a referent distinct from the first argument of EXP. Thus the first argument of EXP cannot bear the Experiencer$_2$ role, and the sentence is unacceptable. Similarly, as the structure in (49b) shows, the first argument of EXP of sentence (48b) cannot bear Experiencer$_2$, since the complement of AT, which in turn is the second argument of BE, does not contain a bindee. Thus, the sentence is unacceptable. Nakau (1998) argues the unacceptability of sentence (48b), and the structure in (49b) reflects his discussion.

Last but not least, there are several constructions in addition to EH whose subject arguments take the Experiencer$_2$ role. As is evident in the examples in (50)-(53), the verbs *contain* and *include* display the same behavior as EH:

(50) a. The table$_i$ has a book on {it$_i$ / *them$_j$}.

b. The bottle$_i$ contains wine (in {it$_i$ / *them$_j$}).

c. This file$_i$ includes several important names in {it$_i$ / *them$_j$}.

(51) a. * The table$_i$ has a pencil on a book on it$_i$.   (= (48b))

b. * The bottle$_i$ contains wine in a bottle in it$_i$.

c. * This file$_i$ includes several important names in a file in it$_i$.

(52) a. This tree has a mushroom on the trunk.

b. This house contains a fireplace in the kitchen.

c. This file includes important names in the pockets.

(53) a. * This trunk has a mushroom on the tree.

b. * This kitchen contains a fireplace in the house.

c. * These pockets include important names in the file.

As illustrated in (50), a pronoun within the PP must refer back to the subject; as is clear from (51), the first argument of EXP must bind the complement of AT, which in turn is the second argument of BE; as suggested by the acceptability contrast in (52-53), the first argument of EXP is semantically specified to bind the complement of AT.   These examples indicate that the same principle lies behind the acceptability of these constructions and EH.[6]

In sections 4.2 and 4.3, we have seen that both PH and EH exhibit not only locative characteristics but also their own characteristics simultaneously.   Our framework can capture these characteristics.

4.4.   Advantages of the Present Account over Other Approaches

In addition to offering explanations for the many different phenomena we have observed, the present theory also has several advantages over alternative models.   In this sub-section, I examine the models proposed by Jackendoff (1983, 1987), Pinker (1989), and

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[6]   PH and EH exhibit one difference.   In PH, a definite article cannot appear in the position where a bindee appears, as illustrated in (25) in section 3.3.1, repeated here as (i):

(i)   a.   * John has the car.
       b.   * John has the wife.

On the other hand, in EH, it can appear in the position in question, as illustrated in (43) in section 4.3.2, repeated here as (ii):

(ii)   a.   Bill has a hole in the heart.
       b.   The tree has a mushroom on the trunk.

This difference seems to be attributed to the difference of syntactic positions where a bindee appears; that is, the bindee of PH appears in (surface) object position and that of EH occurs in the complement position of the preposition.   This reasoning is supported by the facts observed in the sentences in (26) in section 3.3.1, repeated here as (iii), and in the sentences in (52).

(iii)   a.   * John raised the hand.
        b.   * Philip stubbed the toe.
        c.   * The poor boy lost the mind.

McIntyre (2006: 195) makes a similar observation.

Kageyama (1996), and point out that each of them faces some phenomena that are difficult to account for.

First and foremost, our approach assumes that the CSs for PH and EH have one function embedding under it a location-denoting structure. By assuming this, we can provide an explanation for locative characteristics of PH and EH, as well as their non-locative characteristics. PH and EH, we argue, comprise not only locative relations but also relations distinct from them, namely the binding relations denoted between the first argument of EXP and an argument within its second argument. Therefore, we argue against approaches like Jackendoff's that assume that the semantic representations of the relations expressed by PH and EH, and locative sentences are fundamentally the same. We also argue against approaches like Pinker's that assume just one function in semantic representations of possessive relations expressed by the verbal *have*.

In Jackendoff's approach, which is based on the localistic view advocated by Gruber (1965/1976), the possessive relation is conceptualized as the possessum existing at the possessor, as shown in (54):

(54) $[_{\text{State}} \text{BE}_{\text{Poss}} ([\text{Thing}], [_{\text{Place}} \text{AT}_{\text{Poss}} ([\text{Thing}])])]$ (Jackendoff (1983: 192))

Jackendoff postulates that conceptual structures for locative and possessive sentences share the same structure and the same functions, and differ only with respect to semantic fields in which the functions apply. That is, the functions in the structure of locative sentences apply in the semantic field of Location; those of possessive sentences in the field of Possession, which is indicated by the subscript *Poss* in structure (54). Although this approach may capture the parallelism between locative and possessive sentences as well as the commonality between English and Japanese possessive sentences that we saw in sections 4.2.1 and 4.2.3, it

cannot explain several phenomena that our approach can provide an explanation for. For example, in his theory, (54) is also the structure for the verb *belong*, as in *The car belongs to Mike*. Accordingly, an argument bearing the same semantic role is to be realized in different syntactic positions; the possessor argument of *belong* is to be realized in the complement position of the preposition *to*, while that of PH is to be realized in subject position.[7, 8]

In the present framework, on the other hand, this problem does not arise, since the possessor of PH and that of *belong* bear different semantic roles. Our theory hypothesizes that the verb *belong* has roughly the CS [Y BE [AT X]], where the complement of AT is the possessor realized as the complement of the preposition *to*; the possessor of *belong* bears only the Location role. On the other hand, the possessor of PH bears not only Location but also Possessor simultaneously. The validity of this claim can be supported by the facts given in (55):

(55) a. * Stalin, who died several decades ago, has a tomb.

     b. This tomb belongs to Stalin, who died several decades ago.

The possessor of PH in sentences like (55a) must be alive; on the other hand, that of the verb *belong* in sentences like (55b) need not. In the current theoretical framework, this contrast is explained in terms of a difference in the semantic role taken by the possessor argument of each predicate.

Furthermore, Jackendoff (1987) observes that the subject of EH in (56a) denotes the same referent as that of the complement of the preposition, which bears the semantic role

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[7] It has been claimed by several previous studies that the construction that we call here PH and the verb *belong* express the same or a very similar proposition (e.g. Jackendoff (2007: 213), Tham (2009)).

[8] Jackendoff (1990: 261) notes that "*have* could be a stative version of *receive*, its subject being a stative Beneficiary," though he continues to state that he is not yet altogether convinced.

Location.

    (56) a.   The box_i has books in it_i.   (Jackendoff (1987: 382), with modifications)

          b.   There are books in the box.   (Jackendoff (1987: 382))

From this observation, he concludes that the subject argument of EH also bears only the Location role. In addition, he considers sentences like (56a) to be apparently synonymous with *there* constructions such as (56b). An entity occurring in the subject position of EH appears as the complement of the preposition in the *there* construction, which takes the Location role. This fact further supports the assumption that the subject of EH bears the Location role (cf. Costa (1974), Culicover (2009)). However, this assumption is not tenable, since it cannot explain the difference in acceptability shown in (57):

    (57) a.   * The $table_i$ has a pencil on a book on it_i.   (= (51a))

          b.   There is a pencil on a book on the table.

In his framework, *the table* in both (57a) and (57b) will bear the same semantic role. He might try to account for the fact displayed in (57) by claiming that the unacceptability of (57a) results from the realization of *the table* in subject position; in other words, he might argue that the subject in (57a) cannot syntactically bind an anaphor because it is too deeply embedded in the PP. However, this claim is argued against by the data in (58) observed by Belvin and den Dikken (1997), in which the binder can syntactically bind the anaphor that is deeply embedded in the PP. Consider (58):

(58) a. Everyone$_i$ should concentrate on the pencil on the book on his$_i$ table.

   b. Everyone$_i$ hates it when there is a spider crawling around on the hat on his$_i$ head.

<div align="right">(Belvin and den Dikken (1997: 168))</div>

On the other hand, the present theory predicts the facts displayed in (57). The subject of EH bears the semantic role Experiencer$_2$ and the complement of the preposition in the *there* construction does not. As we saw in the previous section, the first argument of EXP in EH must bind the complement of AT, which in turn is the second argument of BE. The bindee in (57a) does not fill in this particular position, resulting in the unacceptability of the sentence.[9]

   Secondly, Pinker (1989) adopts a different approach, which describes the CS for the construction that we call here PH as having no functions corresponding to BE and AT but containing only one function that specializes in expressing possessive relations. Consider (59):

(59)   [$_{State}$ HAVE ([Thing], [Thing])]   (Pinker (1989: 190))

In essence, Pinker does not divert a structure aimed at representing the spatial relation of two entities to the representations of possessive predicates such as PH, *own*, and *possess*. He assumes that possession is conceptualized in two ways: one is shown in (59) and the other in (54), which is the structure for the verb *belong* in his framework. The logical entailment of these two propositions is captured by the inference rule in (60):

(60)   If X HAVE Y, then Y BE (place-function) X.   (Pinker (1989: 190))

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[9] Nakau (1991, 1998: 93-94) also argues against the discussion by Jackendoff (1987).

As stated at the beginning of this section, we argue that the relations expressed by PH and/or EH cannot be captured by assuming just one function.

Furthermore, Pinker's model cannot give a unified account of possessive sentences that are thought of as deriving from different sources, which was discussed in section 4.2.3. He will have to claim that it is just an accident. One might be tempted to claim that the CS for the verb *grab* or *hold*, from which *have* is diachronically derived, has the function HAVE in it. (61a) is an example of these verbs, and (61b) is their possible CS:

(61) a.   Mary {grabbed / held} a book.

b.   [CAUSE ([MARY],[MARY], [HAVE ([MARY], [BOOK])])]

The structure in (61b) means that an agent acts on herself, which results in the situation of her having a book. One might be able to argue that the resultant state represented in (61b), in which the function HAVE appears, has become the CS for English *have*. However, it seems difficult to suppose that the CS for the possessive sentence in Japanese originally had the function HAVE in it, since, as we saw in section 4.2.3, the Japanese possessive verbs, *iru* and *aru*, originally denote not the act of grabbing or holding, but the existence of an entity in a situation. It would not be convincing, therefore, to assume that the possessive sentences in English and Japanese are derived from elements that were not related to each other at all and happen to have come to express a similar or the identical proposition.

Finally, Kageyama (1996) posits a structure like (62), which closely resembles the structure proposed by the present theory.[10]

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[10]   Kageyama (1996: 53-56) seems to regard instances of PH and those of EH as instances of one and the same construction.

(62) $[_{\text{State}} z_i \text{ BE } [_{\text{Poss}} \text{WITH } [_{\text{State}} y \text{ BE } [_{\text{Loc}} \text{AT } z_i]]]]$ (Kageyama (1996: 55))

In this model, the function BE on the left hand side of the structure and the function WITH are realized as the verb *have*.   The possessor originally occurs in the complement position of the function AT and becomes a possessor by being realized in subject position.   This association is represented by the variable *z* in the complement of AT and the first argument of BE.   One problem with Kageyama's model and the other models presented in this sub-section is that it is unclear whether or not the surface subject argument is semantically specified in such a way that one can predict the difference in acceptability of sentences like the following:

(63)   a.   This plane has four engines.   (cf. (8a))

        b.   * This desk has a book.   (= (17a))

    In short, the previous studies examined in this sub-section all face one or more problems that are difficult to account for.

Chapter 5

Conceptual Structures for Two Uses of the Double Object Construction

and Their Binding Relations

5.1. Introduction

In this chapter, I deal with two uses of the double object construction (DOC): the CS for one use contains as its part the CS for PH; the CS for the other contains as its part the CS for EH.   Their presence creates binding relations between the indirect object and another entity. The former use can be regarded as the DOC counterpart of PH and the latter as the DOC counterpart of EH.   In what follows, I call them PH-DOC and EH-DOC for convenience.

The definition of binding should be recalled here:

(1)   binding:

X binds Y if and only if the reference of Y is fixed in terms of the reference of X.

X binds Y iff Y is referentially dependent on X.   The present thesis employs the term "reference" as a cover term for "reference" in its strict sense and for "identity."   That is to say, Y depends on X with respect to its identification.

An instance of PH-DOC is exemplified in (2a):

(2)   a.   Providence gave him a {house / wife}.

=   b.   Providence gave him$_i$ a {house / wife} of his$_i$ own.

Sentence (2a) exhibits a binding relation in the sense of the present thesis between the indirect and direct objects.   The direct object in (2a), *house* or *wife*, depends on the indirect object

with respect to its identification, which is clarified by the interpretation of (2a) given in (2b). This relation is more clearly observed in the sentences in (3), where there are universal quantifiers in the indirect object positions:

(3)　a.　　Providence gave everyone a house.

　　　b.　　Providence gave everyone a wife.

In these cases, each member of the set denoted by the quantifier had or got a house or wife different from any other member's in the same set; the value of the direct object covaries with the value of the indirect object.　This relation is roughly represented as follows:

(4)　a.　　x_1 had/got x_1's house and x_2 had/got x_2's house and … and x_n had/got x_n's house.

　　　b.　　x_1 had/got x_1's wife and x_2 had/got x_2's wife and … and x_n had/got x_n's wife.

$(\{x_1, x_2, … , x_n\} = $ a set of individuals$)$

　　　Instances of EH-DOC are given in (5).　This use demonstrates a binding relation in the sense of the present study between the indirect object and the complement of the preposition.[1]

(5)　a.　%This gave him$_i$ several more people at {his$_i$ / *her} disposal.

　　　b.　%This gave everyone$_i$ Colin Powell at his$_i$ disposal.

As is illustrated in (5a), the pronoun in the PP must refer back to the referent of the indirect

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[1] Some English native speakers find acceptable examples of EH-DOC like those in (5), while others do not. The % in front of the sentences in (5) reflects this variability in judgements.　This marker is employed throughout this chapter.

object; in this case, the pronoun *his* in the PP functions as a formal bound variable. The binding relation is more clearly observed in sentence (5b), where there is a universal quantifier in the indirect object position. In this case, each member of the set denoted by the quantifier had or got Colin Powell at his own disposal; the value of the complement of the preposition covaries with the value of the indirect object. This relation is roughly represented as follows:

(6) x_1 had or got Colin Powell at x_1's disposal and x_2 had or got Colin Powell at x_2's disposal … and x_n had or got Colin Powell at x_n's disposal.

$$(\{x_1, x_2, \dots, x_n\} = \text{a set of individuals})$$

The pronoun *his* in the PP in (5b) also functions as a formal bound variable.

We account for, in section 5.2, many different phenomena demonstrated by the two uses of the DOC. We then investigate, in section 5.3, the question of whether or not the DOC and the corresponding prepositional phrase construction (e.g. *I gave a book to Mary*) denote the same meaning; we argue that they differ in meaning, entailing that they have totally different CSs. Before moving to these sub-sections, I first propose, in section 5.1.1, conceptual structures for PH-DOC and EH-DOC, whose presence creates the binding relations observed above. In section 5.1.2, we argue that the DOC is associated with the caused possession meaning. By caused possession, I mean the bringing about of a relation between the indirect object and another entity within the same sentence by the subject referent. The DOC, whether it be PH-DOC or EH-DOC, does not encode transfer.

5.1.1. Conceptual Structures for PH-DOC and EH-DOC

The present study hypothesizes that PH-DOC has the conceptual structure represented in (7a), and that EH-DOC has the conceptual structure represented in (7b):

(7)   a. $[_{Event}$ CAUSE ([W], $[_{State}$ EXP ($[X^{\alpha}]_i$, $[_{State}$ BE ([Y (α)], $[_{Place}$ AT (e_i)])])])]

       b. $[_{Event}$ CAUSE ([W], $[_{State}$ EXP ($[X^{\alpha}]$, $[_{State}$ BE ([Y], $[_{Place}$ AT ([Z (α)])])])])]

These CSs have the CSs for PH and EH embedded under the function CAUSE. The function EXP takes as its second argument a location-denoting structure, namely the [Y BE [AT X]] part. For a better understanding, we present examples of PH-DOC and EH-DOC in (8a) and (9a), and their CS representations in (8b) and (9b), respectively.

(8)   a.   Providence gave Mike a child.

       b.   [CAUSE ([PROVIDENCE], [EXP ($[MIKE^{\alpha}]_i$, [BE ([CHILD (α)], [AT (e_i)])])])]

(9)   a.   %This gave $Mike_i$ several more people at his_i disposal.

       b.   [CAUSE ([THIS], [EXP ($[MIKE^{\alpha}]$, [BE ([PEOPLE], [AT ([DISPOSAL (α)])])])])]

For ease of reference, the subscripts *Event*, *State*, and *Place* are omitted in the (b) representations. The first argument of the function CAUSE is realized as the surface subject. The first arguments of EXP and BE are realized as the surface indirect and direct objects, respectively; the complement of AT of the CS for EH-DOC is realized as the complement of the preposition. As is the case with PH, it is specified as a constructional meaning that the first argument of the function EXP in the CS for PH-DOC binds the first argument of BE. As is the case with EH, the first argument of EXP in the CS for EH-DOC is specified to bind the complement of AT. These are s(emantic)-selections imposed on the first arguments of EXPs in these structures. The first argument of EXP of PH-DOC bears the Possessor role, while that of EH-DOC bears the $Experiencer_2$ role. The first argument of the function

CAUSE is specified as a Causer. The first argument of BE bears Theme, and the complement of AT bears Location. The first argument of the function EXP simultaneously takes both the Possessor/Experiencer$_2$ and Location roles. The complement of AT of the CS for PH-DOC is empty, which is indicated by *e*.

Note that in constructions like EH and EH-DOC, in which the argument bearing Experiencer$_2$ and the argument bearing Location are realized as different linguistic elements, it is binding that guarantees the subject argument and the indirect object argument bearing both Experiencer$_2$ and Location. That is, the bindee is an element within the complement which takes the semantic role Location. The bindee refers back to the binder and it ensures that the first argument of EXP bears both the semantic roles.

The (invisible) anaphors in these two uses of the DOC are anaphoric to local antecedents. Consider (10):

(10) a.   Providence gave Mike's sister a child.

     b.   %I handed Mary$_i$'s father$_j$ five dollars in {*her$_i$ / his$_j$} hand.

Sentence (10a) describes not a situation in which Mike got a child of his own, but a situation where Mike's sister got a child of her own. A pronoun in the PP in (10b) must be anaphoric to the indirect object referent. Thus, the direct object in PH-DOC and the complement of the preposition in EH-DOC are subject to locality conditions. These restrictions stem from the semantic specifications of these constructions.

As the CSs for PH and EH are unified into a single entry, the CSs for the two uses of the DOC are unified into one entry as well, as shown in (11):

(11) $[_{Event}$ CAUSE $([W], [_{State}$ EXP $([X^{\alpha}]_{\{i\}}, [_{State}$ BE $([Y (\{\alpha\})],$

$[_{Place}$ AT $([\{X (\alpha)\}]_{\{i\}})])])])]$

The curly bracketed elements are mutually exclusive.   Either the first argument of EXP binds the first argument of BE, or else it binds the complement of AT.   The speaker has this one entry stored in his or her mind.

The [X EXP [Y BE [AT Z]]] part of PH-DOC refers to an atemporal relation, while that of EH-DOC denotes a temporal relation.   I assume that the situation denoted by the relation between the first argument of EXP and its second argument is *not* spatio-temporally limited when the CS contains the [AT (e)] part, where the complement of AT is empty.   In this case, the relation between the first argument of EXP and its second argument tends to refer to an atemporal state of affairs.   The CS for PH contains the [AT (e)] part; therefore, PH expresses an atemporal, abstract relation and tends to refer to a state of affairs holding over a relatively long period of time and hence cannot be recurrent.   The same holds true for PH-DOC.   The CS for PH-DOC contains the [AT (e)] part.   Thus, it is difficult to express a limited (short) duration of the situation denoted by the [X EXP [Y BE [AT X]]] part.   Observe the following:

(12) a.   * Providence gave them a daughter for the day.

   b.   * Mary's long prayers gave her a child for the weekend.

The relations between the indirect and direct object referents in (12) are rather atemporal; therefore, expressions delimiting the relations such as *for the day* and *for the weekend* cannot occur in the sentences in (12).

I also assume that the situation denoted by the relation between the first argument of

EXP and its second argument is spatio-temporally limited when the CS contains the [AT ([Z (α)])] part, where the complement of AT is *not* empty.   In this case, the relation between the first argument of EXP and its second argument tends to refer to a temporary and iterative situation.   The CS for EH contains the [AT ([Z (α)])] part; therefore, EH expresses a spatio-temporally limited situation between the first argument of EXP and its second argument. The same holds true for EH-DOC.   The CS for EH-DOC contains the [AT ([Z (α)])] part; therefore, the second argument of the function CAUSE in EH-DOC tends to refer to a state of affairs holding over a relatively short period of time.   Thus, it is not difficult to express a limited (short) duration of the situation denoted by the [X EXP [Y BE [AT X]]] part. Observe the following:

(13)   a.   %This gave Mike$_i$ several more people at his$_i$ disposal for the weekend.(cf. (9a))

       b.   I gave John my bicycle for the afternoon.   (Oehrle (1976: 22))

In (13a), for example, the relation between Mike and the situation of him having custody of several people is rather temporal; thus, the expression delimiting it, namely *for the weekend*, can occur in the sentence.

       The [AT ([Z (α)])] part of sentence (13b) is not realized in surface structure.   As is the case with an EH exemplified in (14a), it is often the case that the [AT ([Z (α)])] part of EH-DOC is not realized in surface structure.   Sentence (13b) is one example; another example is given in (14b):

(14)   a.   Judy has the car.

       b.   Give me the pen.

A possible context for sentence (14a) is one in which someone asks her husband why they cannot use the car, and he answers that his sister, Judy, is in a shopping mall, has the car in question at her disposal and is currently using it.   Sentence (14b) is an imperative and can be uttered in a situation where the speaker wants the hearer to hand him a pen that is situated near the hearer.   Since it is contextually evident, it is not necessary in these cases for the [AT ([Z (α)])] parts to be explicitly uttered.[2]

5.1.2.   DOC Not Encoding Transfer

Before we proceed to the next section, a brief comment on a constructional meaning of the DOC is in order.   Several previous studies argue that the DOC encodes transfer of entities from the subject referent to the indirect object referent; Goldberg (1992, 1995), for example, claims that the central sense of the construction in question involves transfer between a volitional agent and a willing recipient.   I argue, partially in line with Rappaport Hovav and Levin (2008) (RH & L (2008)),[3] that the meaning of transfer is not encoded in the DOC, and that some instances of the DOC only appear to be associated with the meaning in question.

Some instances of the DOC appear to encode transfer, but this stems from the composition of (i) constructional meaning of the DOC, (ii) lexical meanings of the verb

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[2]   Sentences like (13b) prompted Ross (1976: 267) to assume a *have*-like element in the (syntactic) representation of the DOC.   His example is given in (i):

(i)   I {gave / loaned / sent / mailed} Ted my keys until tomorrow.   (Ross (1976: 267))

Until tomorrow in (i) modifies the result having state.   In our framework, the DOC in (i) is an instance of EH-DOC with the [AT ([Z (α)])] part not appearing in surface structure.

[3]   As argued by RH & L (2008: 139), sentence (i) does not express any transfer:

(i)   The court gave a parent visiting rights.   (RH & L (2008: 139))

RH & L (2008) argue that it is not the case that the court had the rights in question and relinquished them to the parent; rather, the court brought about a possessive relation between the parent and the rights.   Because of the presence of the court, the rights were created, and the parent got them.

appearing in it, and/or (iii) values of the arguments.   For example, sentence (15) can describe a situation where the direct object referent was transferred from the subject referent to the indirect object referent.

(15)   Brett gave Leslie an apple.   (RH & L (2008: 140))

As RH & L (2008: 140) note, one may conclude from this kind of example that the DOC is always associated with transfer of possession.   However, the interpretation in question of sentence (15) is a result of the composition of constructional meaning of the DOC and values of the arguments.   The DOC specifies that the subject referent causes the creation of a relation between the object referents.   Both the subject and the indirect object in sentence (15) denote human beings, and the direct object refers to an entity that can be transferred from one place to another.   Our world knowledge easily makes us interpret sentence (15) as expressing the movement of an apple from the subject referent to the indirect object referent.

Another example is in (16):

(16)   %John handed Mary$_i$ five dollars in her$_i$ hand.

Sentence (16) denotes a physical transfer of several dollars from the subject referent to the indirect object referent.   In this case, what contributes to the interpretation of transfer of possession is the constructional meaning of the DOC, the lexical meaning of the verb *hand,* and the values of arguments.   The DOC specifies that the subject referent causes a situation denoted by the elements following the verb *hand*.   It is specified in the lexical meaning of the verb *hand* that the action of handing is effected by hand, namely the hand(s) of the subject referent (RH & L (2008: 136, fn. 8)).   Both the subject and indirect object in (16) refer to

human beings; the direct object denotes a physical object; and the complement of the preposition refers to a spatial goal to which the direct object referent moved. In sum, the acquisition by Mary of five dollars in her hand was brought about by the subject referent using his hand(s); five dollars was given to the indirect object referent by the subject referent employing his hand(s). Thus, the sentence compositionally creates the interpretation in which the subject referent physically transferred an entity to the indirect object referent. The subject referents in the sentences in (15) and (16) pragmatically function as agents (cf. Nakau (1994)).

As just seen, it is possible that a causer contextually becomes an agent, especially when it denotes a human being, but this does not necessarily indicate that a human being in the subject position of the DOC always functions as an agent. Consider the sentence in (17):

(17)   I gave John a cold.   (Williams (1994: 250))

Williams (1994: 250) observes that sentence (17) does not denote a transfer of a cold from the subject referent to the indirect object referent. In this case, the subject referent merely brought about a situation where the indirect object referent got a cold; the subject, although it refers to a human being, functions just as a cause. A possible context for (17) is a situation where the speaker kept John waiting outside a house or building for certain hours, and John got a cold because of it.

Inanimate entities can occur in the subject positions of the DOC; inanimate entities cannot themselves transfer entities from one place to another, but they can cause the creation of relations between other entities. Observe the sentences in (18):

(18) a.   Mary's long prayers gave her a child.

b.   %His$_i$ strategy and logistics gave him$_i$ everything he$_i$ needed to win at his$_i$

disposal.   (cf. *The Little Black Schoolbook*)

Sentence (18a) refers to a situation where the indirect object referent got a child of her own by praying for a long time.   This sentence does not express any transfer; the child in question did not physically move from one place to the indirect object referent.   The subject referent in (18a) functions as a cause creating the relation between the indirect and direct objects. Similarly, sentence (18b) expresses a situation where the subject referent brought about the indirect object referent getting the custody of his necessities; the indirect object referent came to be able to employ things that he needed because of the subject referent.   Sentences like those in (17) and (18) indicate that neither the DOC nor the verb *give* encodes a transfer of possession.

It should be noted here that the DOC does not encode the specific nature of the cause expressed by the subject referent, the first argument of CAUSE.   It is unspecified as a constructional meaning that what behavior of the subject referent, if any, causes the situation denoted by the elements following the verb.   It can only be understood contextually (cf. Pinker (1989: 212)).[4]

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[4]   Our framework explains observations made by Oehrle (1976).   Oehrle (1976: 19) observes that an instance of the DOC in (i) has three interpretations given in (ii).

(i)   Nixon gave Mailer a book.   (Oehrle (1976: 19))

(ii)   On reading (**a**), [i] asserts that the ownership of the book passed from Nixon to Mailer; on reading (**b**), [i] is compatible with a situation in which Mailer wrote a book which he wouldn't have been able to write if it hadn't been for Nixon; on reading (**c**), [i] is compatible with a situation in which Nixon merely handed the book to Mailer, and questions of ownership are simply irrelevant.   (Oehrle (1976: 19), with modifications, bold mine)

In our framework, readings (a) and (b) of sentence (i) are instances of PH-DOC, and reading (c) is an example of EH-DOC.   Readings (a) and (c) involve transfer, but this is a compositional result of values of the arguments.

The organization of this chapter is as follows: we account for, in section 5.2, many different phenomena demonstrated by the two uses of the DOC. We then investigate, in section 5.3, the question of whether or not the DOC and the corresponding prepositional phrase construction (e.g. *I gave a book to Mary*) denote the same meaning; we argue that they differ in meaning. That is to say, they have totally different CSs.

5.2. Double Object Construction

The present study hypothesizes that PH-DOC has the CS represented in (7a), repeated here as (19a), and that the EH-DOC has the CS represented in (7b), repeated here as (19b):

(19) a. $[_{Event}$ CAUSE $([W], [_{State}$ EXP $([X^{\alpha}]_i, [_{State}$ BE $([Y (\alpha)], [_{Place}$ AT $(e_i)])])])]$

b. $[_{Event}$ CAUSE $([W], [_{State}$ EXP $([X^{\alpha}], [_{State}$ BE $([Y], [_{Place}$ AT $([Z (\alpha)])])])])]$

For a better understanding, we present examples of PH-DOC and EH-DOC in (20a) and (21a), and their CS representations in (20b) and (21b), respectively.

(20) a. Providence gave Mike a child. (= (8a))

b. [CAUSE ([PROVIDENCE]), [EXP ([MIKE$^{\alpha}]_i$, [BE ([CHILD (α)], [AT (e_i)])])]] (= (8b))

(21) a. %This gave Mike$_i$ several more people at his$_i$ disposal. (= (9a))

b. [([THIS]) CAUSE, [EXP ([MIKE$^{\alpha}$], [BE ([PEOPLE], [AT ([DISPOSAL (α)])])])]] (= (9b))

For ease of reference, the subscripts *Event*, *State*, and *Place* are omitted in the (b) representations. It is specified as a constructional meaning that the first argument of EXP

binds the first argument of BE in PH-DOC, and that the same argument binds the complement of AT in EH-DOC.   These are s(emantic)-selections of the first arguments of EXP.

We examine, in section 5.2.1, PH-DOC and, in section 5.2.2, EH-DOC.

5.2.1. PH-DOC

This sub-section focuses on PH-DOC.   In the present framework, PH-DOC has the CS represented in (19a), repeated here as (22):

(22) $[_{Event}$ CAUSE $([W], [_{State}$ EXP $([X^{\alpha}]_i, [_{State}$ BE $([Y (\alpha)], [_{Place}$ AT $(e_i)])])])]$

The first argument of CAUSE takes the Causer role; the first argument of EXP(ERIENCE) takes both the Possessor and Location roles; the first argument of BE bears Theme.   For a better understanding, we present an example of PH-DOC in (23a) and its CS representation in (23b).

(23)   a.   Providence gave Mike a child.   (= (20a))

       b.   [CAUSE ([PROVIDENCE], [EXP ([MIKE$^{\alpha}$]$_i$, [BE ([CHILD (α)], [AT (e_i)])])])]   (= (20b))

The CS for PH-DOC has the structure [Y BE [AT X]] embedded under the function EXP, entailing that this use has locative characteristics, as well as characteristics of its own.   The complement of function AT serves as a reference object relative to which the first argument of BE is located.   The first argument of the function EXP of the CS for PH-DOC simultaneously takes both the Possessor and Location roles; an argument is both the first argument of EXP and the complement of the location-denoting function at the same time,

which is indicated by the same subscript *i*. The complement of AT is empty, which is indicated by *e*.

5.2.1.1. Locative Characteristics

Let us first examine locative characteristics of PH-DOC. The Location argument functions as a reference object relative to which the first argument of BE is construed. Consider the contrast in (24):

(24) a.   I gave Mike a book.

b.   * I gave a book Mike.

The second argument of function EXP of the CSs of the sentences in (24) is given in (25); the second argument of function CAUSE is given in (26); the whole CS representations are given in (27).

(25) a.   [BE (BOOK) [AT (MIKE)]]

b.   # [BE (MIKE) [AT (BOOK)]]

(26) a.   [EXP (MIKE$^{\alpha}$)$_i$, [BE (BOOK(α)) [AT (e$_i$)]]]

b.   * [EXP (BOOK$^{\alpha}$)$_i$, [BE (MIKE(α)) [AT (e$_i$)]]]

(27) a.   [(I) CAUSE, [EXP (MIKE$^{\alpha}$)$_i$, [BE (BOOK (α)), [AT (e$_i$)]]]]

b.   * [(I) CAUSE, [EXP (BOOK$^{\alpha}$)$_i$, [BE (MIKE (α)), [AT (e$_i$)]]]]

As illustrated in (25), it is more natural for a book to be understood or construed relative to a human being than vice versa, since a book is smaller than a human being.   This construal is directly reflected in the [Y BE [AT X]] part.   In the [Y BE [AT X]] part of the CS of (24a)

that is given in (25a), *Mike* is an argument of the function AT and *book* is the first argument of the function BE, ensuring that *book* is understood relative to *Mike*. On the other hand, in the same part of the CS of (24b) that is given in (25b), *book* is an argument of the location-denoting function and *Mike* is the first argument of BE. In this case, the book functions as a reference object relative to which a human being is construed. This conceptualization is difficult to make, so the sentence in (24b) is unacceptable. The [Y BE [AT X]] part of sentence (24a) denotes an acceptable situation, rendering the sentence acceptable; on the other hand, the same part of (24b) refers to an unacceptable situation, resulting in the unacceptability of the sentence.

The acceptability of the [Y BE [AT X]] part is inherited to the acceptability of the relation between the first arguments of EXP and BE. The second argument of CAUSE of sentence (24a) is given in (26a), where the first arguments of EXP and BE are *Mike* and *a book*, respectively. In this case, the reference of the first argument of BE can be fixed in relation to the reference of the first argument of EXP. Thus, the first argument of EXP can bind the first argument of BE and bear the Possessor role, and the sentence is acceptable. The acceptability of structure (26a) originates from the acceptability of structure (25a). On the other hand, it is difficult for sentence (24b) to exhibit a binding relation between the indirect and direct objects, that is, between the first arguments of EXP and BE. The reference of Mike does not depend on any other element within the same sentence with respect to its identification; it need not be determined in relation to a book. Thus the first argument of EXP of sentence (24b) cannot bear the Possessor role, and the sentence is unacceptable. The unacceptability of structure (26b) originates from the unacceptability of structure (25b).

5.2.1.2. Non-locative Characteristics

We now move on to examine cases whose acceptability is determined by the relation expressed between the first arguments of EXP and BE. When the first argument of EXP can bind the first argument of BE and can bear the Possessor role, the sentence is acceptable; when it cannot bind the argument and cannot bear the role in question, the sentence is unacceptable. For example, a part of a whole can be bound by the whole; by definition, being a part of a whole necessitates the dependence of the part on the whole with respect to its identification. When the first arguments of EXP and BE refer to a whole and its part, respectively, the sentence can successfully instantiate PH-DOC. This theoretical assumption accounts for the acceptability of examples given in this sub-section.

Observe as an example the sentences in (28):

(28) a. She gave the room thick and dark curtains.

b. * She gave the room a book.

The second argument of function EXP of the CSs of the sentences in (28) is given in (29); the second argument of function CAUSE is given in (30); the whole CS representations are given in (31).

(29) a. [BE (CURTAINS) [AT (ROOM)]]

b. [BE (BOOK) [AT (ROOM)]]

(30) a. [EXP (ROOM$^{\alpha}$)$_i$), [BE (CURTAINS(α)) [AT (e$_i$)]]]

b. * [EXP (ROOM$^{\alpha}$)$_i$], [BE (BOOK(α)) [AT (e$_i$)]]]

(31) a. [(I) CAUSE, [EXP (ROOM$^{\alpha}$)$_i$, [BE (CURTAINS (α)), [AT (e$_i$)]]]]

b. * [(I) CAUSE, [EXP (ROOM$^{\alpha}$)$_i$, [BE (BOOK (α)), [AT (e$_i$)]]]]

Like the sentences examined in the previous section, one may find that the difference in acceptability between the sentences in (28) can be explained by considering their second argument of EXP, namely the [Y BE [AT X]] part. However, both curtains and books can be spatially located relative to a room, as exemplified in *There are thick and dark curtains in the room* and *There is a book in the room*. Therefore, the difference found in (28) cannot be explained by merely considering the second argument of EXP.

The relation expressed between the first arguments of EXP and BE contributes to the differential acceptability of the sentences in (28). It is easier to construe curtains as a part of a room than books. Only in the case in (28a) can the first argument of BE be regarded as one of the parts of the first argument of EXP; only in this case can the binding relation in the sense of this thesis be established between these two arguments. Hence the first argument of EXP can take the Possessor role, and the sentence is acceptable. In the case of (28b), on the other hand, the value of the first argument of BE cannot be easily construed as constituting a part of the value of the first argument of EXP, in which case the reference of the first argument of BE cannot as easily be determined in relation to the reference of the first argument of EXP. Thus, the first argument of EXP cannot bind the first argument of BE and cannot bear the Possessor role, and the sentence is unacceptable.

The discussion thus far has clarified that locative situations can be easier to express than possessive situations (cf. Harley (2003: 37)); in other words, situations expressible by the [Y BE [AT X]] part are less restricted than those by the relation between the first argument of EXP and its second argument. For example, the unacceptability of sentence (32) originates from the unacceptable relation denoted between the first arguments of EXP and BE.

(32)   * She gave the room a book.   (= (28b))

The [Y BE [AT X]] part, on the other hand, denotes an acceptable situation, as exemplified in *There is a book in the room*. When the relation expressible by the [Y BE [AT X]] part is acceptable, it does not necessarily entail that the relation between the first arguments of EXP and BE also refers to an acceptable situation. The acceptability of the former relation does not entail the acceptability of the latter relation.

On the other hand, when the relation expressed between the first arguments of EXP and BE is acceptable, the [Y BE [AT X]] part also refers to an acceptable situation. Consider the data in (33):

(33)   She gave the room thick and dark curtains.   (= (28a))

The reference of curtains in (33) depends on the indirect object referent with respect to its identification; in this case, the [Y BE [AT X]] part also refers to an acceptable situation, as exemplified in *There are thick and dark curtains in the room*. The relation between the first arguments of EXP and BE refers to an acceptable situation, entailing that the [Y BE [AT X]] part also denotes an acceptable situation.

Furthermore, when the [Y BE [AT X]] part denotes an unacceptable situation, the relation between the first arguments of EXP and BE also refers to an unacceptable situation. Consider (34):

(34) a.   * I gave a book Mike.   (= (24b))

      b.   # [BE (MIKE) [AT (BOOK)]]   (= (25b))

      c.   * [EXP (BOOK$^{\alpha}$)$_i$ [BE (MIKE(α)) [AT (e$_i$)]]]   (= (26b))

The [Y BE [AT X]] part of sentence (34a) is given in (34b), in which a book functions as a

reference point relative to which Mike is located.   This construal is difficult to make, leading to the unacceptability of the sentence.   In this case, the relation between the first arguments of EXP and BE is not acceptable, either.   Books cannot be easily construed as a whole of which a human being is a part; the reference of the first argument of BE cannot be determined in relation to the reference of the first argument of EXP.   The reference of Mike does not depend on any other element within the same sentence with respect to its identification; it need not be determined in relation to a book.   The unacceptability of the relation expressible by the [Y BE [AT X]] part entails the unacceptability of the relation expressible between the first arguments of EXP and BE.   Thus, locative relations are expressible more easily than possessive relations.

5.2.1.3.   Other Examples

This sub-section presents other examples that can be explained by our framework.   For example, the present study can predict the observation by Harley (2003).   She observes that the DOC in (35) can express the idea that John impregnated Mary; that is, Mary got her own child.

(35)   John gave Mary a child.   (Harley (2003: 42))

In our framework, sentence (35) instantiates PH-DOC.   The indirect object of PH-DOC binds the direct object, creating the interpretation observed by Harley.   In this case, the direct object referent depends upon the indirect object referent with respect to its identification.

Our framework can account for the difference in acceptability of the sentences in (36) and (37):

(36)　a.　　Nixon gave Mailer a book.

　　　b.　* Nixon gave Mailer someone else's book.

(37)　a.　　Their$_i$ marriage brought them$_i$ a child.

　　　b.　??Their marriage brought them someone else's child.

(36a) denotes a situation where the ownership of the book was transferred from Nixon to Mailer; (37a) expresses a situation where the referents of the indirect object got married and got a child of their own.　　In these cases, the references of the direct objects are determined in relation to the references of the indirect objects.　　That is to say, after the giving or bringing event, the book became Mary's, and the child became theirs.　　On the other hand, the (b) sentences in (36) and (37) do not display binding relations between the indirect and direct objects, since the direct object NPs contain an element that hinders their references from being determined in relation to the indirect objects, namely *someone else*.　　Therefore, the indirect object arguments cannot bind the direct object arguments and cannot bear the Possessor role, and the sentences do not successfully instantiate PH-DOC.

　　　The (a) sentences in (38-41) instantiate PH-DOC.　　The direct object referents depend on the indirect object referents with respect to their identification.　　The (b) sentences are possible paraphrases for the corresponding sentences.[5]

(38)　a.　　Interviewing Richard Nixon gave Norman Mailer a book. (Oehrle (1976: 44))

　　　b.　　Norman Mailer wrote a book by interviewing Richard Nixon.

(39)　a.　　Having a smart older sister gave John an inferiority complex.

(Green (1974: 129))

　　　b.　　John got an inferiority complex by having a smart older sister.

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[5]　These paraphrases are based on observations by Oehrle (1976).

(40) a.   Working hard for 20 years gave Mike a house.

      b.   Mike built/got a house by working hard for 20 years.

(41) a.   Working hard for 20 years gave Mike a fortune.

      b.   Mike made a fortune by working hard for 20 years.

As a possible paraphrase in (38b) indicates, sentence (38a) denotes a situation where the referent of the indirect object himself wrote a book by having done some interview with Richard Nixon. In this case, a book was created whose reference is determined in relation to the reference of the indirect object. Similarly, sentence (39a) denotes a situation where John got a certain complex of his own because of the presence of his older sister; in this case, the reference of the complex in question is determined in relation to the reference of the indirect object. Sentence (40a) refers to a situation where the indirect object referent built or got a house of his own by working hard for certain years; the reference of the house in question is determined by the reference of the indirect object. Sentence (41a) also denotes a similar situation. The indirect object referent got a fortune of his own by working hard for a long time; the reference of the fortune in question is determined by the indirect object referent.

It is expected in our framework that sentences like the (a) sentences in (38-41) are not acceptable when the direct object NPs contain *someone else*. This expectation is borne out by the data in (42):

(42) a.   * Interviewing Nixon gave Mailer someone else's book.

      b.   * Having a smart older sister gave John someone else's inferiority complex.

      c.   ??Working hard for 20 years gave Mike someone else's house.

      d.   ??Working hard for 20 years gave Mike someone else's fortune.

Since the direct object NPs contain *someone else*, their references cannot be determined in relation to the references of the indirect objects. The first arguments of EXP cannot bind the first arguments of BE, and cannot take the Possessor role, and the sentences are unacceptable. Similar examples appear in (43) and (44):

(43) a.   Working in France gave Mike a wife.

b.   * Working in France gave Mike someone else's wife.

(44) a.   The war years gave Mailer a book.   (Harley (2003: 41))

b.   * The war years gave Mailer someone else's book.

The discussion so far seems to have clarified that sentences like *Interviewing Nixon gave Mailer a book* are one of the prototypical examples of PH-DOC (cf. Goldberg (1992: 61)). The DOC or PH-DOC encodes the caused possession: the bringing about by the subject of a relation between the indirect and direct objects; in addition, PH-DOC encodes as a constructional meaning a binding relation between the indirect and direct objects. Sentences like *Interviewing Nixon gave Mailer a book* merely reflect these constructional encodings of PH-DOC; they are neither exceptional nor idiosyncratic at all.[6]

The claim that PH-DOC encodes a binding relation between the indirect and direct objects can also elucidate why certain verbs should occur in the DOC when their appearance in it is allegedly exceptional and/or idiosyncratic. For no reason, several previous studies argue, do the verbs *envy* and *forgive* occur in the DOC. This thesis, on the other hand, claims that their occurrence in it is neither exceptional nor idiosyncratic. There are motivations for

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[6]   Goldberg (1992: 61) reports the existence of the claim that sentences like those in (i) are exceptional and/or idiosyncratic instances of the DOC.

(i)   a.   Sally gave Bill a headache.
       b.   Mary's behavior gave John an idea.

these verbs to occur in the DOC; the lexical meanings of these verbs accord well with a constructional meaning of PH-DOC.

Some studies have claimed that the occurrence of *envy* and *forgive* in the DOC is unmotivated (Green (1974: 101), Goldberg (1992: 67; 1995: 131-132), Croft (2003)), since (i) their subjects do not seem to refer to a causer, and (ii) they do not seem to lexicalize the meaning of transfer. Concerning claim (ii), we have already argued that the DOC does not encode transfer; thus, it does not pose any problem to our claim. We will turn to claim (i) later in this section.

What we are primarily concerned with here is lexical meanings of these verbs that are consonant with the binding relation associated with PH-DOC. The verbs *envy* and *forgive* lexicalize binding relations between entities. Observe (45):

(45) a. Carolyn envied her$_i$ her$_i$ good looks.   (Pinker (1989: 66))

 b. No one can forgive you your comment.

(Rappaport Hovav and Levin (2007: 15), with modifications)

The indirect object must bind the direct object, as illustrated below:

(46) a. Carolyn envied her$_i$ {her$_i$ / *his / *their} good looks.

 b. No one can forgive you {your / *his / *her} comment.

It is generally the case that one envies someone for his or her possession or behavior; it is unlikely to envy someone for someone else's possession or behavior. Similarly, it is generally the case that one forgives someone for his or her acts; it is unlikely that one forgives someone for what someone else has done. These particular meanings of these predicates are

consonant with the constructional meaning of PH-DOC and thus motivate their appearance in it.

The binding relation in the sense of the present thesis can also be observed even when the direct object is indefinite. Consider the following:

(47) a. People envied you a brilliant marriage. *(Lippincott's Monthly Magazine)*

b. Perhaps Word would forgive him a moment's idleness.

(Creative Spirit: A Supernatural Thriller: A Haunted House Ghost Story)

A brilliant marriage in (47a) denotes a marriage that the indirect object referent had with someone not made explicit in the sentence; *a moment's idleness* in (47b) refers to a situation that the indirect object referent has experienced. In both these cases, the direct object referents depend on the indirect object referents with respect to their identification; the indirect object referents bind the direct object referents. Here is another example where there is no formal relation between the indirect and direct objects.

(48) I envy old Podgy Hicks that boat. (Colleman and De Clerck (2008: 205))

Sentence (48) is licensed as an instance of PH-DOC as long as the direct object referent is understood as belonging to the indirect object referent.

It is expected in our framework that the sentences in (49) are unacceptable.

(49) a. * People envied you someone else's brilliant marriage.

b. * God can forgive you his misinterpretation on the problem.

Since there are elements in the direct objects that refer to someone other than the indirect object referents, the indirect object referents in (49) cannot bind the direct object referents, and the sentences are unacceptable.

Let us move on to the discussion on the subject arguments of *forgive* and *envy*. One of the reasons for arguing that the occurrence of *forgive* and *envy* in the DOC is exceptional and/or idiosyncratic is that their subjects do not seem to denote causers. Colleman and De Clerck (2008) argue against this claim and argue that the subjects of *forgive* and *envy* have causal characteristics. Colleman and De Clerck (2008: 205-206) claim that the subject referent of the verb *forgive* functions as a causer, in that it does the act of granting forgiveness to the indirect object referent. Because of the act performed by the subject referent, the indirect object referent can relinquish whatever burden it has. In this respect as well, the occurrence of this verb in the DOC cannot be seen as an exception. As for the verb *envy*, Colleman and De Clerck (2008: 206) note that Colleman (2006) claims that the subject of *envy* "has a particular feeling or attitude towards" a relation between the indirect and direct objects, which he claims is an extension from the causality initiated by the subject toward the objects. This "attitudinal" extension motivates the verb to appear in the DOC. Thus, the lexical meanings of the verbs that are consonant with the binding relation of PH-DOC, as well as the "causal" or "attitudinal" nature on the part of the subjects accords well with constructional meanings of PH-DOC. They do not at all constitute either exceptional or idiosyncratic cases of PH-DOC.

Pinker (1989: 111) categorizes the verbs *envy* and *forgive* into the "verbs of future not having" group. Another verb belonging to this category is *cost*.[7] It is generally the case that something costs someone things that he or she possesses, or things that matter to him or her.

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[7] Other verbs included in this group are *spare*, *begrudge*, *bet*, *refuse*, *charge*, *fine*, *deny*, *ask* as in *She asked him the time*, and *save* as in *That saved me the trouble of making a separate trip*.

It is rather difficult to imagine a context where something costs someone things that do not belong to him or her, or things that do not matter to him or her at all.   This particular meaning of the verb *cost* also accords well with the constructional meaning of PH-DOC and thus motivates its occurrence in it.   Observe (50):

(50)　　　　That remark might cost you {your / *his / *her} job.

A pronoun in the direct object NP, when it appears, must be anaphoric to the indirect object referent; otherwise, the indirect object referent cannot bind the direct object referent, and the sentence is unacceptable.

The binding relation in the sense of the present thesis can be observed even when the direct object is indefinite.   Consider the following:

(51)　　　　It cost him a lot of money.

A lot of money in (51) refers to the money belonging to the indirect object referent; in this case, the direct object depends on the indirect object with respect to its identification.   Thus, the indirect object referent bears the Possessor role, and the sentence is acceptable.

Instances of the DOC with the verb *win* also demonstrate the binding relation between the indirect and direct objects.   Consider (52):

(52)　a.　　　John's essay won him a 1969 Fiat.

　　　b.　　　Advertising practices have won Coca-Cola an international reputation.

　　　c.　　　The book won him a good reputation.

<div align="right">((a, b), Green (1974: 99, 104))</div>

The indirect object referents in (52) bind the direct object referents; the direct object referents depend on the indirect object referents with respect to their identification. For example, the indirect object referent in (52a) got a Fiat of his own because of his essay. The (b) and (c) sentences in (52) exhibit the same kind of relations.

5.2.1.4. Interim Summary

This sub-section has examined one use of the DOC, PH-DOC. The CS for PH-DOC contains as its part the CS for PH, where the function EXP takes as its second argument a location-denoting structure, namely [Y BE [AT X]]. The first argument of EXP binds the first argument of BE. Some phenomena can be captured by assuming the [Y BE [AT X]] part, and the other phenomena can be explained by assuming the binding relation between the first arguments of EXP and BE. When the first argument of EXP binds the first argument of BE and bears the Possessor role, the sentence successfully instantiates PH-DOC. We have also demonstrated that sentences like *Interviewing Nixon gave Mailer a book* are nothing but prototypical examples of PH-DOC. We have also demonstrated that the verbs *envy* and *forgive* have motivations in their lexical meanings to occur in PH-DOC; their lexical meanings accord well with constructional meanings of PH-DOC.

5.2.2. EH-DOC

This sub-section focuses on EH-DOC. In the present framework, EH-DOC has the CS represented in (19b), repeated here as (53):

(53) $[_{\text{Event}} \text{CAUSE} ([\text{W}], [_{\text{State}} \text{EXP} ([\text{X}^{\alpha}], [_{\text{State}} \text{BE} ([\text{Y}], [_{\text{Place}} \text{AT} ([\text{Z} (\alpha)])])])])]$

The first argument of CAUSE takes the Causer role; the first argument of EXP(ERIENCE)

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takes the Experiencer$_2$ role; the first argument of BE bears Theme; the complement of AT takes Location. The complement of function AT serves as a reference object relative to which the first argument of BE is located. The first argument of the function EXP in (53) simultaneously takes both Experiencer$_2$ and Location. Note that in constructions like EH-DOC, in which the argument bearing Experiencer$_2$ and the argument bearing Location are realized as different linguistic elements, it is binding that guarantees the first argument of EXP bearing both Experiencer$_2$ and Location. That is, the bindee is an element within the complement which takes the semantic role Location. The bindee refers back to the binder and it ensures that the first argument of EXP bears both the semantic roles. The first argument of BE bears Theme.

For a better understanding, we present an example of EH-DOC in (54a) and its CS representation in (54b), respectively.

(54) a. %This gave Mike$_i$ several more people at his$_i$ disposal.   (= (21a))

b. [CAUSE ([THIS], [EXP ([MIKE$^\alpha$], [BE ([PEOPLE], [AT ([DISPOSAL (α)])])])])]   (= (21b))

For ease of reference, the subscripts *Event*, *State*, and *Place* are omitted in the (b) representation. The CS for EH-DOC has the structure [Y BE [AT X]] embedded under the function EXP, entailing that this use has locative characteristics, as well as characteristics of its own.

5.2.2.1. Locative Characteristics

Let us first examine locative characteristics of EH-DOC. The Location argument functions as a reference object relative to which the first argument of BE is construed.

Consider the sentences in (55):

(55) a. %I gave him$_i$ five dollars in his$_i$ pocket.

      b. %They gave him$_i$ a few dollars in his$_i$ hand.

The [Y BE [AT X]] part of sentence (55a) denotes a situation where there are several dollars in a pocket; the same part of sentence (55b) denotes a situation where there are several dollars in a hand.   Certain amount of money can easily be located relative to pockets and hands, and not vice versa.   For example, *I gave him$_i$ his$_i$ pocket in five dollars and *They gave him$_i$ his$_i$ hand in a few dollars are totally nonsensical.

5.2.2.2.   Non-locative Characteristics

The relation expressed between the first argument of EXP and the complement of AT can determine the acceptability of instances of EH-DOC.   When the first argument of EXP can bind the complement of AT and can bear the Experiencer$_2$ role, the sentence is acceptable; when it cannot bind the argument and cannot bear the role in question, the sentence is unacceptable.   For example, a part of a whole can be bound by the whole; by definition, being a part of a whole necessitates the dependence of the part on the whole with respect to its identification.   This theoretical assumption accounts for the acceptability of examples given in this sub-section.

Observe the sentences in (56):

(56) a. %I handed Mary$_i$ five dollars in her$_i$ hand.

      b. * I handed Mary$_i$'s hand five dollars to her$_i$.

(57) a. $[EXP\ (MARY^{\alpha})\ [BE\ (DOLLARS)\ [AT\ (HAND(\alpha))]]]$

     b. * $[EXP\ (HAND^{\alpha})\ [BE\ (DOLLARS)\ [AT\ (MARY(\alpha))]]]$

The structures in (57) represent the second argument of the function CAUSE of the CSs of the sentences in (56).   Like the sentences examined in the previous section, one may find that the difference in acceptability between the sentences in (56) can be explained by considering the second argument of EXP of the sentences, namely the [Y BE [AT X]] part.   However, a certain amount of money can be located relative both to a human being's hand and to a human being, as exemplified in (58):

(58) a.   There is five dollars in Mary's hand.

     b.   There is five dollars on Mary.

Therefore, the difference found in (56) cannot be explained by merely considering the second argument of EXP.

     The relation expressed between the first argument of EXP and the complement of AT contributes to the differential acceptability of the sentences in (56).   A human being can function as a whole of which a hand is a part; the reference of a hand depends on the reference of a human being with respect to its identification .   Only in the (a) sentence in (56) can the complement of AT be bound by the first argument of EXP.   The first argument of EXP can bear the Experiencer$_2$ role and the sentence is acceptable.   On the other hand, it is difficult to construe a hand as a whole of which a human being is a part.   In this case, the first argument of EXP cannot bind the complement of AT; it cannot take the Experiencer$_2$ role; and the sentence is unacceptable.

5.2.2.3. Other Examples

This sub-section presents other examples that can be explained by our framework. Consider first instances of EH-DOC like the following:

(59) a.   %This gave Mike$_i$ several more people at his$_i$ disposal.   (= (54a))

     b.   %His$_i$ strategy and logistics gave him$_i$ everything he$_i$ needed to win at his$_i$ disposal.   (= (18b))

It is expected that there cannot appear in the PPs pronouns that do not refer back to the indirect objects.   This expectation is borne out by the data in (60):

(60) a.   * This gave Mike several more people at her disposal.

     b.   * His$_i$ strategy and logistics gave him$_i$ everything he$_i$ needed to win at her disposal.

Other examples are observed in (61) and (62):

(61) a.   %I gave him$_i$ five dollars in his$_i$ pocket.

     b.   %They gave him$_i$ a few dollars in his$_i$ hand.

(62) a.   %They handed her$_i$ the paper in her$_i$ hand.   She was so amazed.

                                  (*Short Stories For the Young and Old At Heart*)

     b.   %Julia turned to Grace$_i$ and handed her$_i$ the small package in her$_i$ hand.

                                  (*The Courtship of the Vicar's Daughter*)

The facts given in (63) and (64) parallel those given in (60).

(63) a. * I gave him five dollars in her pocket.

      b. * They gave him a few dollars in her hand.

(64) a. * They handed her the paper in his hand.

      b. * Julia turned to Grace_i and handed her_i the small package in his hand.

5.2.2.4. Interim Summary

We have examined in this sub-section one use of the DOC, EH-DOC.   The CS for EH-DOC contains as its part the CS for EH, where the function EXP takes as its second argument a location-denoting structure, namely [Y BE [AT X]].   The first argument of EXP binds the complement of AT.   Some phenomena can be captured by assuming the [Y BE [AT X]] part, and the other phenomena can be explained by assuming the binding relation between the first argument of EXP and the complement of AT.   When the first argument of EXP binds the complement of AT and bears the Experiencer$_2$ role, the sentence successfully instantiates EH-DOC.

5.3. The Double Object Construction and the Prepositional Phrase Construction

Now that we have demonstrated how our framework explains many different phenomena pertaining to the two uses of the DOC, we move on to focus on the question of whether the DOC, as exemplified in (65a), and the corresponding prepositional phrase construction (PPC), as exemplified in (65b), denote the same or distinct meanings.

(65) a.   Mike gave Mary a book.

      b.   Mike gave a book to Mary.

This phenomenon is called dative alternation and this question has long been debated in the

literature.   In this sub-section, the distinction between PH-DOC and EH-DOC is irrelevant. So I just employ the term the DOC.[8]

The DOC and the PPC encode different meanings.   The DOC is associated with the caused possession meaning, and that the PPC is associated with the caused motion meaning. By caused possession, I mean the bringing about of a relation between the subject and the elements following the verb.   Caused motion entails that an agent transfers a theme along a path to a goal (Goldberg (1995)).   If the DOC and the PPC were associated with one and the same meaning, the DOC and the PPC would share one of the CSs proposed in the previous section, the CS for PH-DOC or the CS for EH-DOC.   This thesis argues that they do not share a CS; they have distinct CSs.   Following Pinker (1989) and Goldberg (1995), I hypothesize roughly the CS for the PPC as shown in (66).   (67a) is an instance of this construction, and (67b) is its rough representation.

(66) $[_{Event}$ CAUSE $([X], [_{Event}$ GO $([Y], [_{Path}$ TO $([Z])])])]$

(67)   a.   Mike gave a book to Mary.

       b.   [CAUSE ([MIKE], [GO ([BOOK], [TO ([MARY])])])]

For ease of reference, the subscripts *Event* and *Path* are omitted in the (b) representation. The CS for the PPC in (66) has the motion-denoting structure [Y GO [TO Z]] embedded under the function CAUSE and means that X transfers Y to Z.   This CS does not have a function corresponding to the function EXP(ERIENCE) embedding a location-denoting structure under it.   In addition, the PPC does not encode binding relations between one element and another, either.   It is specified in the CS for the PPC that the first argument of CAUSE is an agent.   It follows from this assumption that entities that cannot be an agent

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[8]   The discussion in this sub-section is based on Takeuchi (to appear).

cannot occur as the subject of this construction.

The PPC is treated analogously with so-called "caused motion constructions" (Goldberg (1995: 90)), constructions that are thought of as including a path. Their examples are in the following:

(68) a. Joe kicked the bottle into the yard. (Goldberg (1995: 90))

  b. They sprayed the paint onto the wall. (Goldberg (1995: 152))

  c. Frank sneezed the tissue off the table. (Goldberg (1995: 152))

Nevertheless, the DOC and the PPC can denote one and the same situation as a result of the composition of values of the arguments, but this does not entail that the two constructions encode one and the same meaning. Consider (69):

(69) a. John gave the bell boy a large tip.

  b. John gave a large tip to the bell boy.

(cf. Van Bell and Van Langendonck (1996: 238))

As argued by Van Bell and Van Langedonck (1996), the difference between sentences like those in (69) can be neutralized by our world knowledge. It is understood that giving someone a tip involves a transfer of a tip from the giver to the givee. In this case, the interaction of values of the arguments results in denoting one and the same situation, no matter which construction may be employed. The DOC and the PPC in (69) happen to denote one and the same situation.

Section 5.3.1 surveys previous studies on the question of the dative alternation; section 5.3.2 argues for the claim that the DOC and the PPC encode different meanings. Section

5.3.3 gives a summary.

5.3.1. Previous Studies

There are roughly three classes of analyses. One assumes that both constructions encode one and the same meaning. Using the term by Rappaport Hovav and Levin (2008) (RH & L (2008)), we call this approach "the single meaning approach" (Baker (1988), Larson (1988, 1990), Aoun and Li (1989), Butt et al. (1997), etc.). A second approach assumes that the constructions encode related, yet distinct meanings. Using the term by RH & L again, we call this approach "the multiple meaning approach" (Pinker (1989), Goldberg (1992, 1995), Krifka (1999, 2004), Harley (2003), Beck and Johnson (2004), to name a few). A third approach can be called the verb-sensitive approach (Jackendoff (1990), Rappaport Hovav and Levin (2008)). This approach focuses on lexical meanings of dative verbs, rather than constructional meanings. We call those verbs dative verbs that appear in either the DOC or the PPC, or both. The third approach argues that one type of dative verbs only denotes caused possession in either construction, and that another type of dative verbs denotes both caused possession and caused motion in the DOC, and caused motion in the PPC. We will overview these approaches one by one.

5.3.1.1. Single Meaning Approach

A generative syntactic analysis for the single meaning approach will hypothesize a derivation which relates one construction to the other, in line with the Uniformity of Theta Assignment Hypothesis by Baker (1988). UTAH assumes that "identical thematic relations are mapped onto identical syntactic positions across structures." In this approach, the two constructions are "thematic paraphrases" and have one and the same underlying syntactic structure, giving rise to two different surface realizations of arguments. The particle *to* is

either inserted or deleted, depending on the choice of underlying structure. Aoun and Li (1989), for example, assume that the DOC is basic and the PPC is derived, with the particle *to* inserted in the course of derivation; Larson (1988), on the other hand, assumes that the PPC is basic and the DOC is derived, with the particle deleted in the course of derivation.[9, 10]

5.3.1.2. Multiple Meaning Approach

The multiple meaning approach does not assume a derivational relation between the two constructions: each construction encodes meanings of its own and gives rise to its own surface realization of arguments. This approach generally entails that the double object construction denotes caused possession, and that the PPC denotes caused motion.   The PPC in this approach contains in its representation, semantic or syntactic, a path along which a theme moves to a goal.

From here to the end of this sub-section, I present many different examples that the multiple meaning approach claims to serve as evidence that the two constructions differ in their meaning.   The single meaning approach, on the other hand, must provide an explanation for the different acceptabilities of these data.

Let us first present so-called idiomatic examples (e.g. Green (1974), Oehrle (1976), Gropen et al. (1989)):

(70) a.   The noise gave Terry a headache.

      b.   * The noise gave a headache to Terry.

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[9]   Larson (1990: 601) proposes his own version of UTAH.   See (i):

(i)   *Relativized UTAH*
         Identical thematic relationships are represented by identical relative hierarchical relations between items at D-Structure.

[10]   There are also non-derivational single meaning approaches (e.g. Butt et al. (1997)).

(71) a.   The count gives me the creeps.

     b.   * The count gives the creeps to me.

It is argued that the subject referents in the (a) sentences in (70) and (71) brought about a possessive relation between the indirect and direct object referents; in other words, because of the subject referents, the indirect object referents came to have the direct object referents.   In these cases, the direct object referents were created, not transferred.   Hence caused possession.   On the other hand, the subject referents in the (b) sentences, as they are inanimate entities, cannot themselves have a headache or the creeps and cannot transfer them to another entity.   In these cases, the constructional meaning of the PPC is not compatible with the propositions that are intended to convey.

The differential acceptability of sentences like those in (72) has also been considered to support the multiple meaning approach (e.g. Harley (2003), Krifka (2004)).[11]

(72) a.   Interviewing Richard Nixon gave Norman Mailer a book. (Oehrle (1976: 44))

     b.   * Interviewing Richard Nixon gave a book to Norman Mailer.

(RH & L (2008: 151))

Sentence (72a) does not express the proposition that a book was physically transferred from somewhere to Norman Mailer.   It conveys that Mailer wrote and/or published a book by doing some interview with Nixon; in this case, a book was created.   The constructional meaning of the PPC is not compatible with the proposition that can be conveyed by the corresponding DOC, since interviewing someone cannot physically move objects from one place to another.

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[11]   We examined example (72a) in section 5.2.1.3 as example (38a).

The pairs of sentences in (73-75) also display different acceptability:[12]

(73) a.   The war years gave Mailer a book.   (Harley (2003: 41))

      b.   * The war years gave a book to Mailer.   (Harley (2003: 41))

(74) a.   The absence of competition guaranteed Scorsese the prize money.

      b.   * The absence of competition guaranteed the prize money to Scorsese.

                                                           (Pesetsky (1995: 194))

(75) a.   Lipson's textbook taught me Russian.   (Oehrle (1976: 75))

      b.   * Lipson's textbook taught Russian to me.   (Oehrle (1976: 75))

The sentences in (73-75) express the bringing about of a relation between the indirect and direct objects, not the transfer of an entity from one place to another. Thus, only the DOC is compatible with the meanings intended to convey.

In addition, there are several non-alternating verbs. It is known that verbs of "future not having," verbs like *cost*, *envy*, *spare*, and *forgive* can only occur in the DOC (Pinker (1989: 111), cf. Green (1974: 101), Oehrle (1976: 142)). Observe the following:

(76) a.   That remark might cost you your job.   (Pinker (1989: 65))

      b.   * That remark might cost your job to you.   (Pinker (1989: 65))

(77) a.   Carolyn envied her_i her_i good looks.   (Pinker (1989: 66))

      b.   * Carolyn envied her_i good looks {to / from / of} her_i.   (Pinker (1989: 66))

(78) a.   Please spare me your sarcasm.   (Pinker (1989: 65))

      b.   * Please spare your sarcasm {to/ from / of} me.   (Pinker (1989: 65))

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[12]   We examined example (73a) in section 5.2.1.3 as example (44a).

(79) a.   No one can forgive you that comment.   (RH & L (2008: 144))

     b.   * No one can forgive that comment to you.   (RH & L (2008: 144))

It is claimed that these verbs do not encode caused motion; thus, the lexical meanings of these predicates are not compatible with the constructional meaning of the PPC.

     On the other hand, verbs expressing a continuous imparting of force or control (Pinker (1989)) appear only in the PPC.   Consider the following data:

(80) a.   * Ann pulled Beth the box.

     b.   Ann pulled the box to Beth.

(81) a.   * Ann rode Beth the horse.

     b.   Ann rode the horse to Beth.

(82) a.   * Ann walked Beth the dog.

     b.   Ann walked the dog to Beth.

(Krifka (2001: 2))

The causing events denoted by these verbs coincide with the moving events of themes (Pinker (1989), Krifka (2001)); for example, to pull something, to ride something, or to walk something entails the movement of things pulled, ridden, or walked.   Thus, these verbs lexicalize a movement event.   However, there is no movement associated with the DOC, so the verbs and the construction are not compatible with each other.[13]

     Verbs of manner of speaking do not occur in the DOC, either.

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[13]   Other verbs belonging to this category are *push*, *lower*, and *haul.*

(83) a. * Ann yelled Beth the news.   (Krifka (1999: 10))

      b.   Ann yelled the news to Beth.   (Krifka (1999: 10))

(84) a. * Ann shouted Beth the news.   (Krifka (1999: 3))

      b.   Ann shouted the news to Beth.   (Krifka (1999: 3))

These types of verbs, in their transitive use, share one characteristic with verbs of continuing imparting force or control: the causing event named by the verb coincides with the transfer of information, that is, the transfer of a theme.   For example, to yell something or to shout something entails the movement of something yelled or shouted.   These verbs, too, lexicalize a movement; therefore, they are compatible only with the PPC.

5.3.1.3. Verb-Sensitive Approach

A third approach can be called "the verb-sensitive approach."   This approach treats verbs like *give* or *sell* differently from those like *throw* or *send.*   Jackendoff (1990) claims that verbs in the former class inherently mean change of possession, and that those in the latter class mean "instantaneous imparting of force in some manner causing ballistic motion" (Pinker (1989: 110)).   Partially in line with Jackendoff (1990), Rappaport Hovav and Levin (2008) (RH & L (2008)) classify dative verbs into two types:

(85)   Dative verbs having only a caused possession meaning:

        a. Verbs that inherently signify acts of giving: *give, hand, lend, loan, pass, rent, sell*, …

        b. Verbs of future having: *allocate, allow, bequeath, grant, offer, owe, promise*, …

        c. Verbs of communication: *tell, show, ask, teach, read, write, quote, cite*, …

(86) Dative verbs having both caused motion and possession meanings:

a. Verbs of sending: *forward*, *mail*, *send*, *ship*, …

b. Verbs of instantaneous causation of ballistic motion: *fling, flip, kick, lob, slap, shoot, throw, toss*, …

c. Verbs of causation of accompanied motion in a deictically specified direction: *bring, take*

d. Verbs of instrument of communication: *e-mail, fax, radio, wire, telegraph, telephone*, …

(RH & L (2008: 134))

In their framework, verbs in (85) (*give*-type verbs) denote only the caused possession meaning in either construction.   Verbs in (86) (*throw*-type verbs) denote either the caused possession or caused motion meaning in the DOC, and the caused motion meaning in the PPC.   Here is a summary of their verb-sensitive approach and the multiple meaning approach:

A summary of the verb-sensitive approach

	DOC	PPC
give-type verbs	caused possession	caused possession
throw-type verbs	caused motion *or* caused possession	caused motion

A summary of the multiple meaning approach

	DOC	PPC
all dative verbs	caused possession	caused motion

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RH & L (2008) argue that the different acceptabilities of sentences observed in the previous section can be accounted for by considering the heaviness of the NPs and/or information structure. We will overview their contention as a representative study of the verb-sensitive approach.

One of the important premises of their claim is that instances of the PPC with a *give*-type verb do not encode an event schema that includes a path and therefore does not involve transfer. In support of this claim, they present as an example the following data:

(87)   Cultural commissioner Megan Whilden said that the five 'Artscape' pieces would 'give a festive air to Park Square, they're fun and interesting.'

(RH & L (2008: 139))

They argue that sentence (87) does not involve transfer, since the theme NP *a festive air* does not exist prior to the event named by the verb *give*. They conclude from this kind of example that if there is no transfer, there is no path.

RH & L (2008) argue that heaviness and/or information structure play a crucial role in the choice between the two constructions. They roughly define heaviness and information structure in the following way:

(88)   a.   Heaviness: Heavy material comes last.

b.   Information structure: Given material comes before new material.

(RH & L (2008: 156))

We first overview their claim on heaviness and then move on to their claim on information structure.

In their framework, idiomatic uses such as *give X a headache* can occur in the PPC when the goal NP is heavy.   Consider the data in (89):

(89) a.   … it is unreadable, guaranteed to give a headache to **anyone who looks hard**
              at the small print.   (RH & L (2008: 158), bold mine)

      b.   'Doing my taxes' gives a headache to **22 percent of Americans surveyed**
              for Bristol-Myers Squibb, which makes Excedrin pain-relief medicine.

                                                                        (RH & L (2008: 158), bold mine)

The goal NPs in (89) are relatively heavier than the theme NPs, and it licenses the PPCs.

The sentences in (90) are also presented as evidence that heaviness plays a key role in determining the choice between the PPC and the DOC:

(90) a.   # Nixon's behavior gave an idea for a book to Mailer.

      b.   Nixon's behavior gave an idea for a book to **every journalist living in New**
              York City in the 1970s.

                                                                        (after Snyder (2003: 35), bold mine)

Although sentence (90a) is claimed to be unacceptable out of context, it certainly is acceptable when the goal NP is long and heavy, as illustrated in (90b).

Let us move on to their discussion on information-structural considerations.   RH & L claim that information-structural considerations can account for the different acceptability of sentences like those in (91):

(91) a.   Interviewing Richard Nixon gave Norman Mailer a book.   (= (72a))

        b. * Interviewing Richard Nixon gave a book to Norman Mailer.   (= (72b))

The PPC is acceptable when the theme NP is given, as illustrated in (92):

(92) A: It is very difficult to get **an idea for a book** simply from an interview.

        B: Well, interviewing Nixon gave **an idea for a book** to Mailer.

                                           (RH & L (2008: 157), bold mine)

The theme NP *an idea for a book* is introduced in the sentence uttered by Speaker A and thus given in the sentence uttered by Speaker B. This data is presented as evidence that there is no semantic difference encoded between the two constructions.

      The information-structural account can also explain idiomatic uses such as *give X a headache* and *give X the creeps*. Consider (93) and (94):

(93) a.   The noise gave Terry a headache.   (= (70a))

        b. * The noise gave a headache to Terry.   (= (70b))

(94) a.   The count gives me the creeps.   (= (71a))

        b. * The count gives the creeps to me.   (= (71b))

It is generally the case that a recipient is human, and a theme is non-human. Human beings, rather than inanimate entities, are likely to be familiar in a given discourse and hence to be a topic in the discourse; on the other hand, an illness, as it is inanimate, is usually new information. Thus, it is information-structurally appropriate for a recipient to precede a theme, which makes suitable the employment of the default word order of the DOC. When

the idiomatic uses occur in the PPC, as in the (b) sentences of (93) and (94), the theme is regarded as old information and the recipient is considered to be new information. This interpretation is unlikely, and thus the sentences are judged unacceptable without context.

It is expected in their framework that an illness, when it is old information, can precede a recipient. This expectation is, they argue, borne out by the data in (95):

(95)   I think it's time you give your lovely illness to someone else!!!

(RH & L (2008: 159), sic)

It is concluded from this kind of data that one and the same meaning is associated with both constructions.

5.3.2.   Arguing for the Multiple Meaning Approach

This sub-section argues that the DOC and the PPC denote different meanings: the DOC denotes caused possession and the PPC caused motion. By caused possession, I mean the bringing about by the subject argument of a relation between the indirect and direct objects. The DOC does not encode a transfer of entities from the subject referent to the indirect object referent. The classification of dative verbs by RH & L (2008) is irrelevant here. I first investigate the heaviness account overviewed above and argue against it. I then move on to demonstrate that the PPC, regardless of the type of verb appearing in it, does have an event schema that includes a path. I then move on to investigate the information-structure account overviewed above and argue against it. This sub-section also claims that some instances of the PPC can be licensed by the Conduit Metaphor, and that this metaphor can only license the PPC, not the DOC. At the end of this sub-section, I present other examples whose acceptability is predicted in our framework.

5.3.2.1. Against the Heaviness Account

Let us first examine the issue of heaviness. Heavy material comes last in order to observe the principle of end weight (e.g. Wasow (2002)). Acceptability for various types of constructions can certainly be overridden by this factor, but this does not indicate at all that the DOC and the PPC have one and the same meaning associated with them. When the goal NP is heavy, to employ the default word order of the PPC is sometimes the only option available; we have sometimes no choice but to employ the PPC in order to observe the principle of end weight.

For example, the heaviness of an NP determines the naturalness of the sentences in (96) and (97):

(96) a.   Robin talked with Dana about the cockroach that ate Cincinnati.

    b.   ? Robin talked about the cockroach that ate Cincinnati with Dana.

(97) a.   ? Robin talked with the former vice-chairman of the sociopathy department about Leslie.

    b.   Robin talked about Leslie with the former vice-chairman of the sociopathy department.

(Culicover and Jackendoff (2005: 146-147), with modifications)

These data indicate that a sentence sounds more natural when a heavier material comes last. In (96), the information talked about is heavier than the person talked with; thus, the (a) sentence sounds more natural than the (b) sentence. In (97), on the other hand, the person talked with is heavier; thus, the (b) sentence sounds more natural.

Hawkins (1994) observes that sentence (98a) is the most acceptable of the three, and that sentence (98c) is the least acceptable.

(98) a.　　Joe looked the number up.

   b.　　Joe looked the number of the ticket up.

   c.　　Joe looked the number that Mary had forgotten up.

<div align="right">(Hawkins (1994: 65))</div>

In terms of heaviness, the heavier the linguistic element denoting the material looked up, the less acceptable the sentence becomes. This is precisely because the element in question is situated not at the end of the sentence, although it becomes heavier and heavier than the particle *up*.

　　When it comes to the DOC and the PPC, to employ the default word order of the PPC is sometimes the only option available when the goal NP is heavy. Bresnan et al. (2007) observe the contrasts in (99) and (100):

(99) a.　　That movie gave **me** the creeps.

   b.　　* That movie gave the creeps to **me**.

(100) a.　　??Stories like these must give **people whose idea of heaven is a world without religion** the creeps…

   b.　　Stories like these must give the creeps to **people whose idea of heaven is a world without religion**…

<div align="right">(Bresnan et al. (2007: 73-74), bold mine)</div>

As illustrated in (99), when the goal NP is not heavy, only the DOC is acceptable; as illustrated in (100), when the goal NP is heavy, the PPC is much preferable to the DOC. These data indicate that we have no choice but to employ the PPC when the goal NP is long and heavy; the default word order of the PPC is appropriate in order not to violate the principle

of end weight.

If there is no difference in meaning between the PPC and the DOC, the PPC in (99b) should be just as acceptable as the DOC in (99a).   Since sentences like (99b) cannot be acceptable without factors such as heaviness, as illustrated in (100b), it seems reasonable to suppose that the DOC and the PPC encode distinct meanings.   It is not that the DOC in (99a) is preferable to the PPC in (99b); in this case, the DOC is perhaps the only option available.

The same principle lies behind the contrasts observed in the following sentences:

(101) a.   Working hard for 20 years gave Mike a house.

       b.   * Working hard for 20 years gave a house to Mike.

(102) a.   ??Working hard for 20 years gave every journalist living in New York City in the 20th century a house.

       b.   Working hard for 20 years gave a house to every journalist living in New York City in the 20th century.

Sentence (101a) is acceptable, and sentence (101b) is not.   However, when the goal NP is heavy, the PPC is much preferable to the DOC, as illustrated in (102).   In this case, the heaviness of the goal NP licenses the employment of the word order of the PPC in order for the sentence to be understandable.

5.3.2.2.   PPC Having a Path

In this sub-section, I present several pieces of evidence indicating that the PPC, regardless of the type of verb occurring in it, has an event schema that includes a path.   A path in the PPC stems from the spatial semantic meaning of the particle *to* (e.g. Langacker (1991), Colleman and De Clerck (2009)).   The DOC, on the other hand, lacks this particle

and thus lacks an event schema including a path.

As noted by Colleman and De Clerck (2009: 37, fn. 14), English *to* has not grammaticalized into a dative marker as its French counterpart has. English *to* can mark a goal toward which a theme moves but cannot mark a source from which a theme moves away; on the other hand, its French counterpart *à* marks not only a goal but also a source. Observe the sentences in (103) and (104):

(103) a.　　Ils　　ont　　donné　　un　livre　à　　Paul.

　　　　　　They have　given　　a　　book　to　Paul

　　　　　　'They gave a book to Paul.'

　　 b.　　They gave a book to Paul.

(104) a.　　Ils　　ont　　volé　　　un　livre　à　　Paul.

　　　　　　They have　stolen　　a　　book　to　Paul

　　　　　　'They stole a book from Paul.'

　　 b.　* They stole a book to Paul.

(cf. Colleman and De Clerck (2009: 37, fn. 14))

French *à* is not but English *to* is subject to this direction constraint. These facts indicate that French *à* has grammaticalized (from an allative marker) into a dative marker, while English *to* has not undergone the same stage of grammaticalization. English *to* is a preposition.

The basic meaning of English *to* is to mark a goal at the end of spatio-temporal path. This particle brings in the path semantics to the PPC. Langacker (1991: 13-14), for example, describes the meaning difference in the sentences in (105) in the way given in (106):

(105) a.   Bill sent a walrus to Joyce.

      b.   Bill sent Joyce a walrus.

(106)   In [105a] the morpheme *to* specifically designates the path followed by the walrus, thereby rendering this aspect of the conceptualization more prominent than it would otherwise be … In [105b] on the other hand, *to* is absent, but the juxtaposition of two unmarked nominals (*Joyce* and *a walrus*) after the verb symbolizes a possessive relationship between the first nominal and the second. Consequently [105b] lends added prominence to the configurartion that results when the walrus completes its trajectory, namely that which finds it in Joyce's possession …

             (Langacker (1991: 13-14), after Colleman and De Clerck (2009: 10))

The verb in the example of the PPC in (105a) is *send*, a *throw*-type verb; nevertheless, Langacker's argument also applies to instances of the PPC with *give*-type verbs.

If we assume that the semantic representation of the PPC has a path, we can account for an observation made by Harley (2003).   Harley (2003: 42) observes that the DOC in (107a) can express the idea that John impregnated Mary, while the PPC in (107b) seems to entail that an already existing child was physically transferred.[14]

(107) a.   John gave Mary a child.   (Harley (2003: 42))

      b.   John gave a child to Mary.   (Harley (2003: 42))

Not only sentence (107a) but also sentence (107b) contains the verb *give*.   Harley's observation pertaining to (107b) follows from the combination of the following: (i) the particle

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[14]   We examined sentence (107a) in section 5.2.1.3 as example (35).

to contributes a path semantics to the PPC; (ii) the PPC encodes caused motion; (iii) a child was transferred along a path to a goal; and (iv) the child must exist prior to the giving event in order to move along a path to a goal.

Similar examples are given in (108) and (109):

(108) a.   God sent Mary a daughter.

b.   God sent a daughter to Mary.

(109) a.   Mary's long prayers brought her a son.

b.   Mary's long prayers brought a son to her.

The (a) sentences in (108) and (109) describe events where the subject referents caused the bringing about of relations between the indirect object and direct object referents.   In these cases, the direct object referents were not transferred but created.   On the other hand, the (b) sentences describe events where the subject referents caused already existing children to go to the goal NPs physically.

The validity of these observations is supported by the data in (110-111), where # indicates that the sentences are less preferable than the counterparts.

(110) a.   Mary wanted a child so much, but she didn't get pregnant.   She prayed and prayed, and finally God sent her a son.

b.   # Mary wanted a child so much, but she didn't get pregnant.   She prayed and prayed, and finally God sent a son to her.

(111) a.   Mary wanted a child so much, but she didn't get pregnant.   She prayed and prayed, and finally her long prayers gave her a son.

b.   # Mary wanted a child so much, but she didn't get pregnant.   She prayed and

prayed, and finally her long prayers gave a son to her.

The context makes it clear that the woman in question wanted a child of her own.   What is at issue here is the creation of children, not the transfer of already existing children.   Thus, as illustrated in (110) and (111), the DOCs are preferred.   The fact that the PPCs are not preferred in this particular context follows from our assumption that the PPC encodes an event schema including a path.   The PPCs in the (b) sentences describe situations where an already existing child was transferred from one place along a certain path to another; the son in the (b) sentences could thus be anyone's son, which does not accord well with the context.

Note in passing that the path in the PPC with a *give*-type verb lacks any internal structure.   As observed by several previous studies (e.g. Jackendoff (1983: 192), Krifka (2004)), the path in the PPC whose verb is a *give*-type one has no internal structure. Consider (112):

(112) a. * Susan gave the ball {all the way / halfway} to Bill.

b. Jake threw the ball {all the way / halfway} to Bill.

c. I sent the package {all the way / halfway} around the world to the Antarctic.

(RH & L (2008: 138))

Expressions like *all the way* and *halfway* denote internal structures of paths.   Since they cannot appear in the PPC with a *give*-type verb as in (112a), unlike the PPCs with *throw*-type verbs as in (112b) and (112c), the path of this type of PPC is not internally complex. Nevertheless, these data merely indicate that the path in the PPC whose verb is a *give*-type one lacks any internal structure; they do not indicate at all that this type of the PPC lacks a path

altogether.[15]

5.3.2.3.　Against the Information-Structure Account

Let us move on to investigate the validity of the information-structural account that we saw in section 5.3.1.3. To conclude, information-structural considerations cannot validate the claim that the DOC and the PPC encode one and the same meaning.

If we assume that the DOC denotes caused possession and the PPC denotes caused motion, we can straightforwardly account for the fact that sentences like (113) exhibit different acceptabilities:

(113) a.　　Interviewing Richard Nixon gave Norman Mailer **a book**.　　　(= (91a))

　　　b.　* Interviewing Richard Nixon gave **a book** to Norman Mailer.　　(= (91b))

It is argued in RH & L (2008) that sentences like (113b) are acceptable when the theme NP is given information, and the data in (114) is presented:

(114) A:　　It is very difficult to get **an idea for a book** simply from an interview.

　　　B:　　Well, interviewing Nixon gave **an idea for a book** to Mailer.　　(= (92))

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[15]　The *give*-type verbs in the PPC can take only the possessional goal, as illustrated in (i) and (ii):

(i)　　a.　* Where did you give the ball?
　　　b.　　Where did you throw the ball?　　To third base.
　　　c.　　Where did you send the bicycle?　　To Rome.
　　　　　　　　　　　　　　　(RH & L (2008: 137), cf. Levinson (2005))
(ii)　　a.　　I gave the package to {Maria / *London}.
　　　b.　　I sent the package to {Maria / London}.
　　　c.　　I threw the ball to {Maria / the other side of the field}.
　　　　　　　　　　　　(RH & L (2008: 138), cf. Green (1974: 103), Goldsmith (1980: 430))

On the basis of these kinds of examples, it is concluded that there is no semantic difference between the DOC and the PPC.   However, the explanation of the sentence in (114) uttered by Speaker B cannot straightforwardly apply to the sentences in (113), since the value of the theme NPs differs.   In (113), it is *a book*; in (114), it is *an idea for a book.*   Note that sentence (113b) is distinctly odd even when the theme NP is given.   Observe (115):

(115) A: It is very difficult to write **a book** simply from an interview.

   Bi: * Well, interviewing Richard Nixon gave **a book** to Norman Mailer.

   Bii: Well, interviewing Richard Nixon gave Norman Mailer **a book**.

Thus, one must provide an explanation for the differential acceptability of sentences like those in (113).

   We hypothesize that the subject argument of the DOC and that of the PPC are specified as a causer and as an agent, respectively.   The gerund phrase in the subject position of the DOC in (113a) can cause the creation of a relation between the indirect and direct objects; in other words, the indirect object referent wrote a book by interviewing someone.   Thus, sentence (113a) is acceptable.   On the other hand, the same gerund phrase, as it is not animate, cannot be an agent and thus cannot physically transfer entities from one place to another.   In other words, doing the act of interviewing cannot physically move entities like books from one place to another.   Therefore, sentence (113b) is unacceptable.

   The same reasoning applies to examples similar to (113).   Observe the sentences in (116-119):[16]

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[16]   Oehrle (1976: 27-28) gives similar examples as well:

   (i)   a.   The American program to land a man on the moon gave Mailer a book.
          b.   * The American program to land a man on the moon gave a book to Mailer.

(116) a.   Working hard for 20 years gave Mike **a house**.   (= (40a))

     b.   * Working hard for 20 years gave **a house** to Mike.

(117) a.   Working hard for 20 years gave Mike **a fortune**.   (= (41a))

     b.   * Working hard for 20 years gave **a fortune** to Mike.

(118) a.   Trying to see around the couple in front of us gave me **a pain** in the neck.

     b.   * Trying to see around the couple in front of us gave **a pain** in the neck to me.

(119) a.   Having a smart older sister gave John **an inferiority complex**.

     b.   * Having a smart older sister gave **an inferiority complex** to John.

(Green (1974: 103, 129), bold mine)

The gerund phrases in the subject positions of the DOCs can cause the indirect object referent to have things like houses, fortunes, pains, and complexes; in other words, the indirect object referents built a house, made a fortune, had a pain in the neck, or had a certain complex by working hard for certain years, trying to see around the couple in front of them, or having a smart sibling. Thus, the (a) sentences in (116-119) successfully instantiate the DOC. On the other hand, the same gerund phrases, as they are not animates, cannot be agents and thus cannot physically transfer entities from one place to another. In other words, the events denoted by the gerund phrases themselves cannot physically move houses, fortunes, pains, and complexes. Therefore, the (b) sentences cannot instantiate the PPC.

The facts observed in (120-123) parallel that in (115).

(ii)   a.   A series of accidental circumstances gave Knopf & Co. *The Magic Mountain*.

     b.   * A series of accidental circumstances gave *The Magic Mountain* to Knopf & Co.

(120) A: It is very difficult to build **a house** simply by working hard.

     Bi: * Well, working hard for 20 years gave **a house** to Mike.

     Bii: Well, working hard for 20 years gave Mike **a house**.

(121) A: It is very difficult to make **a fortune** simply by working hard.

     Bi: * Well, working hard for 20 years gave **a fortune** to Mike.

     Bii: Well, working hard for 20 years gave Mike **a fortune**.

(122) A: It is very difficult to get **a pain** in the neck simply by trying to see around people in front of you.

     Bi: * Well, trying to see around the couple in front of us gave **a pain** in the neck to me.

     Bii: Well, trying to see around the couple in front of us gave me **a pain** in the neck.

(123) A: It is very dificult to get **a complex** simply by having brothers or sisters.

     Bi: * Well, having a smart older sister gave **an inferiority complex** to John.

     Bii: Well, having a smart older sister gave John **an inferiority complex**.

The data in (120-123) indicate that one cannot conclude by simply resorting to information-structural considerations that there is no semantic difference between the two constructions.

I present other data indicating the existence of semantic difference between the two constructions.   If there is no semantic difference encoded between the two constructions, and different acceptabilities can be accounted for by information-structure considerations, it will be expected that the DOC and the inverted PPC can appear in the same environment. Information-structurally, they have the same status, with a goal preceding a theme.   However, this expectation is not borne out.   Consider (124-126):

(124) A: Norman Mailer$_i$ did not work at all last year.

    Bi: * Well, interviewing Richard Nixon gave to him$_i$ **a book**.

    Bii: Well, interviewing Richard Nixon gave him$_i$ **a book**.

(125) A: It is very difficult to build **a house** simply by working hard.

    Bi: * Well, working hard for 20 years gave to Mike **a house**.

    Bii: Well, working hard for 20 years gave Mike **a house**.

(126) A: It is very difficult to make **a fortune** simply by working hard.

    Bi: * Well, working hard for 20 years gave to Mike **a fortune**.

    Bii: Well, working hard for 20 years gave Mike **a fortune**.

If we assume that the DOC and the PPC differ in meaning, these data can easily be explained.

Recall the sentence in (95), repeated here as (127). It is presented as evidence that idiomatic examples such as *X gives Y a headache/the creeps* can also occur in the PPC when information-structural conditions are satisfied.

(127)   I think it's time you give your lovely illness to someone else!!!

Sentence (127) merely describes a situation where the subject of the PPC is required to transfer his/her own illness to someone else. To conclude, it is irrelevant in this particular case to discuss information-structural considerations.

We should recall the discussion that we saw in section 5.3.1.3. Consider the idiomatic examples in (128):

(128) a.	The noise gave Terry a headache.		(= (93a))
b.	* The noise gave a headache to Terry.		(= (93b))

RH & L (2008) argue that it is generally the case that a recipient is human, and a theme is non-human. Human beings, rather than inanimate entities, are likely to be familiar in a given discourse and hence to be a topic in the discourse; on the other hand, an illness, as it is inanimate, is usually new information. Thus, it is information-structurally appropriate for a recipient to precede a theme, which makes suitable the use of the default word order of the DOC. When the idiomatic uses occur in the PPC, as in the (b) sentence of (128), the theme is regarded as old information and the recipient is considered to be new information. This interpretation is unlikely, and thus the sentence is judged unacceptable without context. It is expected in their framework that an illness, when it is old information, can precede a recipient. They present the data in (127), claiming that their expectation is borne out by it. However, the PPC in (127) denotes a transfer of a theme. It is precisely for this reason that the PPC, not the DOC, is employed. Information-structural considerations are simply irrelevant here.

There still remains a question of why the sentence in (114) uttered by Speaker B, repeated here as (129), should be acceptable, to which we now turn in the next section.

(129) A: It is very difficult to get an idea for a book simply from an interview.

B: Well, interviewing Nixon gave an idea for a book to Mailer.

5.3.2.4. Conduit Metaphor

The Conduit Metaphor (e.g. Reddy (1979), Lakoff and Johnson (1980)) can apply to the PPC and can license some of its instances. For example, the sentence in (129) uttered by Speaker B, repeated here as (130), is licensed by this metaphor.[17]

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[17]   This idea itself is given to me by Yukio Hirose (p.c.).

(130) A: It is very difficult to get an idea for a book simply from an interview.

B: Well, interviewing Nixon gave an idea for a book to Mailer.

The PPC encodes caused motion.   Caused motion and the conduit metaphor are compatible with each other, since caused motion entails sending entities from one place to another, which is what the conduit metaphor is all about.   Therefore, the conduit metaphor can apply to the PPC.   This hypothesis can also invalidate some examples presented by RH & L (2008).

The conduit metaphor consists of the following three components:

(131)   Conduit Metaphor (Reddy (1979), Lakoff and Johnson (1980)):
    i.   Ideas are objects.
    ii.   Words are containers.
    iii.   Communication is sending.

In this metaphor, communication involves ideas contained in words traveling across from the speaker to the hearer.

As shown in (131), what is made to travel by the conduit metaphor is ideas or things of similar sort.   They denote internal conceptual or emotional material and called by Reddy (1979) repertoire member of individuals.   See (132):

(132)   Repertoire Member (RM) (Reddy (1979))
            e.g. ideas, thoughts, meanings, or feeling

We employ the verb *convey* as a diagnostic for RM, as exemplified in (133):

(133) a.　　to convey a(n) {idea / thought / meaning / feeling}

　　　b.　* to convey a {TV / car / desk / chair}

The verb *convey* in this diagnostic is intended to mean to make ideas, feelings, etc. known to somebody, not to take, carry or transport somebody/something from one place to another, as in *A carriage was waiting to convey her home*.　If a noun can appear as the direct object of the verb *convey*, it denotes an RM.

　　　Let us look at the subject of conveying repertoire members.　Many different entities, including events, can convey RMs, supporting the claim that sentence (130B) is licensed by the metaphor in question.　Consider (134):

(134) a.　　The passage conveys a feeling of excitement.

　　　b.　　Your writing must transfer these ideas to those who need them.

　　　c.　　His letter brought the idea to the French pilots.

(Reddy (1979: 313))

Each sentence in (134) contains an RM: *a feeling of excitement* in (134a), *these ideas* in (134b), and *the idea* in (134c).　As exemplified in *the passage* in (134a), *your writing* in (134b), and *his letter* in (134c), the subject of the act of sending RMs can be inanimate. Furthermore, not only inanimate entities but also events or state of affairs can do the act of sending RMs.　Consider (135):

(135) a.　　This understanding gave meaning to her suffering.　(*The Attack of the Blob*)

　　　b.　　Caring conveys a feeling of compassion and empathy.　(*The Abc's of Values*)

　　　c.　　Thinking of Erica brought an idea to me.　　　　　(*My Father's Letters*)

RMs can also be conveyed by understanding, caring, and thinking. Thus, it seems reasonable to assume that interviewing someone, the event denoted in the subject position of the PPC in (130B), can also convey RMs. This thesis argues that sentence (130B) is licensed by the conduit metaphor.

The (b) sentences in (113) and (116-119), repeated here as (136), are not licensed by this metaphor, since nouns like books, houses, fortunes, pains, and complexes do not refer to RMs.

(136) a.   * Interviewing Nixon gave a book to Norman Mailer.

      b.   * Working hard for 20 years gave a house to Mike.

      c.   * Working hard for 20 years gave a fortune to Mike.

      d.   * Trying to see around the couple in front of us gave a pain in the neck to me.

      e.   * Having a smart older sister gave an inferiority complex to John.

Observe (137):

(137)   * to convey a(n) {book / house / fortune / pain / inferiority complex}

Therefore, the sentences in (136) cannot be licensed by the conduit metaphor. Note that it is allowed to say *to convey the impression of a pain or an inferiority complex*, in which case the thing conveyed is an impression. The word *impression* denotes a RM, as is clear from the following definition of it: *an **idea**, a **feeling** or an **opinion** that you get about somebody/something, or that somebody/something gives you* (Oxford Learner's Dictionaries, bold mine).

The claim that the conduit metaphor can apply to the PPC can invalidate another type of

data given by RH & L (2008).   As we saw in section 5.3.1.3, sentences like (87), repeated here as (138), are presented as evidence that a PPC with a *give*-type verb does not involve an event schema that includes a path.

(138)   Cultural commissioner Megan Whilden said that the five 'Artscape' pieces would 'give a festive air to Park Square, they're fun and interesting.'

It is claimed that sentence (138) does not involve transfer, since the theme NP *a festive air* does not exist prior to the event named by the verb *give*.   If there is no transfer, there is no path.[18]

One possible problem with their claim will be that it is uncertain whether or not the theme NP exists before the giving event.   There is no evidence presented supporting its non-existence; thus, one cannot easily conclude that sentence (138) does not express transfer, and that it does not contain a path.

Sentence (138) is an instance of the PPC to which the conduit metaphor applies; the direct object *a festive air* denotes an RM, as illustrated in (139):

(139)   to convey a festive air

Sentence (138) thus does not serve as evidence that the PPC with a *give*-type verb does not involve transfer and does not contain a semantic representation including a path.

Let us look at the subject of conveying a certain air.   Inanimate entities like *'Artscape' pieces* can convey a certain air, supporting the claim that sentence (138) is licensed by the conduit metaphor.   Observe the sentences in (140):

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[18]   *Artscape* is an annual art festival held in America.

(140) a.   He managed to convey a mild, almost scholarly air.   (*Heaven's Net is Wide*)

b.   The lack of 'historical' events can therefore convey a spurious air of immobility.   (*The Cambridge Ancient History*)

c.   The six published versions of this myth do not differ greatly.   Reo Fortune's version from Tewara is the most detailed and discursive, and because it follows the rhythms of the vernacular it conveys a canonical air.

(The Kula: New Perspectives on Massim Exchange)

The subjects of conveying a certain air in these sentences refer to a human being ((a)), a lack of something ((b)), and a myth ((c)). These data make it clear that not only can human beings convey a certain air, but also non-human entities can do so. Thus, sentence (138) accords well with our analysis.

Furthermore, the present study argues against the claim by some previous studies that some examples of the DOC are licensed by the conduit metaphor. I argue that they are actually not licensed by it. For example, Goldberg (1992) argues that sentence (141) is licensed by the conduit metaphor.

(141)   Mary$_i$ gave Joe her$_i$ thoughts on the subject.

(Goldberg (1992: 63), with modifications)

Our account is as follows: the presence of *her* in the direct object NP in (141) makes the idea Mary's idea, not Joe's. It is difficult to suppose that Joe created in himself someone else's idea. In this case, we have no choice but to think that Mary transferred her own idea to Joe. As a result, it appears that the conduit metaphor applies to the DOC, but it is illusory. Only the PPC, not the DOC, can be licensed by the metaphor in question.

In fact, as we saw at the beginning of section 5.3, the DOC and the PPC can denote one and the same state of affairs, as a result of the composition of values of the arguments. Nevertheless, this does not indicate that the DOC and the PPC can be licensed by the same metaphor.   Consider (142):

(142) a.　　　John gave the bell boy a large tip.　　　　　　　　　　　(= (69a))

　　　b.　　　John gave a large tip to the bell boy.　　　　　　　　　(= (69b))

As argued by Van Bell and Van Langedonck (1996), the difference between sentences like those in (142) can be neutralized by our world knowledge.   It is understood that giving someone a tip involves a transfer of a tip from the giver to the givee.   In this case, the interaction of values of the arguments results in denoting one and the same situation, no matter which construction may be employed.

5.3.2.5.　Predictable Examples

This sub-section presents examples predicted to be explained by our assumptions.   For example, given that the DOC denotes caused possession and the PPC denotes caused motion, it is expected to find the meaning contrasts observed by Williams (1994).   Consider (143) and (144) (Williams (1994: 250)):[19]

(143) a.　　　I gave John a cold.　　　　　　　　　　　　　　[not my cold]

　　　b.　　　I gave a cold to John.　　　　　　　　　　　　　　[my cold]

(144) a.　　　I gave John an idea.　　　　　　　　　　　　　　[not my idea]

　　　b.　　　I gave an idea to John.　　　　　　　　　　　　　　[my idea]

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[19]　Sentence (143a) appears as sentence (17) in section 5.1.2.

The DOC expresses the bringing about by the subject referent of a relation between the indirect and direct objects; on the other hand, the PPC denotes a transfer of the direct object referent from the subject referent to the complement of the preposition.   Therefore, the direct object referents in the (a) sentences in (143) and (144) are considered to be created within the indirect object referents.   A possible context for (143a) is a situation where the speaker kept John waiting outside a house or building for certain hours, and John got a cold because of it; a possible situation denoted by (144a) is that the presence of the subject referent or its certain behavior created an idea within the indirect object referent.[20]   On the other hand, the direct object referents in the (b) sentences are transferred from the subject referents to the complements of the preposition; the subject referents in the (b) sentences in (143) and (144) transferred their own cold or idea to someone else.   For example, Akashi (2005) observes that *a cold* in sentences like (143b) denotes a virus.   A cold virus can be transferred from one place to another, and the sentence successfully instantiates the PPC.   This interpretation of the word *cold* also appears in the PPCs given in (145):

(145) a.   Don't give your cold to others!   Cover your nose and mouth with a tissue
         when you cough or sneeze, then throw the tissue away and wash your hands.

                                                    (Akashi (2005: 73))

     b.   If you give your cold to Mom and she gives it to Dad and each of them gives
         it to two other people …   (*A Kid's Official Guide to Germs*)

     c.   The Contac commercial on television used to say: "Give your hand to a friend
         and give your heart to your love, but give your cold to Contac."

                                                    (*Best Funeral Meditations*)

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[20]   Krifka (1999: 4) makes a similar observation.

The reasoning applied to the (b) sentences in (143) and (144) can also apply to instances of the PPC with the word *a headache*.[21]   As we saw before, PPCs like the following are unacceptable.

(146)   * The lightning gave a headache to me.

As Akashi (2005) observes, *headache* not only means (i) "a continuous pain in the head," but also (ii) "a person or thing that causes worry or trouble" (Oxford Learner's Dictionaries).   Here are some examples of the word *headache* denoting meaning (ii):

(147) a.   He was a headache to her.

     b.   It is a headache to all relativists, whether they admit it or not.

Headache of meaning (ii) refers to an entity that can be transferred (Akashi (2005: 73)), since it denotes a person or thing.   It is thus expected that it can appear in the PPC, and this expectation is borne out by the following data:

(148) a.   Sending a copy to every elector is a nice gesture, but futile, because it is
               unreadable, guaranteed to **give a headache** to anyone who looks hard at the
               small print.   (cf. (89a))

     b.   TAX TIME is a big headache for Americans, according to The Excedrin
               Headache Report.   "Doing my taxes" **gives a headache** to 22 percent of

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[21]   The reasoning applied to the (b) sentences in (143) and (144) applies to the following sentence discussed in section 5.3.2.3 as well.

   (i)   I think it's time you give your lovely illness to someone else!!!   (= (127))

Americans surveyed for Bristol-Myers Squibb, which makes Excedrin pain-relief medicine. (cf. (89b))

The contexts in (148) make it clear that *a headache* appearing in them does not refer to a continuous pain in someone's head; the sentence *TAX TIME is a big headache for Americans* in (148b), for example, particularly makes it clear that a headache in this context denotes meaning (ii). It is described in (148a) that sending an unreadable copy to every elector is equal to giving to them things causing worry or trouble. The PPC in (148b) describes a situation where making a tax payment is equal to giving to those who do it things causing worry or trouble. The word *headache* can occur as a theme of the PPC, as long as it denotes an entity that can be transferred.

We have observed the sentences in (148) in section 5.3.1.3. They are presented by RH & L (2008) as examples demonstrating that heaviness plays a role in determining the choice between the DOC and the PPC. The sentences in question instantiate the PPC precisely because they denote transfers of themes. Heaviness considerations are irrelevant in these cases, since the word *headache* denoting meaning (ii) can appear even when a goal NP is not heavy. Observe (149):

(149) a. Sending a copy to every elector is a nice gesture, but futile, because it is unreadable, guaranteed to give a headache to **everyone**.

b. TAX TIME is a big headache for Americans, according to The Excedrin Headache Report. "Doing my taxes" gives a headache to **all Americans**.

The data in (149) validate our claim.

It is also expected that the sentences in (150-152) differ in their acceptability.

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(150) a.   Providence gave them a daughter.

       b.   * Providence gave a daughter to them.

(151) a.   Providence sent them a daughter.

       b.   * Providence sent a daughter to them.

(152) a.   Their marriage brought them a child.

       b.   * Their marriage brought a child to them.

The subjects of the sentences above are not human beings. Therefore, while they can cause the creation of relations between the indirect and direct objects, they cannot be agents and cannot physically move children along a certain path to a goal. We can account for the different acceptability of the sentences in (153) and (154) in the same way.

(153) a.   Working in France gave Mike a wife.

       b.   * Working in France gave a wife to Mike.

(154) a.   Living in France gave them a child.

       b.   * Living in France gave a child to them.

The (b) sentences in (150-154) cannot be licensed by the conduit metaphor, since nouns like daughter and child do not denote repertoire members. Observe (155):

(155)   * to convey a { daughter / child / wife / husband }

    Our framework also predicts the contrasts found in (156) and (157), where # indicates the sentence is less preferable than the counterpart.

(156) a.   Looking at it gave her pleasure.   That is, the emotion surged up within her.

     b.   # Looking at it gave pleasure to her.   That is, the emotion surged up within her.

(157) a.   Interviewing Nixon gave Mailer an idea for a book.   The idea surged up within him.

     b.   # Interviewing Nixon gave an idea for a book to Mailer.   The idea surged up within him.

The second sentences denote situations where things like emotions and ideas are created within a person. The DOC specifies that the referent of the direct object is created within the referent of the indirect object, not transferred from one place to another. Therefore, the DOCs in (156) and (157) are easier than the PPCs for the second sentences to follow.

5.3.3. Summary

Section 5.3 has argued that the DOC and the PPC differ in their meaning; they encode different meanings. The DOC encodes caused possession, and the PPC caused motion. By caused possession, I mean the bringing about of a relation between the indirect object referent and another entity. The DOC does not encode the meaning of transfer. By caused motion, I mean that an agent causes a theme to move along a path to a goal; the PPC is associated with the meaning of transfer. In terms of conceptual structure, the DOC and the PPC have different conceptual structures.

Chapter 6

Concluding Remarks

6.1. Summary

This thesis has been concerned with explicating the nature of possessive *have* (PH), existential *have* (EH), PH-DOC, and EH-DOC in English from the perspective of a simplified version of Conceptual Semantics (Jackendoff (1983, 1990, 2002, 2007), Culicover and Jackendoff (2005), Culicover (2009)). PH-DOC and EH-DOC are the DOC counterparts of PH and EH.

I have proposed the following conceptual structures:

(1) a. $[\text{EXP} ([X^{\alpha}]_i, [\text{BE} ([Y (\alpha)], [\text{AT} (e_i)])])]$

     b. $[\text{EXP} ([X^{\alpha}], [\text{BE} ([Y], [\text{AT} ([Z (\alpha)])])])]$

PH has structure (1a), and PH-DOC has it embedded under another function; whereas EH has structure (1b), and EH-DOC has it embedded under another function. The function EXP of each of the structures in (1) takes as its second argument the location-denoting structure [Y BE [AT X]], entailing that constructions having either of these conceptual structures have not only locative characteristics but also characteristics denoted by the relation between the first argument of EXP and its second argument. These conceptual structures encode referential dependency of one element on another. The first argument of EXP of structure (1a) binds the first argument of BE, and that of structure (1b) binds the complement of AT. PH, EH, PH-DOC, and EH-DOC demonstrate many different phenomena that can be accounted for by assuming these semantic representations. They all encode binding relations between one argument and another, and these constructions cannot be fully understood unless one assumes

these relations, and these relations are best represented over conceptual structure.

Let us briefly retrace our steps so far. Chapter 2 has outlined our theoretical framework, on which the present argument is based. It has outlined basic tenets of Conceptual Semantics and introduced theoretical apparatus.   Two basic tenets of Conceptual Semantics are (i) that it is a mentalistic theory, and (ii) that it assumes that meaning is decompositional; the semantic representation of a given sentence consists of functions and arguments that they take.   Arguments bear semantic roles.   This chapter has defined binding in conceptual semantics terms and proposed conceptual structures shared by PH and PH-DOC on the one hand, and EH and EH-DOC on the other.   The proposed conceptual structures have the function EXP(ERIENCE) embedding under it a location-denoting structure, namely [Y BE [AT X]].   In the framework of Conceptual Semantics, binding relations are represented over conceptual structure.   This chapter has also defined the Possessor and Experiencer$_2$ roles.   Possessor is taken by the first argument of the function EXP of the conceptual structures for PH and PH-DOC; the Possessor argument binds the first argument of BE.   Experiencer$_2$, on the other hand, is taken by the first argument of EXP of the conceptual structures for EH and EH-DOC; the Experiencer$_2$ argument binds the complement of AT. These specifications are s(emantic)-selections of the first arguments of EXP and are represented at the level of conceptual structure.

Chapter 3 has been concerned with previous claims/studies pertaining to *have*.   It has first overviewed two often-made claims concerning *have* constructions: (i) one is that the subject arguments of PH and EH are (human) locations; in terms of semantic roles, they bear only the Location role and do not take any other semantic role, and (ii) the other is that English *have* has no semantics at all, and the interpretation of a given *have* sentence is completely determined by the values of its arguments.   At the end of this chapter, we overviewed another often-made claim that the construction that we call here PH can be divided into two

subclasses, regarding the so-called relationality of a noun in object position.   The PH taking a so-called non-relational noun as the surface object is said to denote alienable possession, while the PH taking a so-called relational noun as the surface object is said to denote inalienable possession.   This claim entails that the two PHs differ in the volitionality of the subject arguments: the subject of the PH denoting alienable possession refers to a volitional entity, whereas that of the PH denoting inalienable possession refers to a non-volitional entity.   This claim also seems to entail that the subject arguments of the two PHs bear two different semantic roles.   Contrary to this claim, which is argued for by several previous studies (e.g. Belvin (1993), Harley (1998)), I have demonstrated that there is only one PH, and that the subject argument of PH does not exhibit any volition.   In terms of semantic roles, the subject argument of PH bears one and the same semantic role regardless of the relationality of a noun in the object NP.

Based on the discussions in chapters 2 and 3, chapter 4 has accounted for many different phenomena exhibited by PH and EH.   This chapter has answered the questions raised in the previous chapter: (i) the question of whether or not the subject arguments of PH and EH bear only the Location role, and (ii) the question of whether or not *have* has any meaning at all.

The subject arguments of both PH and EH bear not only the Location role but also the Experiencer role.   Some phenomena exhibited by PH and EH can be accounted for by assuming that the subject arguments are locations.   In other words, some phenomena can be explained by assuming the [Y BE [AT X]] parts in the conceptual structures for PH and EH.

The other phenomena can be accounted for by assuming that the subject arguments bear the Experiencer role.   In other words, the other phenomena can be explained by considering the binding relations between the first argument of EXP and the first argument of BE or the complement of AT.   The binding relations are constructional meanings of PH and EH.

Brugman (1988: 51) notes that "having either a general or an abstract meaning is not the same as having no meaning," and we have followed her in this respect. Nakau (1998) argues that EH is an Experiencer construction. This thesis argues that not only EH but also PH is an Experiencer construction.

Chapter 5 has explained many different phenomena demonstrated by PH-DOC and EH-DOC. The conceptual structures for both PH-DOC and EH-DOC have the location-denoting structure [Y BE [AT X]] embedded under the function EXP, entailing that they have locative characteristics, as well as characteristics expressed by the binding relation between the first argument of EXP and its second argument. Some phenomena exhibited by PH-DOC and EH-DOC can be explained by considering the [Y BE [AT X]] parts of their conceptual structures; the other phenomena can be accounted for by considering the binding relations between the first argument of EXP and the first argument of BE or the complement of AT.

This chapter has also argued for the claim that the DOC and the corresponding prepositional phrase construction (PPC) encode distinct meanings. In terms of conceptual structure, they have different conceptual structures. The DOC is associated with the caused possession meaning. By caused possession, I mean the bringing about of a relation between the subject and the elements following the verb; the DOC is *not* associated with the meaning of transfer. On the other hand, the PPC is associated with the caused motion meaning. Caused motion entails that an agent transfers a theme along a path to a goal (Goldberg (1995)).

6.2. Future Research

Let me conclude this thesis by pointing out issues for future research. There seem to be many other predicates encoding referential dependency. It seems that predicates like the

following encode binding relations in the sense of this thesis: *need*, *want*, *require*, *would like*, *hope for*, and *feel a need for*.   Taking *need* and *want* for examples, it has been pointed out by several previous studies that *need* NP and *want* NP denote propositions whose interpretation is obtained by assuming the presence of a *have*-like predicate (McCawley (1974), Ross (1976), Larson et al. (1997), Harley (2004), Marušič and Žaucer (2006), Schwarz (2006), Beavers et al. (2008), Harves (2008), Harves and Kayne (2012), etc.).   For example, the sentences in (2a) and (3a) are understood as meaning (2b) and (3b), respectively:

(2)   a.   Harry needs a new car.

       b.   Harry needs to have a new car.

(3)   a.   Harry wants a new car.

       b.   Harry wants to have a new car.

In our framework, the use of *need* and *want* exemplified in (2a) and (3a) may be analyzed as having conceptual structures similar to that of PH.   For example, sentence (4a) is interpreted as denoting situations described by sentence (4b):

(4)   a.   He {needs / wants} a {house / wife}.

       b.   He$_i$ {needs / wants} a {house / wife} of his$_i$ own.

The surface object in (4a) is referentially dependent on the subject referent.   This relation is more clearly observed in the sentence in (5), where there is a universal quantifier in the subject position:

(5)   Everyone {needs / wants} a {house / wife}.

Each member of the set denoted by the quantifier in the sentence in (5) needs or wants a house or wife different from any other member's in the same set.   The value of the direct object in (5) covaries with the value of the subject.

Furthermore, these predicates exhibit a similar behavior to that of EH.   Consider (6):

(6)   a.   He$_i$ {needs / wants} a desk in his$_i$ room.

b.   Everyone$_i$ {needs / wants} a copy of the paper on his$_i$ desk.

Sentence (6a) parallels instances of EH such as *He$_i$ has a hole in his$_i$ shoe*, in that the PP contains a pronoun that refers back to the subject.   The identity of the room in (6a) is determined by the identity of the subject referent.   This relation is more clearly observed in the sentence in (6b), where there is a universal quantifier in the subject position.   In this case, the value of the complement of the preposition covaries with the value of the subject.

Sentence (7a) can also be analyzed as analogous to EH:

(7)   a.   I {need / want} a desk in Mary's room.

b.   * I don't know Mary$_i$ at all.   I don't bear any relation whatsoever to her$_i$. That is, I am not a father, boyfriend, friend, teacher, or boss to her$_i$.   (Now) I {need / want} a desk in her$_i$ room.

Sentence (7a) can only be uttered in a situation in which Mary's identity is determined by the identity of the subject, for example, in a situation in which Mary is a daughter of the subject referent's.   When there is no such connection between the subject referent and Mary, sentence (7a) is not acceptable.   This is illustrated in the data in (7b).

Sentences such as (7a) contrast with sentences such as (8), whose PPs do not include an

element depending on the subject with respect to its identification.   Observe (8) and (9):

(8)   a.   I put a book on Mary's desk.

        b.   I hid a book behind Mary's desk.

(9)   I didn't know Mary$_i$ at all.   I didn't bear any relation whatsoever to her$_i$. That is, I was not a father, boyfriend, friend, teacher, or boss to her$_i$. Yesterday, I {put / hid} a book {on / behind} her$_i$ desk.

One can put or hide something behind anyone's desk.   Thus, verbs like *put* and *hide* are not constrained in the same way as verbs like *need* and *want* are.

Predicates like *get*, *find*, *seek*, *choose*, *select*, *pick*, *pick out*, and *hire* are also known as demonstrating a *have*-like behavior (Burton (1995), Kobukata (2004), Marušič and Žaucer (2006)).   For example, the sentences in (10), with the verb *hire*, behave like PH:

(10)   a.   Mike hired a secretary.

        b.   Everyone hired a secretary.

Sentence (10a) describes a situation where Mike hired a secretary of his own.   This relation is more clearly observed in sentence (10b), where there is a universal quantifier in the subject position.   Each member of the set denoted by the quantifier in sentence (10b) hired a secretary of his or her own.   Thus, the conceptual structure for predicates like *hire* may perhaps have characteristics analogous to that for PH.

Predicates such as *need*, *want*, and *hire* seem to encode referential dependency of one element upon another; these predicates may also constitute a category whose members lexicalize referential dependency.   In line with the *have* constructions and the two uses of the

DOC, it may be reasonable to assume that there is an anaphor in the semantic representations of these predicates; the semantic representations for predicates like these may be associated with referential dependency.

We have examined PH, EH, PH-DOC, and EH-DOC, all of which encode referential dependency of one element upon another. We have argued that these constructions cannot be fully understood unless one examines their semantic specifications; they all encode referential dependency of one element upon another, and it is best represented at the level of conceptual structure. My immediate hope is that the conceptual semantics approach adopted here will act as a stimulus for more research for clarifying the nature of referentially dependent expressions and constructions containing those expressions.

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