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# Transitive Constructions with the “*Extra Money*” Object<sup>1)</sup>

TSUTOMU IWAMIYA

## 1. Introduction

In the present paper, we observe peculiar argument structures demonstrated by verbs prefixed with *over-* demonstrate. That is, two *over-Vs*, *overpay* and *overspend* can take numeral cardinals as the object, as in ‘*New Zealanders overpay \$42 million in tax*’, and ‘*we overspend \$400,000*’. It is presumed that these transitive *over-Vs* are derived from *by*-comparative expressions such as ‘*we overspend by \$400,000*’, and ‘*New Zealanders overpay by \$42 million in tax*’, because the ratio in which *over-Vs* are used in *by*-comparatives is slightly higher than the ratio in which they are used in these transitive constructions with the ‘*extra money*’ object.

However, *by*-backgrounding normally occurs with pure intransitives<sup>2)</sup> such as *rise*, *fall* (including intransitive phrasal verbs such as *go up* and *come down*), and unaccusative intransitives such as *increase*, *decrease* and *grow* (Huddleston & Pullum 2002), but not with zero-complement intransitives. For instance, the intransitive phrasal verb *go up* can be used without *by*, as in ‘*the price went up £2*’, and the unaccusative intransitive *increase* can also be used with the preposition backgrounded, as in ‘. . . and food prices **increased** 1.1 percent.

Although zero-complement intransitives such as *win*, *lose*, and *lead* can be incorporated into *by*-comparatives, as in ‘*To lose by one point was the worst feeling*’, the preposition *by* cannot be backgrounded (‘*to lose one point*’ is grammatically correct, but it has a completely different meaning).<sup>3)</sup> Whereas the cardinal numbers following common intransitives such as *rise*, *fall*, and *go up* are treated as

adjuncts (Huddleston & Pullum 2002: 693), the cardinal number following these zero-complement *over-V*s can be seen as the object (or the patient).

The best way to judge whether the cardinal number is regarded as the object is to see whether it can be used as the subject referent of the passive voice. For example, while ‘*the number of passengers traveling by plane will **increase 3 percent***’ is acceptable, the cardinal number cannot serve as the subject referent of the passive voice (\****3 percent** will be increased*’), since *3 percent* is regarded as an adjunct, not an object, with *increase* as the matrix verb. On the other hand, the cardinal number (*extra money*) after *overpay* and *overspend* can serve as the subject referent of the passive voice,<sup>4</sup> as in ‘*nearly **\$70 million** had been overpaid during the first nine months of 2020*’, since the number is seen as the object of the verb.

Table 1 outlines which types of intransitives realizable in *by*-comparatives can be used with *by*-backgrounding and in passive voice with the cardinal number as the subject referent.

Table 1. Verbs used in *By*-comparatives

	Used in <i>By</i> - COMPARATIVE	<i>BY</i> -BACK- GROUNDING	PASSIVITY
PURE INTRANSITIVES ( <i>rise, fall, decline, etc.</i> )	○	○	×
INTRANSITIVE PHRASAL VERBS ( <i>go up, jump up, come down, move down, etc.</i> )	○	○	×
UNACCUSATIVE INTRANSITIVE ( <i>grow, increase, decrease, etc.</i> )	○	○	×
ZERO-COMPLEMENT INTRANSITIVES ( <i>win, lose, lead, score, etc.</i> )	○	○	×
<i>overpay</i> and <i>overspend</i> (ZERO-COMPLEMENT INTRANSITIVES)	○	○	○
OTHER INTRANSITIVE <i>over-V</i> s	○	×	×

Incidentally, there are many (zero-complement)<sup>5)</sup> intransitive *over-V*s, that can be used in *by*-comparatives, although their verbal stems cannot be attested in the comparative structure.<sup>6)</sup> According to the corpora data, *overbid*, *overbuild*, *overdraw*, *overeat*, *overestimate*, *overperform*, *overproduce*, *oversell*, *overshoot*, *oversleep*, *overstay* and *overwork* are used with *by* to express the gap between the two values in comparison. It is assumed that the prefixation of *over-* enables various non-degree verbs to be used in *by*-comparatives (In other words, these verbs become ‘degree verbs’ with the prefixation [Bolinger 1972]). However, the only two zero-complement *over-V*s, *overpay* and *overspend* can occur without *by* and in passive voice.<sup>7)</sup>

The aim of this paper is to examine these transitive constructions with the “*extra money*” object, clarifying how different they are from ordinary “scalar change constructions” that Huddleston & Pullum (2002) point out.

## 2. Previous Studies

Huddleston & Pullum (2002) analyze how the preposition *by* can be backgrounded with several intransitive verbs such as *rise* and *go up* in comparative structures. Therefore, this section reviews this study. Before the review, it may be helpful to clarify the difference between zero-complement and unaccusative intransitive verbs in general, and explain why *overpay* and *overspend* are categorized into zero-complement intransitives.

### 2.1. Zero-complement and Unaccusative Intransitives

Normally, verbs that can be used both transitively and intransitively fall into two main categories: zero-complements and unaccusatives.<sup>8)</sup> The difference between zero-complements and unaccusatives lies in which participant (the patient or the agent)<sup>9)</sup> is backgrounded. To illustrate the former, consider the following example in (1a, b), where the verbs *eat* and *drink* are used intransitively.

- (1) a. Have you **eaten** yet? (Huddleston & Pullum 2002: 303)

- b. Do you **drink**? (Quirk et al.1985: 723)

In both examples, the objects are backgrounded. ‘*What you have eaten*’ is omitted in (1a), and ‘*what you drink*’ is not mentioned in (1b) either. The objects of these verbs are backgrounded because they are easily inferred from the meaning of the verb.

For example, when we see or hear *eat* used as an intransitive verb, we construe that the agent eats *some kind of solid food*, that is, *non-specific food*, which can be unnecessary information in describing the situation, or not worth mentioning in context. The verb *drink* in (1b) can also be used intransitively. When it is realized as an intransitive verb, we construe what the agent drinks is *some sort of alcoholic beverage* (Fillmore 1986: 97). Therefore, (1b) is interpreted as ‘*Do you drink alcohol?*’.

Again, *what kind of beverage you drink* is not specified in context, because we can infer what the missing object is. Besides, we do not take what she drank as *water* or *soda* when we hear the verb used intransitively, since the implicit object of the intransitive verb *drink* normally implies *alcoholic beverage*, which is conventionally determined and inferred from the meaning of the verb. In sum, with zero-complement intransitives, the inferable object (the patient) of the verb is backgrounded.<sup>10)</sup> On the other hand, as for unaccusative intransitives, the agent is backgrounded and the patient serves as the subject referent. To illustrate, consider the following examples in (2a, b).

- (2) a. His family **drove a car** into the city and are bringing him back home. (Wordbanks)
- b. . . . they watched as **a small car drove** fast over a barricade and into Lake Michigan. Moreno called 911, which he said he knew how to do from watching American movies.  
(US 2018/ News on the Web Corpus)

The agent indicates “the animate instigator of a situation denoted by a predicate” (Aarts 2011). In (2a), the agent, *his family*, as the subject is specified in this context, because *who drove the car to bring him back* is necessary information for describing the situation. Their involvement is salient and fully incorporated in the event structure. Therefore, *his fam-*

*ily* cannot be backgrounded.

However, in (2b), the agent is backgrounded. In contexts like this, *who was driving the small car* is not considered important and can be deleted. The focal point in (2b) is that the car drove over the barricade and plunged into a lake. Neither *they*, the witnesses of the accident, nor the speaker might know who the driver is. The agent, the driver who caused the accident, is not as salient as the accident, hence it is backgrounded. ‘*The small car*’, the patient, functions as the subject, in turn.

In short, with unaccusative intransitives, the patient is used as the subject referent with the non-salient instigator backgrounded in the context. Another important point to note is that when a verb like *drive* is used as an intransitive verb, the subject referent must look autonomous. In other words, in this event, the vehicle must be described as if it drove autonomously. The same observation can be applied to the transitive alternation with the verb *open*, as exemplified in (3).

- (3) a. She **opened** the door.  
 b. The door **opened**. (Swan 2016: 9)

When the normally transitive verb *open* is used intransitively, the subject *the door* is described as if it opened autonomously, as in (3b). On the other hand, when the speaker directly sees *her* opening the door, it is not appropriate to describe it as an autonomous entity, as in (3a). It is suggested that in the case of (3b), the speaker did not see the young woman opening the door, so that the door was more salient to him than the young woman (the agent). That is why the door is depicted as if it opened autonomously, and why the door serves as the subject referent of the intransitive *open*. In sum, with unaccusative intransitives, the event is described from a different angle, that is to say, from the point of view of the patient, rather than the agent, since the patient is more salient than the agent.<sup>11)</sup>

## 2.2. *Overpay* and *overspend* as Zero-complement Intransitives

Clarifying the difference between zero-complement and unaccusative intransitives, we discuss why *overpay* and *overspend* are categorized as

zero-complement intransitives. Several previous studies (Lieber 2004, Iwata 2008, Bauer et al. 2013) indicate that some verbs prefixed with *over-* are predominantly used as zero-complement intransitives, while specific entity can occasionally appear as the object.

- (4) a. Yoshika **overate** {*\*apples/\*lunch*}.  
 b. Yoshika **overate** {*fruit/sweets/fatty foods*}.  
 (Iwata 2008: 167)

While the objects of *overeat* such as *apples* and *lunch* in (4a) are not acceptable, *fruits*, *sweets* and *fatty foods* in (4b) are occasionally acceptable as objects. What differentiates the noun phrases in (4b) from those in (4a) is that the direct objects denote some particular type of food, whose consumption in a large amount is harmful to one's health, irrespective of whether the person becomes full (Iwata 2008: 167). In other words, *non-specific food*, *food in general* such as *apple* and *lunch* cannot normally occur as the object of *overeat*. Using corpora data Iwamiya (2019) confirmed that *overpay* and *overspend*, which are predominantly used intransitively, are also categorized as zero-complement intransitives.

- (5) a. Can I **pay** by credit card? (“Pay,” def. 1. *Longman Dictionary of Contemporary English* Online)  
 b. I don't need to **pay money** to join a gym. The world is my gym. The hills, the trees, the rivers.  
 (*Peep Show*, 2007 / The TV Corpus)  
 c. They will certainly **overpay** for a business that is virtually worthless, . . . (Wordbanks)  
 d. The SEC itself, within days of the DOL private equity guidance, issued a risk alert that warned of deficiencies the staff had identified among private equity advisers that may have caused investors to **overpay fees and expenses**.  
 (US 2020 / News on the Web Corpus)

The verb *pay* can be used both transitively and intransitively, as exemplified in (5a, b). When *pay* is used intransitively, the missing object is



*non-specific money*, which can be easily inferred from (5b). With *over*-affixation, however, *pay* (*overpay*) in (5c) is predominantly realized as an intransitive. In other words, while the inferable object related to *money* is optionally backgrounded with its verbal stem *pay*, the inferable object is almost obligatorily backgrounded with *overpay*. Similarly like the verb *overeat* is used transitively, a specific type of money *tax* or *fees* can occur in context as the object of *overpay*, as exemplified in (5d). Therefore, *overpay* serves as a zero-complement intransitive.

- (6) a. I like to **spend money**. (Wordbanks)  
 b. When the price of oil goes up, they **spend money** on fusion;  
 . . . (GB/ *news*, Corpus of Online Register of English)  
 c. The researchers were surprised to find that despite perceptions that people always **overspend**, chronic under-spending was far more widespread than thought with tightwads outnumbering spendthrifts by a 3 to 2 ratio. (Wordbanks)  
 d. I propose to make it illegal for a department to **overspend its budget**. (CA 2017/ News on the Web Corpus)

A similar observation can be applied to *overspend*, which is also predominantly used intransitively. Whereas the inferable object related to *money* is optionally backgrounded with its verbal stem *spend*, the inferable object is almost obligatorily backgrounded with *overspend*. When it is used transitively, *money for specific purposes* like *budget* can occur as the object, as in (6d). Therefore, *overspend* is also categorized as a zero-complement intransitive. This study presents the corpora data that shows how frequently some *over-Vs* are used intransitively compared with their corresponding verbal bases, as shown in Table 2.<sup>12)</sup>

Table 2 Zero-complement intransitive rate/ the verbal stems VS. over-Vs

Corpus of Online Register of English. < <i>news</i> >	Wordbanks (600 million)
<i>eat</i> (31.19%). [146/ 468]	<i>overeat</i> (99.04%). [207/209]
<i>pay</i> (46.25%). [981/ 2,121]	<i>overpay</i> (84.97%). [373/439]
<i>spend</i> (13.93%) [74/531]	<i>overspend</i> (93.63%). [133/142]

### 2.3. Huddleston & Pullum (2002)

Huddleston & Pullum (2002) indicate that the preposition *by* can be backgrounded with several intransitive verbs such as *rise* and *go up* in comparative structures. The preposition *by* is used to express the difference in comparative structures, as indicated by several dictionaries and grammar books. This is illustrated in (7a-c).

- (7) a. Food prices **increased by 10%** in less than a year. (*“Increase,”* def.1. *Longman Dictionary of Contemporary English* Online)
- b. Tourist trips of all kinds in Britain **rose by 10.5%** between 1977 and 1987. (*“Rise,”* def.9. *Collins Cobuild Dictionary* Online)
- c. They **extended** the grounds **by 5 acres**.  
(Huddleston & Pullum 2002: 691)
- d. She’s **younger** than me **by a year**, . . . though you wouldn’t know it.  
(*The Suspicions of Mr Whicher*. 2014 / The Movie Corpus)

The number following the preposition *by*, *10 per cent*, indicates how much the food price increased in a specific time-span (*less than a year*), as exemplified in (7a). In this example, *by* is used to mark the difference between *food prices* in the past and those at the relevant time (specified by the phrase ‘*in less than a year*’).

Next, let us examine the example in (7b), where the intransitive verb *rise* is used with *by* and the following cardinal number, *10.5%*, which also shows the difference between two values in a comparative structure. The example is quoted from a dictionary, so that we are not sure how many tourists traveled around the Great Britain in 1977. The only thing we can learn from the context is that the number of tourists in Britain had increased to 110.5 percent over the decade.

The example (7c) illustrates that the transitive verb *extend* can be incorporated into the *by* comparative structure. In this example, the entity *the grounds* as the object serves as the standardized value<sup>13</sup> to express how much it is extended. Lastly, we analyze the example in (7d) from a famous movie, where *younger*, the comparative form of the adject-

tive *young*, serves as the subject-oriented complement of *be* along with *by* in the comparative. The example illustrates the age difference between the subject referent *she* (her age) and the standardized value represented by the pronoun *me* (my age). According to the corpora data, adjectives in the comparative form such as *taller*, *shorter*, *older*, *heavier*, and *faster* are commonly used with *by* to express the difference in comparatives.

As confirmed above, various verbs and adjectives can be incorporated into *by*-comparatives. However, when the cardinal number expresses the “extent of change”, even the preposition *by* can be backgrounded (Huddleston & Pullum 2002: 692). Consider the following examples in (8).

- (8) a. The temperature **fell** {10° / **by** 10°}.  
(Huddleston & Pullum 2002: 692)  
b. The price **went up** {£2 / **by** £2}. (*Ibid*: 693)

The meanings of (8a-b) are the same with or without the preposition *by*. Huddleston & Pullum (2002) claim that as long as the noun phrases (*10 degrees Celsius* and *£2*) indicate the “scalar change”, the preposition *by* is not necessarily required, although they also note that *by*-comparatives are more commonly used than what they call “scalar change constructions” (Huddleston & Pullum: 693).

*Ten degrees Celsius* in (8a) illustrates how much *the temperature* went down from *the temperature* in the past, while *two pounds* in (8b) marks the difference between *the price* in the past and that in the relevant time. Let us examine other examples of “scalar change constructions” derived from different verbs in (9a-c). *Skyrocket*, *creep up* (phrasal verb), and *increase* are all synonyms for the intransitive phrasal verb *go up*, indicating an increase in the number of the subject referents.

- (9) a. Musk’s surge in wealthy surpassed the previous one-day record, held by China’s Zhong Shanshan who saw his wealth **skyrocket** {**\$32 billion / by** **\$32 billion**} in a single day when his beverage company went public, according to Bloomberg News. (US 2021 / News on the Web Corpus)

- b. The rent for a three-bedroom home in Avonhead **had crept up {\$30/ by \$30}** from last year, . . .  
(NZ 2012/ News on the Web Corpus)
- c. . . . the number of passengers traveling by plane will **increase {3 percent/ by 3 percent}** . . . (Wordbanks)

According to the corpora data, *by*-backgrounding occurs with intransitive verbs such as *decline*, *drop*, *fall*, *rise*, *rocket*, *shrink*, *skyrocket* and intransitive phrasal verbs such as *bulk up*, *creep up*, *go up*, *heat up*, *jump up*, *move up*, *perk up*, *come down*, *go down*, *move down*, *tick down*<sup>14)</sup> and unaccusative intransitives such as *increase*, *decrease*, and *grow*. These verbs typically imply the increase or decrease of the ‘number’ or ‘amount’ represented by the subject referent (*wealth*, *rent*, and *passengers*).

Even if *by* can be backgrounded with intransitives and unaccusative intransitives, the noun phrase that consists of a cardinal number and a unit noun (such as *dollars* and *per cent*) differs quite sharply from grammatical objects (*ibid*: 693). Though ‘*the number of passengers traveling by plane will increase 3 percent*’ is grammatically correct, the passive voice with the cardinal number as the subject referent such as ‘*\*3 per cent will be increased*’ is not acceptable,

In addition, whereas zero-complement (simplex) intransitive verbs such as *win*, *lose*, *score*, *lead*, and *trail* can be incorporated into *by*-comparatives, backgrounding the preposition cannot be allowed. Consider the examples in (10a-c).

- (10) a. The Tigers **lost the game by one point** – to extinguish any chance of playing finals . . .  
(AU 2016/ News on the Web Corpus)
- b. **To lose by one point** was the worst feeling. (Wordbanks)
- c. And that is no exaggeration. If I had my way, instead of higher level math students getting an extra 25 points, the people who claim they do no study and then do well **lose 25 points**.  
(IE 2017/ News on the Web Corpus)

Both the transitive *lose* and the zero-complement *lose* can be used in

*by*-comparatives, as illustrated in (10a, b). The verb *lose* can be used intransitively, when the missing object, *game* or *competition*, is easily inferred from the context (Fillmore 1986: 100). However, whereas the inferable object can be deleted, *by*-backgrounding is unacceptable with zero-complement intransitives.

Incidentally, when a cardinal number comes immediately after a zero-complement intransitive verb, it is often interpreted differently. Consider the example in (10c), where the cardinal number *25 points* is used as the object (the patient) of *lose*. The verb phrase in the example implies “*not to gain 25 points*” in the math exam, which is totally different from the meaning of “*to lose by 25 points*”, which indicates that you lose the game or competition 25 points behind your competitor.

Hence, it can be assumed that *by*-backgrounding normally occurs with pure intransitives (including intransitive phrasal verbs), and unaccusative intransitives, but not with zero-complement intransitives. However, two verbs prefixed with *over-* do not conform to Huddleston & Pullum’s (2002) generalization. In other words, *by*-backgrounding can occur with *overpay* and *overspend*, even though they are categorized as zero-complement intransitives.

### 3. Transitive Constructions with the ‘Extra money’ Object

We observe in the present section that the cardinal number immediately after two *over-V*s, *overpay* and *overspend*, are seen as the grammatical object of the verbs. Accordingly, they can serve as passive voice subjects.

#### 3.1. Transitive Constructions with *overpay* and *overspend*

These *over-V*s are realized in *by*-comparatives, as illustrated in (11a, b).

- (11) a. Opening up the market was supposed to ensure consumers got a better deal from energy companies after a Competition and Markets Authority investigation found that customers **overpaid by 1.4 billion pounds** on their bills in the three years to 2015. (US 2021 / News on the Web Corpus)

- b. Canadians gave Justin Trudeau a pass on pledging “modest deficits” on the campaign trail, only to get a bait-and-switch budget post-election that saw his government **overspend by \$29.4 billion**. (CA 2016/ News on the Web Corpus)

*Overpay* and *overspend* are categorized as zero-complement intransitives with human agents (including a *group* or an *organization*) as the subject referents (*customers* and *government*). Although *overpay* and *overspend* are much more likely to be used as intransitives than their verbal stems (see, Table 2), they are still categorized as zero-complement intransitives (see, Section 2.2).

In the previous section, we confirmed that by-backgrounding is normally allowed with intransitives and unaccusative intransitives, but not with zero-complements such as *win*, *lose*, and *lead*.<sup>15</sup> Although *overpay* and *overspend* are used as zero-complement intransitives with animate human agents (*New Zealanders* and *Canadians [we]*) as the subject referent, the preposition *by* can be optionally deleted, as in (12a, b).

- (12) a. New Zealanders **overpay {\$42/ by \$42} million** in tax.  
(NZ 2019/ News on the Web Corpus)
- b. “We **overspent {\$400,000/ by \$400,000}** last year and we weren’t told, we weren’t even warned about that as the year progressed,” he said. (CA 2018/ News on the Web Corpus)

More intriguingly, these numerical expressions following *overpay* and *overspend* are seen as the object of the verbs, though the following cardinal number after intransitives such as *rise*, *go up*, and *increase* are regarded as an adjunct, not an object (Huddleston & Pullum 2002). We can confirm that the cardinal number (*extra money*) after each verb is seen as the object, because these numbers (*\$70 million & 13bn [pounds]*) can serve as the subject referent of the passive voice, as illustrated in (13a, b).

- (13) a. Pryor Gibson, who leads the Division of Employment Security, described how **nearly \$70 million had been overpaid** during the first nine months of 2020.

(US 2021/ News on the Web Corpus)

- b. . . . **13bn is overspent** every year on dealing with the physical health consequences of this unmet need.

(GB 2020/ News on the Web Corpus)

There are 33 examples<sup>16)</sup> in the corpora data, where the cardinal number (*extra money*) serves as the subject referent of the passive voice with *overpay* as the matrix verb, whereas 6 instances are found, where “cost difference” serves as the subject referent of the passive clause with *overspend* (*overspent*). In contrast, the expressions like ‘\*£2 was gone up’ (Huddleston & Pullum 2002: 693) and ‘\*3 percent will be increased’ are semantically inappropriate.

Therefore, the linguistic phenomenon, that only cardinal numbers after *overpay* and *overspend* are seen as the object, should be recognized as unpredictable characteristics of these verbs, which should be represented as independent constructions, following the concept of “constructions” presented by Goldberg (1995, 2006).

### 3.3. Transitive Constructions with the ‘*Extra money*’ Object

In this study, we observed that the cardinal number following zero-complement intransitives *overpay* and *overspend* can be seen as the object (or the patient), so that they can serve as the subject referent of the passive voice. These comparative structures are quite unpredictable and should be recognized as individual comparative constructions (I would call this “TRANSITIVE CONSTRUCTIONS WITH THE ‘EXTRA MONEY’ OBJECT”), because the cardinal number after common intransitive verbs such as *rise*, *go up*, and *increase* are typically observed as adjuncts, which cannot be realized as the subject of the passive voice (Huddleston & Pullum 2002).

The “scalar change constructions” with common intransitive verbs and “*over-Vs*” transitive constructions with the ‘*extra money*’ object’ can be represented in the following schemata, as in (14). In the round brackets, what kind of standards are used in the specific construction is described.

- (14) a. [NP<sub>i</sub> V<sub>i</sub> (by) Numeral P<sub>j</sub>] ↔ [Numeral P<sub>j</sub> {increases / decrease} from X<sub>i</sub>]  
 (X: a standard represented by an entity in the subject referent)  
*grow, increase, rise, rocket, skyrocket / bulk up, creep up, go up, heat up, jump up, move up, perk up . . .*  
*decrease, decline, drop, fall, shrink / come down, go down, move down, tick down . . .*  
 [SCALAR CHANGE CONSTRUCTIONS (PURE INTRANSITIVES, UNACCUSATIVE INTRANSITIVES, AND INTRANSITIVE PHRASAL VERBS WITH ‘VALUE’ ADJUNCT)]
- b. [NP<sub>i</sub> over-V<sub>i</sub> (by) Numeral P<sub>j</sub>]<sup>17)</sup> ↔ [X<sub>i</sub> SEM<sub>i</sub> the amount of money<sub>j</sub> more than Y]  
 (X: a human agent / Y: a contextually-determined standard)  
*overpay, overspend*  
 [TRANSITIVE CONSTRUCTIONS WITH ‘EXTRA MONEY’ OBJECT]

The two comparative constructions above are strikingly different, since the cardinal number (*extra money*) after *over-V*s is regarded as the object, so that it can serve as the subject referent of the passive voice, as in ‘**\$4.6 billion** was overpaid’.<sup>18)</sup>

Note that the base verbs of phrasal verbs (*bulk up, creep up, go up, heat up, jump up, move up, perk up, come down, go down, move down, tick down*), and the verbal stems of *overpay* and *overspend* cannot be incorporated into these comparative constructions without particles or the prefix *over-*, because these verbs (*bulk, creep, come, go, etc.* and *pay, spend*) do not have scalar meanings (or they are not “degree verbs”, according to Bollinger 1972). Constructions are generated only when the base verbs are combined with the particles (*up* and *down*) or the prefix *over-*.

In addition, the transitive constructions with *overpay* and *overspend* in (14b) semantically differ from normal transitive constructions, because the object refers to “extra money”, not “cost” or “expenditure”.



- (15) a. Oh, and Lil Baby is mad because he **spent \$400,000** on a fake watch. (US 2021 / News on the Web Corpus)
- b. We **overspent \$400,000** last year and we weren’t told, we weren’t even warned about that as the year progressed, . . . (CA 2018 / News on the Web Corpus)

Whereas *\$400,000* with *spend* as the matrix verb implies ‘expenditure’ of the subject referent (*he*) as in (15a), *\$400,000* with *overspend* as the matrix verb in (15b) refers to “extra money”, which means the subject referent (*we*) already spent the expenditure they were supposed to spend (the cost represented by ‘a contextually-determined standard’) and *\$400,000* is regarded as the extra cost (extra money). Furthermore, we can observe innovative linguistic patterns probably related to this “Transitive Constructions with the Extra money Object”. Consider the examples in (16).

- (16) a. He said Centrelink **overpaid him \$440** in sickness benefits in 2013 but he forgot about it after he did not receive the promised Centrelink letter asking him to repay it. (AU 2017 / News on the Web Corpus)
- b. A Colorado woman has been struggling for months to get a refund from a restaurant after they **overcharged her \$5,700** for a cup of coffee. (CA 2021 / News on the Web Corpus)
- c. The government **had underspent \$1.6 billion** on the NDIS, Mr Shorten added, before promising to put \$40 million towards improving the scheme’s workforce. (AU 2019 / News on the Web Corpus)

*Overpay* and *overcharge* can be used as if they were incorporated into ditransitive constructions,<sup>19)</sup> as in (16a, b). By contrast, *by*-backgrounding can occur with *underspend*, the antonym of *overspend*, as exemplified in (16c). These linguistic patterns can be considered sub-schematic constructs, which can be derived from the construction in (14b), as Goldberg (2006:101) confirms that a linguistic pattern can be extended to create new innovative forms when learners have witnessed the pattern at

a certain frequency. We are not sure whether these examples in (16) should be categorized as true ‘transitive constructions’, because ‘money amount’ as the direct object in these instances are not allowed to serve as the subject of the passive voice (in other words, expressions like \*\$440 was overpaid to him, \*\$5,700 had been overcharged to her, and \*\$16 had been underspent are not acceptable). It may be the case that these sub-constructs are innovative extensions that are not yet entrenched enough in the knowledge of the native speakers to induce the structural complexities brought about by the syntactic change into the passive voice.

#### 4. Concluding remarks

We can confirm that transitive constructions with “extra money” object is strikingly different from “scalar change” constructions with common intransitives that Huddleston & Pullum (2002) propose, because cardinal numbers after *overpay* and *overspend* are seen as the grammatical object. Furthermore, we have also observed that the linguistic patterns are productive enough to create the sub-schematic constructs seen in (16). With the unpredictable characteristics and productivity, these comparative expressions should be recognized as independent constructions, following the concept of “constructions” presented by Goldberg (1995, 2006).

#### NOTES

- 1) This paper is based on Iwamiya (2019), a manuscript for oral presentations of the 27th Annual Conference at The Society of English Grammar and Usage.
- 2) “Pure intransitive verbs” refer to the intransitive verbs, which can be only used as intransitives, not taking any object (Quirk et al. 1985: 1169). For instance, *rise* and *fall* have only been used intransitively since OE (Old English), because vowels are used to distinguish between transitive and intransitive variants (*raise* and *fell* [= *cut down*] have been used as transitives).
- 3) ‘*To lose one point*’ is typically interpreted as “not to gain one point in a game or an exam”.
- 4) There are 33 examples in the corpora data where *overpay* is used in the passive voice with extra money (a cardinal number) as the subject referent.
- 5) Most *over-Vs* that can be incorporated into *by*-comparatives are zero-complement intransitive *over-Vs*, whereas *oversleep* and *overstay* are (pure) intransitive *over-Vs*.
- 6) For instance, while ‘*Last year, the university oversold the number of parking passes by 65 per cent* ... (CA 2011/ News on the Web Corpus)’ is acceptable, ‘*the university \*sold the number of parking*

*passes by 65 per cent*’ cannot be attested.

- 7) It is incorrect to assume that *over-V*s which take ‘money amount’ as the post-prepositional element can background the preposition *by* in the comparative, because *overbid*, *overdraw*, and *overestimate* can actually take ‘money amount’ as the post-prepositional element, as in ‘*As thrilled as people are to win, a middle-aged Pittsburgh man recently **overbid by just \$200** on a trip and a car and looked like he was about to cry.* (CA 2015/ News on the Web Corpus)’, ‘*And even if they **overdraw by more than \$50**, they have more time to fix it*’ (US 2021/ News on the Web Corpus), and ‘*. . . owner-occupiers **overestimate by A\$840** on average*’ (AU 2017/ News on the Web Corpus), but these *over-V*s cannot be used without *by* in the comparative structure nor in the passive voices with the cardinal number as the referent subject.
- 8) For other productive intransitive constructions such as conative intransitives and middle intransitives, see, Huddleston & Pullum (2002: 298–308).
- 9) ‘The patient’ is a semantic role given to the animate or inanimate ‘undergoer’ of a situation denoted by a predicate (Aarts 2011). For instance, in ‘*We replaced **everything***’, *everything* is the patient that undergoes the event of being replaced. ‘The agent’ is also a semantic role of the animate ‘instigator’ of a situation denoted by a predicate’ (Aarts 2011). For example, as in ‘***The police** arrested him*’, *the police* is identified as the agent, which performs the action represented by the matrix verb *arrest*. The agent often occurs as the subject. However, it is frequently backgrounded in the passive voice, as in ‘*He was arrested (by the police)*’.
- 10) The intransitive verb *eat* and *drink* are often categorized as prototypical zero-complements. A number of scholars have discussed these verbs when they explain zero-complement intransitives: see e.g., Fillmore (1986), Levin (1993) and Taylor (2012).
- 11) In the passive voice, the Agent is also backgrounded. However, there is a syntactic difference between the passive voice and unaccusative intransitives (Yoshimura & Taylor 2014: 300). The agent can occasionally be salient in the passive voice, because it can occur with the preposition *by*, as in ‘*the door was opened by him*’. In unaccusative intransitives, though, *by* and the agent are not allowed to occur together (e.g., \**The door opened by him*).
- 12) The linguistic data presented in this paper was collected from February 2 to February 9 in 2022. The data upon which this paper is based were mainly retrieved from the 600 million-word Wordbanks Corpus, the *News on the Web* (NOW) Corpus (this study extracted the data from English-speaking countries: the United States, Great Britain, Canada, Australia, New Zealand, and Ireland), and Corpus of Online Register of English. As for Corpus of Online Register of English, the data in ‘*news*’ register was collected, because both Wordbanks and News on the Web Corpus mainly extract the data from ‘*news*’ register. As for the data in Table 2, the following approaches were employed to collect to compare *over-V*s and their verbal stems in this paper. (i). The number of intransitive vs. transitive uses of each verb in the present simple and the third person singular was calculated. For instance, as for the verb *eat*, the argument structure of *eat* (the present simple) and *eats* (the third person singular) in the corpora data were examined. The reason why the past participle (*V-ed*) and present participle (*V-ing*) were not counted in this research is that it is always difficult to judge whether participles are regarded as the passives of the verb or adjectives, or the continuous form of the verb or nouns. For example, Bolinger (1972: 168) claims that when an intensifier (usually an adverb) follows a past participle (e.g., *It was **done nicely***), it is the passive of the verb. On the other hand, when an intensifier is used before a past participle (e.g., *It was **nicely done***), it is ambiguous whether it is the passive form of the verb or an adjective. However, intensifiers are not always used in the examples in corpora. Accordingly, we cannot judge whether these participles (*V-eds*)

are passives of the verb or adjectives. Furthermore, it is also hard to distinguish whether *V-ing* is considered the continuous form of a verb or a noun. For instance, the number of instances where *overeating* is used as the post-verbal element of be-verb is only 12, while the number of instances where it is used with an article and as the possessive case (such as *the overeating* or *his overeating*) amounts to 22, according to Wordbanks. This corpora data indicates that the present-participle of *overeat* (*overeating*) tends to be used as a noun. Therefore, it is also hard to judge whether *overeating* is primarily used as the continuous form of the verb, if it is lexicalized. / (ii). Their verbal stems of *over-Vs* are typically more polysemous than *over-Vs*. For example, the verb *pay* has a number of meanings, taking various types of nouns as the patient. We use fixed phrases such as ‘to pay attention to something (= to watch something carefully)’ or ‘it pays to do something (= to receive a good result by doing something)’. However, we do not use ‘to overpay attention to something’ nor ‘it overpays to do something’. In other words, *overpay* is not polysemous, because the patient of *overpay* is limited to nouns related to money transactions such as *tax*, *mortgage*, *income*, and *loan* etc.. For this reason, we counted nouns that both *over-Vs* and their verbal stems could take. For *pay* and *overpay*, nouns related to money such as *tax*, *fee*, *bill*, *cost*, *mortgage*, *interest*, *fare*, and *money* were calculated. / (iii). Phrasal Verbs such as *pay off* and *pay back* were not counted neither as intransitive nor transitive verbs, even though they take nouns related to money as the patients, because the meanings should be distinguished from those as a simplex verb. / (iv). Some words such as *much*, *more*, and *enough* are unclear whether they are pronouns or adverbs, when they are used alone (e.g., . . . if your job doesn't pay enough . . . / US, news, Corpus of Online Register of English). For this reason, examples where these words come directly after the verbs were excluded in this research.

- 13) Huddleston & Pullum (2002) call this standardized value “the source”, but I rather not use this term, because it sounds too abstract.
- 14) Kageyama (2001: 22-28) indicates that a phrasal verb can serve as pure intransitive even though the head verb is used transitively. For example, while *break* can be used both transitively and intransitively as in ‘the storm **broke** the window’ and ‘The window **broke** (the unaccusative intransitive)’, the phrasal verb *break up* is used intransitively as in ‘Sweat **broke out** on his forehead’.
- 15) There are a few examples where *by*-backgrounding occurs with the zero-complement *lead* in the corpora. For instance, we can find a sentence from Ireland’s newspaper like ‘Gortletteragh looked intent on making a quick return to the top grade as they **led 12 points** after 27 minutes’. However, most informants (Americans and Englishmen) argue that the expression is not acceptable, clearly indicating that they prefer ‘they **led by 12 points**’.
- 16) As for *overpay*, while 5 examples were seen in Wordbanks (600 million), 28 examples were found in the data extracted from English speaking countries in News on the Web Corpus.
- 17) *Overpay* occurs 24 times in *by*-comparatives with money as the unit noun, in the corpora data (Wordbanks and News on the Web Corpus), while it occurs 17 times in TRANSITIVE CONSTRUCTIONS WITH ‘EXTRA MONEY’ OBJECT (the percentage of *by*-backgrounding is 41.46%). *Overspend* occurs 11 times in *by*-comparatives with money as the unit noun, in the corpora, while it occurs 3 times in TRANSITIVE CONSTRUCTIONS WITH ‘EXTRA MONEY’ OBJECT (the percentage of *by*-backgrounding is 21.43%).
- 18) The example was extracted from News on the Web Corpus. The whole sentence is ‘It’s estimated that **\$4.6 billion was overpaid** in PUA benefits alone.’(US 2021).
- 19) According to corpora data and informant checks, *by*-backgrounding cannot occur with common transitives which take ‘human’ as the object. For instance, *defeat* and *beat* can be incorporated in *by*-comparatives, as in ‘He stood for leader immediately after the election, but some pre-emptive statements on the direction he’d like to take as opposition leader upset some MPs and saw Brendan Nelson **defeat**

*him by three votes*. (AU 2010/ News on the Web Corpus). However, ‘... \*and saw Brendan Nelson defeat him three votes’ is far from acceptable.

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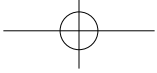
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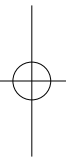




# Peculiar Effects of So-Called Picture Noun Phrase and Emotional Noun Phrase: A Key to the Solution to Backward Binding

KAZUKI ITO

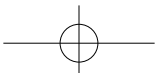
## 1. Introduction



This paper examines the possibility that the phenomenon often referred to as backward binding is not “backward” by showing that two kinds of nouns are compatible with reflexives and there are no direct anaphoric relationships. One is Picture Noun Phrase (PNP), which has been said to be often involved in the constructions of backward binding. The other one, which has never been paid much attention to, is Emotional Noun Phrase (ENP). These nouns may have a role in the grammaticality judgment of backward binding, so it is meaningful to investigate what properties make them different from other nouns. They exhibit the phenomena that cannot be observed in the constructions where nouns other than these are used. From this fact, it would be concluded that backward binding is one of the particular cases that PNP and ENP with reflexives make possible.

To begin with, this chapter gives the background of backward binding. In generative grammar, *Binding Theory* was developed by Chomsky to capture in a unified way how different kinds of nouns would behave in a sentence. Chomsky (1981) formalized *Binding Conditions* as follows:

### Binding Conditions

- A) An anaphor must be bound in its binding domain.
  - B) A pronoun must be free in its binding domain.
  - C) An R-expression must be free.
- 

In this paper, only condition A matters. Simply put, condition A says that an anaphor (reflexive pronouns and reciprocal pronouns) must have its antecedent placed in a structurally higher position. For example, as (1) shows, an antecedent usually precedes a reflexive. A subject is assumed to be the highest constituent in a sentence, so (1) is predicted to be grammatical as expected by native speakers.

- (1) John hates himself.<sup>1)</sup>

The reflexive *himself* is used as an object referring to its antecedent *John*. The order is usually antecedents-reflexives in the viewpoint of linearity. Contrary to the usual case, reflexives can precede their antecedents under some circumstances. (2) is an example of such a case.

- (2) The picture of himself remains still vivid in John's mind.

This phenomenon is called backward binding, once raised as a counter-example to condition A. Subsequent works concluded that sentences such as (2) were not problematic in generative grammar because condition A would only apply to the sentence where anaphors appeared as an argument of a verb<sup>2)</sup>. Backward binding was then put aside as an exceptional case. It seems beneficial, however, that we tackle the issue from another point of view because the order is still weird as compared to the usual antecedents-reflexives order.

This paper consists of 6 chapters. Chapter 2 describes the previous research on PNP and the assumptions related to backward binding. Chapter 3 introduces a new category that I will call Emotional Noun Phrase (ENP), and explain why PNP and ENP are special. Chapter 4 offers three types of constructions that are not allowed with nouns other than these two groups of nouns. They are subjects-verbs disagreement, comparative, and dangling participial constructions. Chapter 5 considers a possibility that backward binding is not “backward”. Chapter 6 summarizes the points presented in this paper.

## 2. Previous research

This chapter briefly looks at previous studies of Picture Noun Phrase



(PNP) and backward binding. The first section introduces what Picture Noun Phrase (PNP) is, and one famous work that treats this category. The next section offers the previously assumed conditions related to backward binding, and I will show all of them are not so important.

### 2.1. Picture Noun Phrase (PNP)

Some researchers, such as Kasai (1997), said that so-called Picture Noun Phrase (PNP) would often be involved in backward binding. Oki (1988)<sup>3</sup> listed some members of PNP.

- (3) description, statement, composition, report, tale, claim, drawing, painting, etching, photograph, sketch, story, column, satire, book, diary, letter, text, article, essay, sentence, paragraph, chapter, picture.

This category is characterized by showing subjective things objectively. For example, the function of *picture* is to make it possible for people to see themselves in the same way as they do others.

Although the fact that PNP is used in backward binding is often noted, very few works discuss the characteristics of PNP. Kuno's work (1987), a famous piece of literature often cited on the effect of Point-of-View, discussed two points about PNP. One was when extraction from PNP would be possible. For example, he used the sentences below to illustrate this phenomenon.

- (4) a. What did you buy a book on?  
 b. Who did you see a picture of?  
 c. What have you bought a book about?  
 d. Which book did you read a review of?
- (5) a. \*What did you lose a book on?  
 b. \*Who did they destroy pictures of?  
 c. \*Who did you see a book about?  
 d. \*What did John burn a large green book about?

The other was whether reflexives or pronouns would be used with PNP depending on semantic aspects of constructions. He cited examples like

these in (6) and (7).

- (6) a. John saw a picture of himself in the morning paper.  
 b. ??John saw a picture of him in the morning paper.
- (7) a. ??John hasn't found out about that horrible book about himself yet.  
 b. John hasn't found out about that horrible book about him yet.

We will not get into these matters in depth. It is enough here to say that his discovery was based on the semantic or pragmatic effects that PNP has. His work was indeed valuable in that he examined the relationships between PNP and reflexives or pronouns, but that seems not to be enough. It lacks the inspection of whether PNP is a special group of nouns for some specific reasons.

## 2.2. Previous assumptions on backward binding

It was said that backward binding had some semantic constraints. They are as follows:

- ( I ). Subjects don't have intentions
- ( II ). Verbs are psychological
- ( III ). As a whole, sentences mean psychological states or changes

Among these assumptions, (II) was considered to be the most fundamental key to the constructions of backward binding<sup>4</sup>. Most works on backward binding focused on the behavior of so-called Psychological Verbs. They are exemplified by verbs such as *surprise*, *amaze*, *astonish*, and *depress*.

Contrary to the assumptions above, Ito (2021) demonstrated that they were not so important in backward binding by using the example below.

- (8) The picture of himself remains still missing somewhere in the house of John's father.

There are three possible antecedents that the reflexive *himself* can refer to: namely *John*, *John's father*, or someone else<sup>5</sup>. This sentence doesn't use a typical Psychological Verb, nor does it mean any psychological

states or changes. Only (I) seems to be met in this sentence. I will show, however, that (I) does not directly affect the grammaticality judgment of backward binding itself. Instead, (I) is deducible from the fact that nouns with intentions cannot be associated with reflexives after all, so as a result, only some kinds of nouns that can be combined with reflexives are used in backward binding. This point will be more clarified in section 3.2., where I talk about a specific schema.

### 3. Special groups of nouns: PNP and ENP.

In this chapter, I will first introduce a new category that is similar to PNP. It is a group of nouns that express feelings or emotions. Thus, I will call it Emotional Noun Phrase (ENP). Some members are listed below.

- (9) sadness, angriness, kindness, happiness, anxiety, depression, shame, laziness, craziness, joy, doubt, hope, desire, belief,

This category does not seem to have established its status independently before<sup>6</sup>. As we see in chapter 4, PNP and ENP show very similar effects with the extent to which sentences are acceptable a little varying. A few remarks on these categories are made in the following two sections to ensure that they are special enough to establish their own status.

#### 3.1. Semantic property

It has already been mentioned in chapter 2 that PNP is often used in backward binding. The reason seems to be that PNP makes it possible for people to look at something that cannot be usually observed, and that many researchers think backward binding also involves some flavor of introspection as (III) says. If this semantic aspect is considered to play some role in backward binding, then it is reasonable to assume that any nouns that have introspective meanings can also be used in the constructions. There are no plausible reasons to restrict our attention only to PNP. ENP is similar to PNP in this respect and allows the constructions of backward binding.

- (10) a. The sadness in himself caused John to be lost at words.  
 b. The anger in herself kept Mary from doing anything.  
 c. The kindness in himself always keeps John confident.

This fact has not been mentioned before, and these two groups of nouns show peculiar constructions, which we will see in chapter 4.

### 3.2. Noun+Preposition+Reflexive schema

Before talking about what constructions PNP and ENP make possible, it is worth noting one semantic peculiarity that only PNP and ENP share. They seem to be the only groups of nouns that permit the schema of Noun+Preposition+Reflexive. Other nouns are odds with this schema.

- (11) a. \*Friends of myself  
 b. \*Money of himself  
 c. \*Family of myself

Note that the emphatic use of reflexives and idiomatic expressions such as *by oneself* are excluded. They can be added to any nouns.

- (12) a. I myself do it.  
 b. He overcame these difficulties by himself.

PNP and ENP can be used in the schema with reflexives replaced by other nouns.

- (13) a. A book on the American history.  
 b. The kindness in people.

The fact that only PNP and ENP can be used in this schema confirms my idea that they are different from other nouns.

## 4. Peculiar constructions

PNP and ENP exhibit some peculiar constructions that are not allowed with nouns other than them. Three phenomena are described below: subjects-verbs disagreement, comparative, and dangling participial constructions. Some of the examples used in this chapter can be

seen as backward binding as well, so these constructions are likely to share some functions.

#### 4.1. Subjects-verbs disagreement

In English verbs in present tense must be conjugated. They must agree with the head noun in a sentence as an example shows below.

(14) The book that John bought a few days ago is interesting.

*The book* is the head subject in this case, so the verb *be* is conjugated to meet the agreement requirement. It seems impossible at first glance that verbs agree with something other than head nouns. Such a case could be observed when PNP or ENP is used with reflexives at the same time.

- (15)<sup>7)</sup> a. The picture of themselves are marvelous  
 b. The picture of themselves is marvelous.  
 c. The sadness in themselves seem to reach the limit.  
 d. The sadness in themselves seems to reach the limit.

Only (15b) and (15d) should be grammatical, but a native speaker said (15a) and (15c) seemed also acceptable with the assumption that it is obvious who the reflexives refer to.

It is worth noting that the problem lies not in the fact that there are two choices as to the forms of the verbs, but in the situation where the noun after the preposition is a candidate for the agreement relationship. It is possible that verbs are inflected in two ways.

- (16) a. Flying airplanes are dangerous.  
 b. Flying airplanes is dangerous.

(16a) means that airplanes that are flying are dangerous. On the other hand, (16b) says it is dangerous to fly airplanes. *Flying* in (16a) is a present participle that has a function similar to that of adjectives. It is used in (16b) as a gerund. The difference between (15) and (16) is apparent. In the examples of (16), the word *Flying* is used in different ways, so it is natural that we have two choices as to the forms of the main verb. In the

sentences of (15), however, the subject *The picture of themselves* or *The sadness in themselves* is used in the same way in each pair. In addition to this fact, such an agreement relationship cannot be seen if we put nouns other than reflexives after PNP or ENP.

- (17) a. \*The book on animals are interesting.  
 b. The book on animals is interesting.

Although the structure in (15) and (17) seems quite similar, only (15) is acceptable. From these observations above, we reach the conclusion that the combination of PNP or ENP with reflexives gives rise to a special agreement relationship.

#### 4.2. Comparative

If we compare two things, they must share a same status. One of the examples below is such a sentence that students in Japan who learn English often make.

- (18) a. The population of China is bigger than that of Japan.  
 b. \*The population of China is bigger than Japan.

In (18), what is compared is *the population*, so the demonstrative pronoun *that* is inserted in (18a) to refer to the population in the case of Japan. (18b) is strange at first because *the population* is compared with *Japan* itself. This requirement is weakened when PNP or ENP with reflexives is used as a subject.

- (19) a. The picture of himself seems bigger to John than that of Mary.  
 b. The picture of himself seems bigger than John really is.  
 c. The kindness in himself seems greater to John than that of Mary.  
 d. The kindness in himself seems greater today than John usually is.

(19a) and (19c) are assumed to be correct in terms of the traditional grammar. The difference appears in (19b) and (19d). For example, what

(19b) conveys is that John in the picture seems bigger than he really is. Such an interpretation seems impossible when PNP or ENP with nouns other than reflexives is used.

(20) Your books on foods are harder than those of mine.

This sentence reads only in the sense that your books that feature foods are more difficult than the books that I have, not that foods that your books specialize on are harder than foods that I have. Despite the fact that sentences in (19) and (20) hire one member of PNP as a subject, the degree to which such an interpretation is acceptable changes dramatically.

Note that this acceptability difference is not caused by the word *book*, as is clear from the example below that puts *book* as a subject.

(21) The book on himself is more interesting than John really is.

Both (20) and (21) use the word *book*, but only (21) permits the intended interpretation. It is fair to say that PNP and ENP with reflexives make such a comparative relationship possible.

### 4.3. Dangling participial constructions

Participial constructions can be made under some conditions. Basically, verbs are turned into their present/past participle forms depending on the relationship with the shared subjects. Then the conjunction and the subject in the adverbial clause are deleted. (22b) is a usual case made from (22a).

- (22) a. Because I was taken by surprise, I couldn't say any single word.  
 b. Taken by surprise, I couldn't say any single word.

Dangling participial constructions are peculiar in that although the subject in the adverbial clause is different from that in the main clause, it is deleted<sup>8</sup>. They are so rare that we don't often encounter them. (23b) is an example of the construction.

- (23) a. Hanged on the wall, the picture of himself seems cool to

John.

- b. ??Playing with many dogs in the park, the picture of himself seems happy to John.

No one can imagine the situation where the picture itself plays with many dogs, so there is no relationship established between *the picture* and *playing*.

It is worth noting that (23b) is still marginal, but much better than (24b).

- (24) a. The picture of himself always brings back good memories to John, making him feel happy to reflect on the past.  
 b. \*The picture of himself always brings back good memories to John, feeling happy to reflect on the past.

The difference between (23b) and (24b) is whether *John* in the picture is the very man who does the action or has the emotion in the real world at the moment. The marginal sentence of (23b) is read in the way John in the picture plays with many dogs in the park, having to do with what he does in the real. The interpretation in (24b) could be that John in the picture is spiritually distinguished from the man who actually feels happy. The degree of acceptability increases when ENP is used with reflexives.

- (25) The laziness in herself has often been noted, forced to resign from the job Mary was devoted to.

It seems apparent why ENP makes this construction more acceptable than PNP. (25) implies that the laziness that eventually forces Mary to resign from the job is her nature, and it is difficult to change one's personality. *Herself* and *Mary*, then, seem to refer to exactly the same person at the moment, which could be the reason for the grammaticality judgment of (25).

It remains to be seen, however, whether such a distinction is the only factor involved in the grammaticality judgment of dangling participial constructions. Given that this construction type is seldom seen and usually regarded as unacceptable, it isn't exaggerating to say that PNP and ENP with reflexives are partly responsible for the grammaticality



judgment, hence the peculiar function of them.

### 5. The relationship between these nouns and backward binding.

From the observations made in chapter 4, I will consider the possibility that backward binding is not actually “backward”<sup>9</sup>). As the examples in (15) show, reflexives can appear without their antecedents in a sentence if it is apparent who they refer to. Consequently, reflexives and pronouns look the same at the syntactic level. Either of them can be used in a sentence, but there is a semantic difference between them. Kuno (1987) explained this point by using his examples below.

- (26)
- a. John pulled the blanket over him.
  - b. John pulled the blanket over himself.
  - c. John hid the book behind him.
  - d. John hid the book behind himself.
  - e. John pulled Mary toward him.
  - f. John pulled Mary toward himself.

The contrast in (26e) and (26f), for example, is that (26f) involves the action more emotionally. John pulls Mary both physically and mentally. In addition to the fact that (26e) doesn’t involve such an interpretation, it is worth noting that the pronoun *him* can refer to someone other than the surface antecedent *John*. Reflexives have more effects than pronouns emphasizing the existence of who they refer to. From this fact, it is likely that one of the functions that reflexives have is to make people’s hidden existence more conspicuous<sup>10</sup>). Both PNP and ENP are nouns that often entail people in some sense, and their existence may be realized with reflexives. If this is the case, the phenomena mentioned in chapter 4 are to be solved. Not only head nouns but also those who reflexives refer to are treated as subjects. As an example, (19) is irregular in that there are two possible choices about what is compared. Head nouns can be no doubt compared. In addition, reflexives make people’s existence outstanding, so they are also permitted to be compared. This function is characteristic of reflexives, different from pronouns<sup>11</sup>). In the case of backward binding, there might be no direct anaphoric relation-

ships between surface antecedents and reflexives. The combination of PNP or ENP with reflexives can make this construction possible as well as those mentioned in chapter 4. It follows that surface antecedents are not “antecedents” but have a role in strengthening the referentiality. This possibility deserves investigation in future research.

## 6. Conclusion

We have investigated so far what makes PNP and ENP special. They are different from other kinds of nouns in some respects. At the semantic level, they have some flavor of introspective meanings, and permit the schema of Noun+Preposition+Reflexive. At the syntactic level, they make possible three types of constructions: namely subjects-verbs disagreement, comparative, and dangling participial constructions, all of which are rare or impossible if nouns other than reflexives are used with PNP or ENP. The reason is that they emphasize people’s hidden existence more conspicuous, and as a result, those who they refer to can be seen as subjects. It suggests that PNP and ENP are responsible for the grammaticality judgment of backward binding as well, and it can be categorized as one of the particular constructions that PNP and ENP allow. The surface antecedent has a role in strengthening the referentiality, but there are no direct anaphoric relationships.

Some problems remain to be solved. One of them is whether reciprocals behave in the same way as reflexives. Because reciprocals can also be used as possessives, they will likely show further peculiarity. For now, it is fair, at least to say that PNP and ENP are compatible with reflexives, and this combination is partly responsible for some particular constructions including backward binding.

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This work has been supported by three native speakers, who judged whether each of the sentences I made was acceptable or not. They gave me many suggestive comments, and they were very helpful. I am deeply grateful to all of them.

## NOTES

- 1) Examples are all made by the author unless otherwise noted.
- 2) The most influential work on this claim is Reinhart and Reuland (1993).
- 3) He distinguished some of the members from others according to their corresponding verbs. This distinction isn't so important in my idea, so all of them are treated similarly here.
- 4) In fact, backward binding was first assumed to be the problem of so-called Psychological Verbs, so almost all of the works on this construction were about how to treat this type of verbs in terms of generative grammar, especially hierarchical structures.
- 5) One native speaker says that the most plausible interpretation is the situation where the reflexive himself refers to someone else other than those mentioned in the sentence.
- 6) Sugiura (2006) introduces a similar category that he calls 'emotion' nouns. It seems dubious, however, that such a category stands alone only on account of his discovery that its appositive *that* use is different from that of others. Not only 'emotion' nouns but also many other kinds of nouns permit appositive *that* clauses. In addition, my term ENP covers a wider range of nouns. Some of them are considered to belong to another group in his paper. Therefore, it is not too much to say that ENP can establish its own status for the reasons proposed in this paper.
- 7) It is true that these examples are not grammatical, but the point is that they are "acceptable", not grammatical.
- 8) If the subject in the adverbial clause is different from that in the main clause, it should be left there. An example below is such a case, often referred to as absolute participial constructions.
  - (i) There being no buses left, I had to walk to the office.
 This type is characterized by some conventional expressions such as *all things considered*, *weather permitting*, and *all things being equal*.
- 9) There are some researchers who claim that English has no backward anaphora. My idea is almost the same, but their claims are all based on the data using pronouns, not reflexives. Therefore, I will not discuss their validity here and will leave it to future research.
- 10) This idea is similar to the emphatic use of reflexives. The difference is that the emphatic use necessarily requires the antecedent to be placed near the reflexive. My claim is that reflexives make people's hidden existence more conspicuous even though the antecedents are not realized in a sentence.
- 11) If PNP or ENP with possessive pronouns is used, such an idiosyncrasy doesn't appear.
  - (i) His picture is bigger than John really is.
 A native speaker says the most conceivable interpretation is that his picture itself is compared with John.

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## 投 稿 規 定

(1) 投稿は岩崎研究会会員に限る。但し、非会員であっても論文審査委員から推薦のあった場合は特別に認める。(2) 論文の内容は未発表のものに限る。(3) 用語は英語に限り、原則として native check を受けたものとする。(4) 注 (note) は後注とし、章ごとに通し番号を付ける。(5) ギリシャ字、ロシア字以外の特殊文字はできるだけローマ字化してほしい。音声記号は国際音声学協会 (IPA) 所定のものを用いる。(6) 引用文献：書式は MLA Style に従う。(7) 枚数：論文はワープロ原稿で、1 行はアルファベットの小文字で 70 字、450 行以内。(8) 原稿はすべて論文審査委員による審査の上採否を決定する。共同執筆論文を別として、論文の掲載は毎号 1 人 1 篇とする。(9) 都合により短縮を求めることがある。印刷上の体裁および論文の掲載年度については編集委員に一任する。(10) 抜刷は 20 部までを無料で、別に本誌 1 部を呈上する。(11) 原稿は随時受付ける。(12) なお、詳細は別に定める。

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編集後記 今回は大学院生による 2 本の論文が寄稿されました。専攻する分野についての研究成果を発表したものと思われるが、両方の論文ともなかなか説得力のある論の進め方をしていると感じました。今後ともそれぞれの分野でさらに発展することを期待します。  
(2023 年 5 月 1 日 S. M.)

