

# A cognitive semantic analysis of the restrictions on the subject of a *V-ing* complement

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**Abstract:** This paper aims to provide a cognitive semantic account of the conditions under which the subject of the *V-ing* complement in English may be overt or covert and under which the matrix subject may be coreferential with it. To this end, I review three previous studies, Kiparsky and Kiparsky (1970), Thompson (1973), and Duffley (2006). My review shows that the former two studies, in which the specific lexical meaning determines the behavior of the subject of a *V-ing* complement, have empirical problems, whereas the latter does not. Thus, I adopt Duffley's hypothesis, in which the lexical meaning of a matrix verb plays an important role in the conditions mentioned above and reveal the cognitive mechanism behind the phenomena that this paper deals with. The cognitive mechanism proposed in this paper is the interaction of two factors: the two meanings of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$  and the meaning of a matrix verb. The constructional meanings are related with subjectivity and objectivity. In conclusion, I argue that the mechanism proposed in this paper can explain the phenomena in question coherently and comprehensively and I identify the remaining issues in this area.

**Keywords:** *V-ing* complement, cognitive semantics, involvement, construction, lexical meaning

## 1. Introduction

This paper investigates the restrictions on the overt expression of and the coreference restrictions on the subject of a *V-ing* complement. As seen in the following sentences, the subject of the *V-ing* complement may be covert or overt and may or may not be coreferential with the matrix subject:

- (1) a. Evelyn<sub>i</sub> dreads PRO<sub>i</sub> singing a solo.  
b. Kathy<sub>i</sub> suggested PRO<sub>j</sub> going to the beach.  
(Thompson, 1973, p.380, with modifications)
- (2) a. I enjoyed my playing the piano. (Hirose, 2020, p.104)  
b. We {imagined / remembered / resented} {his / him} singing the sonata.  
(Kuwabara & Matsuyama, 2001, p.149)

In (1), the subject of the *V-ing* complement is covert, whereas it is overt in (2). However, in the sentences in (1a) and (2a), the subject of the *V-ing* complement is coreferential with the matrix one, whereas that in (1b) and (2b) is not. Previous studies have investigated the conditions in which the subject of a *V-ing* complement may be covert or not, and in which it may be coreferential with the matrix one or not, as in Kiparsky and Kiparsky (1970), Thompson (1973) and Duffley (2006). The former two studies have empirical problems and the latter has a theoretical one. Thus, the purpose of this paper is to reveal the conditions that the subject of a *V-ing* complement may be overt or not, and that the matrix subject may be coreferential with the subject of a *V-ing* complement or not.

This paper is organized as follows: section 2 reviews the previous studies mentioned above; in section 3, I analyze the phenomena dealt with in this paper from a cognitive semantic viewpoint; and section 4 concludes the paper and identifies the remaining issue.

## 2. Previous Studies

In this section, I review the previous studies on the conditions that determine whether the subject of a *V-ing* complement may be covert, and whether it may be coreferential with the matrix subject. Some studies such as Kiparsky and Kiparsky (1970) and Thompson (1973) have empirical problems, and hence I cannot adopt the hypothesis they propose. In contrast, Duffley (2006) does not have these empirical problems, and therefore, I adopt the hypothesis he proposes, in which the lexical meanings of individual matrix verbs determine whether the subject of a *V-ing* complement is coreferential with the matrix subject. In this section, I survey these studies in detail.

### 2.1 Kiparsky and Kiparsky (1970)

Kiparsky and Kiparsky (1970) propose that the lexical distinction between factive predicates and non-factive predicates has an important role in determining the behaviors of complement clauses. Factivity is defined as follows: when a speaker presupposes the complement proposition of a verb to be true, it is factive; when he/she does not, it is non-factive. Thus, the presuppositions are constant under negation; we can judge that the complements of the predicates such as *be odd* and *regret* in (3) are factive because the truth of the complements are not negated when the matrix predicates are negated.

- (3) a. It is odd that the door is closed.  
b. I regret that the door is closed. (Kiparsky & Kiparsky, 1970, p.48))
- (4) a. It is not odd that the door is closed.  
b. John doesn't regret that the door is closed. (Kiparsky & Kiparsky, 1970, p.150)

Likewise, the verb *ignore* in (5) can be defined as a factive verb and *avoid* in (6) as a non-factive verb:

- (5) a. Everyone ignored Joan's being completely drunk. (Kiparsky & Kiparsky, 1970, p.146)  
b. Everyone didn't ignore Joan's being completely drunk.
- (6) a. He avoided getting caught. (Kiparsky & Kiparsky, 1970, p.146)  
b. He didn't avoid getting caught.

Although the matrix clause is negated in (5b), the proposition of the *V-ing* complement is not; thus, the verb *ignore* is a factive verb. In contrast, the matrix clause is denied in (6b) and the proposition of the *V-ing* complement is negated; hence, the verb *avoid* is a non-factive verb.

Kiparsky and Kiparsky (1970) also suggest that factive verbs can take the overt subjects of *V-ing* complements while non-factive verbs cannot. Therefore, *ignore* and *mind*, which are factive verbs, can take the subjects of the *V-ing* complements as in (7); *avoid*, which is a non-factive verb, cannot, as in (8):

- (7) a. Everyone ignored Joan's being completely drunk.  
b. I don't mind your saying so. (Kiparsky & Kiparsky, 1970, p.146)
- (8) a. He avoided getting caught.  
b. \*He avoided John's getting caught. (Kiparsky & Kiparsky, 1970, p.146)

In this way, the difference in factivity appears to be able to explain the coreference restriction on the subject of *V-ing* complement.

However, there are some empirical problems with Kiparsky and Kiparsky's (1970) proposal. Let us consider the following sentences:

- (9) a. Mary repents singing a solo.

- b. \*Mary repents {his / him} singing a solo.  
 (10) a. The boy admitted teasing the cat. (Egawa, 1991, p.362)  
 b. \*The boy admitted her teasing the cat.  
 (11) a. She visualized stomping the picture of self-righteousness.  
 b. She visualized him stomping the picture of self-righteousness.  
 (12) a. Some contemplate working for the Ukrainian Ministry of Justice.  
 b. (...); some contemplate him working for the Ukrainian Ministry of Justice; (...) (NOW)

The verb *repent* and *admit* in (9) and (10) are factive verbs, while *visualize* and *contemplate* in (11) and (12) are non-factive verbs. Observe the following sentences again:

- (13) a. Mary repents singing a solo. (= (9a))  
 b. Mary doesn't repent singing a solo.  
 (14) a. The boy admitted teasing the cat. (= (10a))  
 b. The boy didn't admit teasing the cat.  
 (15) a. She visualized stomping the picture of self-righteousness. (= (11a))  
 b. She didn't visualize stomping the picture of self-righteousness.  
 (16) a. Some contemplate working for the Ukrainian Ministry of Justice. (= (12a))  
 b. Some don't contemplate working for the Ukrainian Ministry of Justice.

Although the matrix clauses in (13b) and (14b) are negated, the propositions their *V-ing* complements denote are not negated. Hence, we can judge that the matrix verbs *repent* and *admit* in (13) and (14) are factive verbs. In contrast, the matrix clauses in (15b) and (16b) are negated, as are the propositions that their *V-ing* complements denote. Thus, we can judge that the matrix verbs *visualize* and *contemplate* in (15) and (16) are non-factive verbs. Therefore, the hypothesis here—that factive verbs can take the overt subjects of *V-ing* complements while non-factive verbs cannot—predicts that sentences (9b) and (10b) are acceptable whereas (11b) and (12b) are not. However, the empirical data in (9)–(12) are the reverse; that is, the factive verbs *repent* and *admit* in (9b) and (10b) cannot take the subjects of the *V-ing* complements, whereas the non-factive verbs *visualize* and *contemplate* can. Therefore, to comprehensively analyze coreference restrictions on the subject of a *V-ing* complement in English, I cannot adapt Kiparsky and Kiparsky's (1970) proposal, considering the counterexamples above.

## 2.2 Thompson (1973)

Thompson (1970) analyzes the *V-ing* complement without an overt subject and proposes that whether the subject of a *V-ing* complement is coreferential with the matrix subject depends on the lexical meaning of the matrix verb. In the case of what she calls private verbs, the subject in the main clause is coreferential with that in the *V-ing* complement clause. However, in what she calls public verbs, this may or may not be the case. Private verbs are defined as verbs that “involve an individual and his private thoughts, feelings, and personal welfare; no one but the individual himself need know that the proposition expressed by one of these verbs is true” (Thompson, 1970, p.381). Consider the following sentences:

- (17) a. Evelyn<sub>i</sub> dreads PRO<sub>i</sub> singing a solo.  
 b. Hal<sub>i</sub> considered PRO<sub>i</sub> becoming a karate instructor.  
 c. Max<sub>i</sub> can't bear PRO<sub>i</sub> watching the tide come in.  
 d. Sue<sub>i</sub> avoids PRO<sub>i</sub> serving white wine with fish.  
 e. Sir Hubert<sub>i</sub> prefers PRO<sub>i</sub> hunting elephants.  
 (Thompson, 1973, p.380, with modifications)

The verbs *dread*, *consider*, *bear*, *avoid*, and *prefer* in (17) have the semantic characteristic “privateness” in common<sup>[1]</sup>. Thus, these verbs allow the matrix subject to be coreferential with the subject of a *V-ing* complement. In contrast, the verbs *talk about* and *argue against* in (18) have the semantic characteristic “publicity” in common. This semantic property is defined as follows: “an

activity is described which is generally shared” (Thompson, 1973, p.381). As mentioned above, the matrix subject of public verbs may be coreferential with the subject of a *V-ing* complement or not.

- (18) a. Father<sub>i</sub> talked about PRO<sub>i/j</sub> getting a wig.  
 b. I<sub>i</sub> argued against PRO<sub>i/j</sub> seeing a lawyer.  
 (Thompson, 1973, p.380, with modifications)

In addition, some public verbs such as *recommend*, *suggest*, *disapprove of* cannot allow the interpretation in which the subjects of *V-ing* complements are coreferential with the matrix subjects:

- (19) a. The psychiatrist<sub>i</sub> recommended PRO<sub>\*i/j</sub> getting away for a week.  
 b. Kathy<sub>i</sub> suggested PRO<sub>\*i/j</sub> going to the beach.  
 c. Fred<sub>i</sub> disapproves of PRO<sub>\*i/j</sub> opening up trade with Albania.  
 (Thompson, 1973, p.380, with modifications)

In this way, the distinction between the meanings of public verbs and private verbs appear to determine the behavior of the coreference here.

However, we can find the phenomena which the hypothesis here cannot account for. Let us consider the following sentences:

- (20) a. The psychiatrist<sub>i</sub> recommended PRO<sub>\*i/j</sub> getting away for a week.  
 b. A case in point is a procurement that Delivering Procurement Services for Aid worked on for the maternal, newborn and child health program in Northern Nigeria. When our procurement team examined lists outlining the goods and equipment requirements of six states for 2017-18 and 2018-19, we anticipated that the client was unlikely to be able to purchase everything within the budget.  
We<sub>i</sub> recommended PRO<sub>i</sub> undertaking a technical assistance exercise to see where savings might be found. With our client’s agreement, we scrutinized more than 700 individual line items, and were able to identify 20 areas where cost efficiencies could be made without compromising quality or reducing capability. For example, we recommended opting for clinical-quality microscopes over research-grade ones.  
 (cf. NOW)
- (21) a. Kathy<sub>i</sub> suggested PRO<sub>\*i/j</sub> going to the beach. (= (19b))  
 b. I<sub>i</sub> suggested PRO<sub>i/j</sub> nursing her newborn baby.
- (22) a. Fred<sub>i</sub> disapproves of PRO<sub>\*i/j</sub> opening up trade with Albania. (= (19c))  
 b. I<sub>i</sub> disapproved of PRO<sub>i/j</sub> cooking my own meals.

As observed above, Thompson claims that the verb *recommend*, *suggest*, and *disapprove of* cannot take the covert subjects of *V-ing* complements, which are coreferential with the matrix subjects. However, we can find that data such as in (20b), (21b), and (22b) allow the interpretation in which the subjects of the *V-ing* complements are coreferential with the matrix subjects. Note that the sentences in (20b), (21b), and (22b) can be acceptable if they are interpreted in the proper contexts: that is, in (21b), the interpretation in which the subject of the *V-ing* complement is coreferential with the matrix subject can be acceptable if the matrix subject *I* offers to *nurse her newborn baby*; in (22b), we can allow the interpretation in which the subject of the *V-ing* complement is coreferential with the main subject if the subject *I* disagrees with *cooking my own meal* because *I* feel tired of doing so.

Thus, Thompson’s (1973) proposal can explain most of the data about coreference with the covert subject. However, we can find a few sentences such as (20b), (21b), and (22b), which her lexical approach cannot account for. However, these can be explained in terms of the mechanism I will propose in section 3.

### 2.3 Duffley (2006)

Duffley (2006) suggests that the individual lexical meanings of main verbs determine the behaviors of the coreference. He analyzes *V-ing* complements, which function both syntactically and semantically as direct objects, as shown in (23) and (24):

(23) Everyone enjoyed playing tennis on the new courts. (Duffley, 2006, p.36)

(24) a. Playing tennis on the new courts was enjoyed by everyone.

b. What everyone enjoyed was playing tennis on the new courts.

(Duffley, 2006, p.37)

Example (24a) indicates that *V-ing* complements can be under passivization, and (24b) pseudo-clefting. In general, direct objects can be passivized and pseudo-clefted, as in (26):

(25) John broke the window.

(26) a. The window was broken by John.

b. What John broke was the window.

Thus, we can judge that *the window* in (25) is a direct object. We can apply these diagnoses to the sentence in (23): as shown in (24), the *V-ing* complement *playing tennis on the new courts* is a direct object. Therefore, *V-ing* complements are syntactically direct objects. Duffley postulates that direct objects have a schematic meaning, “verbed”, which is intended to mean something like the “direct-objecthood of the verb.” In the following discussion, this characteristic of direct objects will be observed.

Direct objects have the following characteristic: their event-originator is not specified if it is not overtly expressed. Consider the following sentence:

(27) I like the new hairdo. (Duffley, 2006, p.47)

The event-originator who made *new hairdo* is not specified and he/she can be interpreted as the subject *I* or others. As I mentioned above, *V-ing* complements are direct objects. Hence, the subject of the *V-ing* complement is not specified if it is not overtly expressed; on the other hand, it is specified if it is. This can explain the following sentences:

(28) Evelyn enjoys John singing that solo much more than Mary singing it.

(Duffley, 2006, p.47)

(29) Evelyn dreads Julio singing that solo.

(Duffley, 2006, p.47)

As shown in (28) and (29), if it is overtly expressed, the subject of the *V-ing* complement is specified: that is, *John*, the subject of a *V-ing* complement, can be specified since it is overtly expressed in (28); *Julio*, the subject of a *V-ing* complement, can be specified since it is overtly expressed in (29). Hence, a *V-ing* complement itself does not have the ability to determine whether the subject of a *V-ing* complement may be coreferential with the matrix subject or not. However, if it is not overtly expressed, the subject of the *V-ing* complement may be coreferential with the main subject as in (30) or not, as in (31) and (32):

(30) Everyone enjoyed playing tennis on the new courts. (= (23))

(31) She suggested going to the beach.

(Duffley, 2006, p.47)

(32) He proposed seeing the doctor.

(Duffley, 2006, p.48)

The covert subject of a *V-ing* complement may be coreferential with the matrix subject or not because a *V-ing* complement itself does not have the ability to determine whether the subject of a *V-ing* complement may be coreferential with the matrix subject, as mentioned above. If the subject of a *V-ing* complement is covert, the individual lexical meaning of the matrix subject determines whether the subject of a *V-ing* complement is coreferential with the matrix subject or not: that is, the verb *enjoy* in (30) has the meaning that the person in the matrix subject himself/herself experiences the situation the *V-ing* complement denotes, and hence the subject of the *V-ing* complement is coreferential with the matrix subject; the meaning of the verb *suggest* and *propose* in (31) and (32) is that the matrix subject

advises someone other than him/her to do something, and thus the subject of the *V-ing* complement is coreferential with the matrix subject.

The proposal above explains many phenomena dealt with in this paper. Thus, I will adopt the hypothesis proposed by Duffley (2006), in which the individual lexical meaning of a matrix verb determines whether the subject of a *V-ing* complement is coreferential with the matrix subject. In addition to his proposal, I will reveal the cognitive mechanism behind the phenomena dealt with in this paper.

### 3. Analysis

In this section, I propose an involvement approach to explain the conditions under which the subject of a *V-ing* complement may be covert or not, and that it may be coreferential with the matrix one or not. This approach is that they can be accounted for by the interaction of the following two factors:

- (33) Two factors of the acceptability of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$
- a. two kinds of construals of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$   
Is the subject involved in the situation that a *V-ing* complement denotes?
    - i. Yes:  $NP_1=PRO$   
The subject is directly involved in the situation that a *V-ing* complement denotes; the construal of the situation is subjective.
    - ii. No:  $NP_2$  appears overtly;  $NP_1 \neq PRO$   
The subject is indirectly involved in the situation that a *V-ing* complement denotes; the subject construes the situation from the outside; the construal of the situation is objective.
  - b. The lexical meaning of a matrix verb

There are two factors that determine the grammaticality of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$ : two kinds of construals of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$  between (4ai) and (4aii), on one hand, and the lexical meaning of a matrix verb, on the other hand. Their construals consist of a direct involvement in the situation that the *V-ing* complement denotes and its indirect involvement. The former is that the subject is involved in the situation directly. Thus, he/she construes it from his/her inside viewpoint and this leads to the subjective construal. The latter is that the subject is involved in the situation indirectly and not directly. Therefore, he/she construes it from his/her outside viewpoint and this produces the objective construal. When the lexical meaning is congruent with the construal, the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$  has, the expression produced is grammatical; when it is not, it is ungrammatical. In what follows, we examine concrete examples to confirm that the above mechanism (33) works well:

- (34) a.  $I_i$  enjoyed  $PRO_i$  playing the piano. (Hirose, 2020, p.104, with modifications)  
b. Evelyn<sub>i</sub> dreads  $PRO_i$  singing a solo. (Thompson, 1973, p.380, with modifications)

In (34a), the subject  $I$  is directly involved in the situation denoted by the complement *playing the piano*. In addition, the lexical meaning of the main verb *enjoy* indicates that the subject himself/herself experiences the situation the complement denotes. Thus, the construal of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$  is compatible with the lexical meaning of the matrix verb, and the grammatical expression is produced. This mechanism can likewise be applied to (34b), and thus, the grammatical expression can be obtained. In both the sentences in (34), the subjective construals are produced because the subjects construe the situations that the *V-ing* complements denote from their inner viewpoints.

Let us continue to the sentences in (35):

- (35) a. I enjoyed my playing the piano. (= (2a))  
b. We {imagined / remembered / resented} {his / him} singing the sonata. (= (2b))  
(36) a. I enjoyed {seeing / hearing} myself playing the piano. (Hirose, 2020, p.108))  
b. I {imagined / remembered / resented} {seeing / hearing} {his / him} singing the sonata.

In (35a), the subject *I* is not involved directly in the situation denoted by the *V-ing* complement *playing the piano*; that is, the subject *I* observes the situation from the outside objectively and can be construed as the observer of the situation or the subject of perception, and not the agent of action. Hence, the sentence in (35a) can be paraphrased into (36a). In addition, the main verb *enjoy* has a lexical meaning in which the subject observes the situation the complement denotes, maintaining a distance from it. Thus, the interaction between the construal of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$  and the lexical meaning of the matrix verb produces the grammatical sentences in (35a). This mechanism can likewise be applied to (35b). Thus, the grammatical expression can be obtained in (35b). In both sentences in (35), the subjects construe the situations the *V-ing* complements denote objectively because they observe the situations in which the persons other than the subjects do something from the outside viewpoints; note that although the overt subjects of *V-ing* complements are coreferential with the matrix subjects, the overt subjects are construed as persons other than the subjects.

Let us turn to the sentences in (37):

- (37) a. Father<sub>i</sub> talked about PRO<sub>i/j</sub> getting a wig.  
 b. I<sub>i</sub> argued against PRO<sub>i/j</sub> seeing a lawyer.  
 (= (18))

In (37a), the subject *father* may or may not be coreferential with the subject of the *V-ing* complement *getting a wig*. That is, in the former situation, he told someone that he himself would get a wig and, in the latter, that some person other than him would do so. The lexical meaning of the main verb *talk about* is that its subject can talk about both the event that involves him/her and those it does not. Therefore, the meaning of *talk about* is compatible with both construals of the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$  (i.e., direct involvement and indirect involvement). These mechanisms can also be applied to (37b). Hence, the sentence in (37b) can be produced grammatically. Both the sentences in (37) produce subjective and objective effects; that is, the subjects can construe the situations that the *V-ing* complement denotes from the inner and outer viewpoints.

We have observed that the above sentences in (37) mean that the matrix subject can be coreferential with the subject of a *V-ing* complement. In the following, we observe the expressions in which it is not. Consider the following sentences:

- (38) a. The psychiatrist<sub>i</sub> recommended PRO<sub>\*i/j</sub> getting away for a week.  
 b. Kathy<sub>i</sub> suggested PRO<sub>\*i/j</sub> going to the beach.  
 c. Fred<sub>i</sub> disapprove of PRO<sub>\*i/j</sub> opening up the trade with Albania.  
 (= (19))

In (38a), the matrix subject *the psychiatrist* is not coreferential with the subject of the *V-ing* complement *getting away for a week*. That is to say, the agent of *getting for a week* is a person other than *the psychiatrist*, such as the patient. (38b) and (38c) have the same kind of interpretation. The reason these phenomena are observed is that the lexical meanings of matrix verbs as in (38) have the meaning in which someone other than matrix subject carries out the event denoted by the *V-ing* complement, and they are compatible only with the constructional meaning (4a<sub>ii</sub>), in which the matrix subject is not involved directly in the situation that the *V-ing* complement denotes. For example, the verbs *recommend* and *suggest* mean that the main subject advises that someone other than the subject should do something. Likewise, the verb phrase *disapprove of* have the lexical meaning in which the subject disagrees on something that someone other than the subject will do. Therefore, these lexical meanings are congruous only with the constructional meaning (4a<sub>ii</sub>).

Let consider the following sentences:

- (39) a. I regret missing the oral examination.  
 b. I regret your / you missing the oral examination.  
 (40) a. Mary repents singing a solo.  
 b. \*Mary repents {his / him} singing a solo.

We observe these sentences here to show that the lexical meanings of the matrix verbs have an important role in producing the coreferential expressions which are grammatical. That is, the subtle difference in the meaning of the matrix verbs determines the grammaticality of the coreferential sentences. Let us reveal it in the following.

The difference in the meaning of the main verbs *regret* and *repent* in (39) and (40) is as follows: the former denotes that the subject can regret either the event in which he/she is involved or that in which he/she is not; the latter only denotes the event in which he/she is directly involved. This difference can be shown to be explicit in the following sentences:

- (41) a. I regret my decision.  
       b. I regret your decision.  
 (42) a. He repented of his sins.  
       b. \* He repented of her sins.

The sentences in (41) indicates that the subject *I* can regret both *my* decision and *your* decision. That is, the matrix subject can regret both the events he/she is involved in and those that someone other than him/her is involved in. In contrast, the sentences in (42) show that the subject *he* can repent *his* sins and not *her* sins. That is, the subject can repent only the object in which he/she is involved. Therefore, the difference in the meaning of the verb *regret* and *repent* can be shown explicitly. This difference can explain the difference in grammaticality between the sentences in (41) and (42): *regret* has the lexical meaning by which the subject regrets both the events that he/she is involved in and not. Therefore, this lexical meaning is congruent with both the constructional meanings in (4ai), in which the subject is involved directly in the situation which the *V-ing* complement denotes, and (4aii), in which he/she is not; however, *repent* means that the subject repents only the event in which he/she is involved, and therefore this meaning is compatible with only the constructional meaning of (4ai). These explanations reveal that the subtle differences in lexical meanings have a crucial role in determining whether the matrix subject in question is coreferential with the subject of a *V-ing* complement.

Other verbs that are observed to behave in the same way as *regret* and *repent* are as follows:

- (43) a. John acknowledged using drugs.  
       b. John acknowledged {our / us} using drugs.  
 (44) a. Tom admitted breaking the window.  
       b. \* Tom admitted {your / you} breaking the window.  
 (45) a. She confessed having stolen the purse.  
       b. \* She confessed {his / him} having stolen the purse.

These behaviors can be explained in the same way as explained above, employing the following data:

- (46) a. John acknowledged his mistake.  
       b. John acknowledged her mistake.  
 (47) a. He confessed his guilt to me.  
       b. \* He confessed her guilt to me.  
 (48) a. Tom admitted his guilt.  
       b. \* Tom admitted her guilt.

The sentences in (46) indicates that the subject *John* acknowledged both his own mistake and *her* mistake; that is, the lexical meaning of *acknowledge* is that its subject can acknowledge both something in which he/she is involved and something in which he/she is not. In contrast, the verbs *confess* and *admit* have different meanings. In (47), the subject *he* confessed his own guilt to me and not her own guilt; this indicates that the verb *confess* has the lexical meaning in which its subject can confess only something that he/she is involved in. In (48), the verb *admit* is observed to behave the same way as the verb *confess* in (47); this behavior indicates that the meaning of *admit* is that its subject can confess only something in which he/she is involved. These differences in the lexical meanings among *acknowledge*, *confess*, and *admit* explain the differences in grammaticality among the sentences in (43) to (45). That is, the meaning of the verb *acknowledge* is compatible with the constructional meanings both in (4ai), in which its subject is involved directly in the situation which the *V-ing* complement



denotes, and in (4aii), in which he/she is not. Hence, the grammatical sentences in (43) can be produced. However, the meaning of the verbs *confess* and *admit* are congruous with the constructional meaning in (4ai) but not that in (4aii). Thus, the sentences in (44a) and (45a) are grammatical while those in (44b) and (45b) are not.

To sum up, as I have argued above, the interactions between the constructional meanings of  $NP_1+V+\{NP_2 / PRO\}+V-ing$  and the meanings of matrix verbs have important roles in explaining the grammaticality of the relevant expressions. These interactions are considered to be determined as the default value; that is, native speakers of English have knowledge of prototypical combinations as to what kind of matrix verbs can cooccur in what kind of construals in the construction  $NP_1+V+\{NP_2 / PRO\}+V-ing$ , as in (49a). However, the default combinations can be invalidated, as in (49b):

- (49) a. He<sub>i</sub> proposed PRO<sub>j</sub> changing the names of the company. (OALD<sup>9</sup>, with modifications)
- b. As a breast-feeding mother, she does not want her newborn son to go hungry. But when she<sub>i</sub> proposed PRO<sub>i</sub> nursing one-month-old Yoel during deliberations, religious council members exploded. “She must be suffering from postnatal depression,” said the ultra-Orthodox deputy mayor, Rabbi Nissim Ze’ev. (Time, March 4, 1996, p.10)  
(Duffley, 2006, p.49, with modifications)

This phenomenon can be explained as follows: the constructional meaning in (4ai), in which the matrix subject is involved directly in the situation that the *V-ing* complement denotes, is coerced in (49b), which is triggered by the context in (49b). Other verbs are observed to behave in the same way as *propose*, as in the following:

- (50) A case in point is a procurement that Delivering Procurement Services for Aid worked on for the maternal, newborn and child health program in Northern Nigeria. When our procurement team examined lists outlining the goods and equipment requirements of six states for 2017-18 and 2018-19, we anticipated that the client was unlikely to be able to purchase everything within the budget.  
We<sub>i</sub> recommended PRO<sub>i</sub> undertaking a technical assistance exercise to see where savings might be found. With our client’s agreement, we scrutinized more than 700 individual line items and were able to identify 20 areas where cost efficiencies could be made without compromising quality or reducing capability. For example, we recommended opting for clinical-quality microscopes over research-grade ones. (= (20b))
- (51) I<sub>i</sub> suggested PRO<sub>i/j</sub> nursing her newborn baby. (= (21b))
- (52) I<sub>i</sub> disapproved of PRO<sub>i/j</sub> cooking my own meals. (= (22b))

The verbs *recommend*, *suggest*, and *disapprove of* cannot take the subject of the *V-ing* complement, which is coreferential with the matrix subject, according to Thompson (1973: 380). However, the phenomena in which they can do so are observed in (50)-(52): in (51), the interpretation in which the subject of the *V-ing* complement is coreferential with the matrix subject can be acceptable if the matrix subject *I* offers to *nurse her newborn baby*; in (52), we can allow the interpretation in which the subject of the *V-ing* complement is coreferential with the main subject if the subject *I* disagrees with *cooking my own meal* because *I* feels tired of doing so. The sentences in (50)-(52) can be explained in the same way as the sentence in (49b): the constructional meaning in (4ai) overrides the lexical meanings of *recommend*, *suggest*, and *disapprove of*, which is triggered by the context. The important factor here is context; if specific contexts are not given, the coreferential interpretations cannot be obtained. Consider the following sentences which are not given specific contexts:

- (53) He recommended reading the book before seeing the movie. (OALD<sup>9</sup>)
- (54) Tracey suggested meeting for a drink after work. (LDOCE<sup>6</sup>)
- (55) He strongly disapproved of smoking in public places.

We cannot obtain the coreferential interpretations in (53)-(55), in which the specific contexts are not given. From these data, we see that the context is the important factor when the specific constructional meaning such as (4ai) is coerced.

## Concluding Remarks

As I have argued above, the compatibility between the meaning of the constructions in question and the matrix verb can explain the grammaticality of the expressions in question. That is, in this paper, I have revealed the conditions in which the subject of a *V-ing* complement may be overt or covert, and in which it may or may not be coreferential with the matrix subject. However, the question remains as to why the subject of a *V-ing* complement may be overt or not, and why the matrix subject may be coreferential with the subject of a *V-ing* complement or not. I leave this question open for further study.

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## Notes

[1] Thompson (1973, p.382) gives a detailed list of private verbs and public verbs.

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