

## 名詞的／動詞的範疇

### —英語、日本語の動名詞構文からの考察

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英語のジェラント（動名詞）や日本語の動名詞構文において共起する動詞的性質と名詞的性質は、述語が統合する機能素性の特性に起因することを主張し、述語が範疇素性の指定を欠く場合はその範疇が機能素性によって決定される可能性を指摘する。英語の動名詞構文はその内部構造においては動詞的な性質を呈するが、文中においては名詞句と同様の分布を示す。本稿ではジェラントは非時制節（CP）であり、そのテンス素性により前置詞が補文標識Cとして生ずることが可能であることを提案する。前置詞+ジェラントはP+DPではなく、前置詞がその主要部となるCPと分析することにより、ジェラントの内部構造と分布の双方に説明が与えられる。また、日本語の動名詞構文は形態的には名詞であるが動詞と同様に節を形成し、さらにその節が格助詞を伴うなどの相反する範疇的な特徴を表すが、これらに対しても、ジェラントと同様、名詞句、あるいは動詞句／節としての特徴が、統合される機能素性により決定される分析を提示する。さらに、名詞、動詞などの範疇ごとに関連する機能素性に区別が存在するのではなく、異なる範疇間で共通する素性の存在を示唆する。

# Nominal and Verbal Categories

—A Study Based on English Gerunds  
and Japanese Verbal Noun Clauses

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## 0. Introduction

English gerunds pose long-standing problems of mixed categorial properties. Their internal structure indicates that they belong to the verbal category, while their external distribution suggests their nominal nature. This article proposes that the *V-ing* form is categorially underspecified and the properties of the projected structure are due to those of the associated functional features. The mixed properties of gerunds will then be attributed to the properties of functional features characteristic of these constructions. Other structures with categorially ambiguous properties are also attested. The so-called “verbal nouns” in Japanese form a structure that shows both nominal and clausal properties. Clauses formed by verbal nouns show no verbal morphology and they can be followed by a case-particle. In this article the properties of these clauses will basically be provided with the same account as the analysis proposed for English gerunds.

In section 1, I begin by reviewing the principal properties of English gerunds. It will be argued that gerunds are CPs involving a certain T-feature and the apparent DP-like distribution of gerunds will be

reinterpreted as the distribution of a CP. Section 2 addresses the issues concerning the clauses formed by Japanese verbal nouns. In the proposed analysis the case-particle that immediately follows these clauses is due to a feature of T, which parallels the feature proposed for English gerunds in section 1. Section 3 states the summary and the conclusion of the discussion.

## 1. English Gerunds as CPs

### 1.1 The Nominal and Verbal Properties of Gerunds

Gerunds can be classified into three subclasses by the morphological form of the subject: (a) those with the subject in possessive-case (*POSS-ing*), (b) those with the subject in accusative-case (*ACC-ing*), and (c) those with no overt subject (*PRO-ing*).

- (1) a. We remembered Jerry's attending the class.  
 b. We remembered him attending the class.  
 c. We<sub>i</sub> remembered PRO<sub>i</sub> attending the class.

Despite the differences manifested in the subject forms, all these three types of gerunds share properties that distinguish them from deverbal nouns with the *-ing* suffix. Though the external distribution of gerunds appears to parallel that of DPs, in contrast to deverbal *-ing* nouns their internal structure indicates that they are clauses.

I will first review some salient properties of gerunds, often taking *POSS-ing* gerunds as examples. No systematic attempt will be made in this article to derive the different types of gerunds mentioned above,

but a brief discussion on a possible explanation for the differences will be presented in section 1.2.

In view of the objective case property, gerunds belong to the verbal category rather than to the nominal rendering the object DP in the accusative form. Thus, as shown in (2), gerunds contrast with a deverbal *-ing* noun whose object is rendered in the *of*-phrase.

- (2) a. We remember Bill's drawing the picture.  
 b. We remember drawing of the picture.

Another difference between gerunds and deverbal *-ing* nouns is that the former allows adverbial but not adjectival modification, whereas the latter can be modified only by adjectives.

- (3) a. We are counting on John's carefully/\*careful assembling the parts.  
 b. We are counting on John's \*carefully/careful assembling of the parts.

The possibility of the adverbial modification also suggests that gerundive constituents are verbal rather than nominal projections.

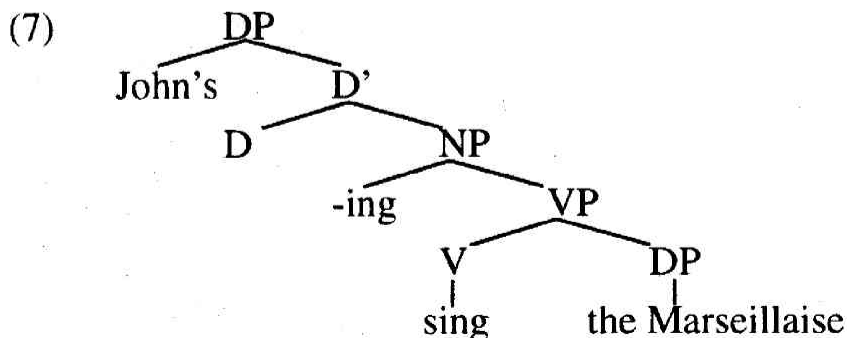
On the other hand, the external distribution of gerunds parallels that of DPs, suggesting the nominal status of gerunds. The examples in (4)–(5) below indicate that gerunds, like DPs and unlike finite/infinitival CPs, cannot appear in the complement position of N or A.<sup>1</sup>

- (4) a. \*John's preference [Meg's studying French]  
 b. \*John's proof [the theorem]  
 c. John's claim [that Mary is guilty]  
 d. John's attempt [PRO to prove his innocence]
- (5) a. \*We are aware [John's passing the bar exam].  
 b. \*We are aware [John's eagerness].  
 c. We are aware [that John is going to take the bar exam].  
 d. John is afraid [PRO to take the bar exam].

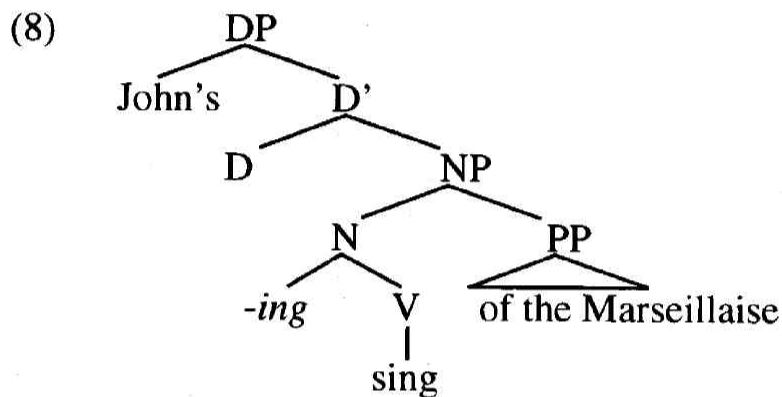
Another distributional characteristic of gerunds paralleling that of DPs is that unlike clauses, they can be the object of P.

- (6) a. John counted on [Meg's winning the prize money].  
 b. John counted on [Meg's winning of the prize money].  
 c. \*John counted on [that he would win the prize money].  
 d. \*John counted on [PRO to win the prize money].

In his analysis to account for these mixed properties of POSS-*ing* gerunds, Abney (1987) proposes that these gerunds are DPs in which the nominal head *-ing* takes a VP complement as illustrated in (7).



Abney assumes that the nominalizer *-ing* takes a VP and converts it into an NP. In his proposal the nominalizer *-ing* in gerunds and the one found in deverbal *-ing* nouns are the same in terms of their basic properties, but the latter differs from the former in that it attaches to V rather than to V's projection as shown in (8).



The structure in (7) suggests a category switching affixation at the phrasal level. Apart from questions concerning this derivation, Abney's structure is problematic because both POSS-*ing* and deverbal *-ing* nouns form DPs. One problem is that although both POSS-*ing* gerunds and deverbal *-ing* nominals allow the subject in genitive-case, typical determiners like *the*, *a*, and *some* are allowed only in deverbal *-ing* nouns.

(9) [The/Mary's reporting of the event] was praised.

(10) I remember John's/\*the singing the song.

I remember the singing of the song.

Another problem concerns the number feature of nominals. As

observed in the examples in Wasow and Roeper (1972), deverbal *-ing* nouns can be pluralized, while gerunds do not tolerate pluralization.

- (11) a. Sightings of UFO's make Mary nervous.  
 b. Sighting UFO's makes Mary nervous.  
 c. \*Sightings UFO's make Mary nervous.

Still another problem is that since in Abney's structure *-ing* attaches to VP and turns it into a nominal category, no clausal properties are assumed. However, gerunds exhibit properties that suggest the presence of T, hence indicating the clausal status of gerunds. Guéron and Hoekstra (1995) observes that an aspectual auxiliary, *have*, can appear in gerunds but not in deverbal *-ing* nominals, suggesting that T is present in the former but not in the latter.

- (12) a. John's having passed this exam surprised us.  
 b. \*John's having passed of this exam surprised us.
- (13) a. We are satisfied with John having finished the job in time.  
 b. \*We are satisfied with John's having finished of the job in time.

Guéron and Hoekstra (1995) also notes that while deverbal *-ing* nouns take *no* as their negation, gerunds take the sentential negation *not*.

- (14) a. John's not reading the book will not surprise me.  
 b. No reading of the book will surprise me.

The contrast observed in (14) immediately follows from the assumption that *not* needs to be licensed by T (cf. Zanuttini (1991)).

Further evidence indicating the clausal status of gerunds is that the expletive *there* and ‘weather’ *it*, whose distributions are restricted to the subject position, can appear in gerunds as discussed in Reuland (1983).

- (15) a. You may count on [there being a lot of trouble tonight].  
 b. I wouldn’t count on [it raining tomorrow].

The presence of these nonarguments strongly suggests that gerunds are clausal constituents whose subject position must be filled. Similarly, the following examples show that ‘raising to subject’ is possible in gerunds while it is not in DPs, also indicating the obligatory subject position in gerunds.

- (16) a. [John’s appearing *t* to be friendly] eased our tension.  
 b. \*[John’s appearance *t* to be friendly] eased our tension.

These observations lead to the conclusion that as the structure of (POSS-*ing*) gerunds, (7) is not tenable. Instead, I tentatively propose that gerunds have a clausal structure as exemplified in (17). Compare this structure with the nominal structure of a deverbal *-ing* noun given in (18).

- (17) [TP John’s<sub>i</sub> T [vP *t*<sub>i</sub> v [vP reporting the news]]



- (18) [<sub>DP</sub> the/John's [<sub>NP</sub> reporting of the news]]

I assume that the *V-ing* forms in the structures in (17) and (18) are categorially underspecified. If a *V-ing* merges with nominal functional features, it projects to the nominal category and is valued with nominal features like number. On the other hand, if a *V-ing* merges with verbal functional features, it projects to the verbal category and is valued with verbal inflectional features.

If gerunds are clauses with T-features, their structure should eventually be extended to CP. Then, a question arises concerning their external distribution. As seen above the external distribution of gerunds appears to parallel that of DPs rather than that of typical CPs. In particular, in the complement position of N, A and P, gerunds and typical CPs show contrastive distribution as observed in (4)–(6) above repeated here as (19)–(21).

- (19) a. \*John's preference [Meg's studying French]  
 b. \*John's proof [the theorem]  
 c. John's claim [that Mary is guilty]  
 d. John's attempt [PRO to prove his innocence]
- (20) a. \*We are aware [John's passing the bar exam].  
 b. \*We are aware [John's eagerness].  
 c. We are aware [that John is going to take the bar exam].  
 d. John is afraid [PRO to take the bar exam].
- (21) a. John counted on [Meg's winning the prize money].  
 b. John counted on [Meg's winning of the prize money].

- c. \*John counted on [that he would win the prize money].
- d. \*John counted on [PRO to win the prize money].

The examples in (21) indicate that like DPs and unlike CPs, gerunds can appear after a preposition. Also, the ungrammatical examples in (19) and (20) become grammatical if an appropriate preposition is inserted between the N/A and their argument DP or gerund. To the extent that the clausal analysis of gerunds is correct, this suggests that in sentences like (21.a) a preposition can take a gerundive clause as its complement. On the basis of this observation, I propose that a preposition and its complement gerund form a CP rather than a PP, and the preposition preceding the gerund is a prepositional complementizer. Then, the structures involving the gerundive complement of P, N, and A can be specified as in (22).

- (22) a. We [<sub>VP</sub> counted [<sub>CP</sub> [<sub>C</sub> on] [<sub>TP</sub> John's finding out the truth]]]  
(cf. 21.a)
- b. [<sub>DP</sub> John's preference [<sub>CP</sub> [<sub>C</sub> of] [<sub>TP</sub> Meg's studying French]]]
- c. We are [<sub>AP</sub> aware [<sub>CP</sub> [<sub>C</sub> of] [<sub>TP</sub> John's passing the bar exam]]]

Notice that the structures of gerunds given in (22) are analogues of the structure of *for-to* infinitives in that C is a prepositional complementizer taking a non-finite TP, as shown in (23).

- (23) We [<sub>VP</sub> prefer [<sub>CP</sub> [<sub>C</sub> for] [<sub>TP</sub> John to find out the truth]]]

By analyzing the prepositions preceding gerunds to be the head of CP, the distribution of gerunds is shown to exactly parallel the distribution of typical CPs.

## 1.2 Support for a Prepositional Complementizer in Gerunds

Another problem that still remains to be considered is whether the structure proposed above can be motivated independently of gerunds. In the following examples (taken from the British National Corpus), the prepositions *despite* and *with* take a gerundive complement.

- (24) a. This expedition began this morning almost an hour later than I had planned, [despite [my having completed my packing well before eight o'clock]].
- b. [Despite [his having given her a tough time on set]], Lysette is still very fond of Woody Allen.
- c. [With [Willis having been injured in the semi-final]], England had chosen to play an extra batsman, Larkins.

In (24.a–c) the gerunds contain perfective *have*, suggesting that the gerundive constituents are clauses with T. If *despite* and *with* are nothing but P in these examples, the relevant structure would be problematic as clausal constituents are excluded from the complement position of P. However, by analyzing *despite* and *with* as (prepositional) complementizers heading adjunct CPs, the generalization concerning the structure of PP still holds.

It has been noted also that prepositions share certain properties with the clause introducing *that* and *for*. Kayne (1984) observes contrasts in the extraction out of a gerundive complement of P, as illustrated in the following examples.

- (25) a. Mary is the one who I'm counting on [him marrying \_ ].  
 b. \*John is the one who I'm counting on [ \_ marrying her].

The examples in (25) clearly indicate that when a gerund is the object of a preposition the extraction of the object is possible while that of the subject is not. The observed contrast is analogous to the contrasts known as “*that*-trace effect” and “*for*-trace effect” observed in the following examples. (cf. Pesetsky and Torrego (2004))<sup>2</sup>

- (26) a. Who do you think [ \_ married her]?  
 b. \*Who do you think [that \_ married her]?  
 (27) a. Who do you want [ \_ to marry her]?  
 b. \*Who do you want [for \_ to marry her]?

If the contrast observed in (25) has the same source as “*that*-trace effect” and “*for*-trace effect” as surmised in Kayne (1984) and Pesetsky and Torrego (2004), this provides support for our claim that a preposition taking a gerundive complement is a complementizer.

Assuming that C-features correlate with T-features, the appearance of prepositional complementizers should be attributed to the T-features specific to gerunds. A prototypical property of P is that it takes a

nominal complement. Then, if the nonfinite T in gerunds has a nominal property, this can be the rationale for the occurrence of a prepositional complementizer.

The association of nominal properties with nonfinite clauses is not an ad-hoc solution specifically for English gerunds. The assumption of nominal properties is motivated in other languages as well. Raposo (1987) claims that Romance infinitives are nominal. Compare the following French examples in which the infinitives are the complements of V, A and N.

- (28) a. Jean désire chanter.  
           John desires sing-inf.
- b. Jean est désireux \*(de) chanter.  
           John is desirous de sing-inf.
- c. le désir \*(de) chanter  
           the desire de sing-inf.

Raposo argues that in French the appearance of the preposition *de* with infinitives in the complement position of A and N is related to case. If the contrasts observed in the above examples are due to availability of case for the infinitive complements, it naturally follows that these infinitives are nominal in nature.

Further support for the claim that Romance infinitives are nominal can be found in the fact that in several Romance languages infinitives can be preceded by a definite article. The example below is taken from Rizzi (1982).

- (29) l'esser la situazione suscettibile de miglioramento  
 the be-ing the situation capable of improvement

These nominal properties of Romance infinitives can naturally be attributed to infinitival T with a nominal feature. If English gerunds are associated with a nominal feature that can be merged with a prepositional complementizer, a nominal feature must be present in gerundive T. This nominal feature should be the one that licenses the inflectional morphology on V. This feature will henceforth be referred to with the notation [+N<sub>T</sub>].

So far I have not been concerned with the differences among the three types of gerunds, i.e., *POSS-ing*, *ACC-ing* and *PRO-ing*. Developing a substantial analysis to account for these differences in detail is beyond the scope of this article, so I will simply sketch a possible scenario. In the proposed analysis, T of gerunds is a bundle of features consisting at least of [-finite, +N<sub>T</sub>]. Suppose that the case of the genitive subject is the morphological reflex of the agreement with [+N<sub>T</sub>] alone or with both of these features compositionally. In the former case, *POSS-ing* gerunds will result. When [-finite, +N<sub>T</sub>] complex is involved, the subject will be valued with [accusative] if it is overt. If the subject is non-overt, it is valued with [null]. Thus, *ACC-ing* and *PRO-ing* gerunds would be derived.<sup>3</sup>

We have thus far established the structure of gerunds as illustrated in (30).

- (30) We counted [<sub>CP</sub> [<sub>C</sub> on] [<sub>TP</sub> John's [<sub>T</sub> -finite +N<sub>T</sub>] taking care

of our children]].

It remains unexplained, however, why a prepositional complementizer does not appear in all gerundive constructions. Prepositional complementizers are apparently present only when gerunds are in the complement position of N, A (as in (31)) and V subcategorized for PP (as in (30) above), and when they appear in adjuncts as in (32).

- (31) a. John's interests [in Mary's expanding her business]  
 b. John is certain [of Mary's knowing the answer].
- (32) Mary looked happy [despite John's having lost his job].

In the following examples, on the other hand, a prepositional complementizer is not overtly present.

- (33) a. We resent [John's deceiving our children].  
 b. [Jill's winking at Tom] angered Alice.

A plausible suggestion is that these sentences contain a non-overt complementizer. The suggested structure is akin to that of control infinitives without the overt complementizer *for*. The suggestion is well-founded in view of the fact that gerunds can appear in the subject position of finite clauses. Thus, with a null complementizer a more explicit structure of the sentences in (33) will be shown as in (34).

- (34) a. We resent [<sub>CP</sub> C<sub>null</sub> [<sub>TP</sub> John's deceiving our children]].  
 b. [<sub>CP</sub> C<sub>null</sub> [<sub>TP</sub> Jill's winking at Tom]] angered Alice.

The complementizer in gerunds must be in concord with the feature [+N<sub>T</sub>]. When a gerund is the complement of N, A, or V which selects the category P or a lexically specific P, a preposition occurs as an overt C in the gerund. When the selection is not lexically specified, the preposition *of* appears as default as in (31.b). In sentences (30) and (31.a) the prepositions *on* and *in*, which are due to the selection by the higher V and N, become the complementizer in the respective sentences. As for overt prepositional complementizers in adjunct positions as in (32), their presence is sanctioned by their independent semantic specifications.

To summarize the discussion thus far, I have argued that gerunds are CPs with a prepositional complementizer. The V-*ing* form is underspecified in terms of its category, and can project either a nominal or a verbal category depending on the functional features it merges with. The nonfinite T in gerunds has a nominal property in the form of the feature [+N<sub>T</sub>], which is responsible for licensing the *-ing* inflection and a preposition as a complementizer. The complementizer in a gerund can be non-overt, but when required by the selectional property of the higher head or by semantic features, an overt prepositional complementizer must be present.

The next section addresses questions concerning the so-called “verbal nouns” in Japanese. As insinuated by the terminology, constructions involving these words pose problems of mixed categorial



properties. It will be shown that problems associated with the “verbal nouns” can be accounted for on the basis of category underspecification and the associated functional features.

## 2. Nominal and Clausal Properties of Verbal Noun Clauses in Japanese

### 2.1 Verbal Nouns Heading Verbal Projections

Japanese has a class of lexical items often called “verbal nouns.” Many verbal nouns derived from Sino-Japanese compounds originated from Chinese verbs.<sup>4</sup> Examples are given in (35).

- (35) a. benkyoo      “studying”  
       b. ryokoo        “traveling”  
       c. kenkyuu      “research”  
       d. soodan        “consultation”

Though many Japanese verbal nouns have their origins in corresponding Chinese verbs, they have distinct nominal characteristics. As shown in (36.a) and (36.b) verbal nouns can co-occur with demonstratives such as *kono* “this” and *sono* “that.” Furthermore, as shown in (36.b) (36.c) the genitive case marker *-no* attaches to the arguments of a verbal noun indicating that the head responsible for the case-marking is nominal.

- (36) a. Ano torihiki-wa mondai-ga aru.  
       that deal-top problem-nom be

“There is a problem in that deal.”

- b. [Ano [syusyoo-no hatugen]]-ga mondai-ni nat-ta.  
 that premier-gen remark-nom problem-dat become-past  
 “That remark by the premier became a problem.”
- c. [Jun-no igirisu-e-no ryuugaku]-wa asobi-ga mokuteki  
 Jun-gen England-to-gen study-abroad-top play-nom purpose  
 dat-ta.  
 be-past  
 “Jun’s studying in England has its purpose in having fun.”

When verbal nouns are followed by the so-called light verb *suru* (or *shita*, *shiteiru*, the past tense and the progressive form, respectively), a verbal noun-*suru* (VN-*suru*) compound functions as V. In VN-*suru* compounds the light verb is devoid of semantic content with no theta-roles of its own. It functions only as the carrier of the verbal morphology, similar to English pleonastic *do*.

- (37) a. Jun-ga benkyoo-suru/sita.  
 Jun-nom study-do/did  
 “Jun will study/studied”
- b. Jun-ga Akiko-to deeto-suru/sita.  
 Jun-nom Akiko-with date-do/did  
 “Jun will go out/went out with Akiko”
- c. Jun-ga Akiko-to torihiki-suru/sita.  
 Jun-nom Akiko-with deal-do/did  
 “Jun has/had a deal with Akiko”

What is interesting about verbal nouns in relation to the discussion in the preceding section is that in certain contexts verbal nouns can function as V without light verb *suru* and they project a clausal structure.

As Shibani and Kageyama (1988) discusses verbal nouns can be followed by expressions with temporal meanings such as *-no ato* “after”, *-no mae* “before”, *-no sai* “instance” and *-no ori* “time.” In the following examples verbal nouns should be analyzed as the head of NP as their arguments are marked by genitive case-particle *-no*, a characteristic of the nominal category.

- (38) a. [Bengosi-no yougisya-to-no mendan]-no ato,  
 [attorney-gen suspect-with-gen interview]-no after,  
 torisirabe-ga hajimat-ta  
 interrogation-nom start-past  
 “After the attorney met with the suspect, the interrogation started”
- b. [Yotoo-no kokkai-e-no houan-no teisyutu]-no  
 [ruling party-gen the Diet-to-gen bill-gen submission]-no  
 mae, kanryoutati-wa tetuyade souan-o kaitei-ta  
 before bureaucrats-top all-night draft-acc writing-past  
 “Before the ruling party submitted the bill to the Diet session, the bureaucrats stayed up all night to write the draft.”
- c. [Bush daitooryoo-no hakone-e-no tootyaku]-no ori, Koizumi  
 [Bush president-gen hakone-to-gen arrival]-no time Koizumi  
 syusyoo-ga mizukara demukae-ta

prime minister-nom himself go-meet-past

“When President Bush arrived in Hakone, Prime Minister Koizumi himself went out to greet him.”

In addition to taking the genitive-case marking, verbal nouns can demonstrate an array of other case particles that are normally observed with verbal and adjectival predicates.

(39) a. [Bengosi-ga yougisya-to mendan]-no ato,

[attorney-nom suspect-with interview]-*no* after,

torisirabe-ga hajimat-ta

interrogation-nom start-past

“After the attorney met with the suspect, the interrogation started”

b. [Yotoo-ga kokkai-ni houan-o teisyutu]-no mae,

[ruling party-nom the Diet-to bill-acc submission]-*no* before

kanryoutati-wa tetuyade souan-o kaitei-ta.

bureaucrats-top all-night draft-acc writing-past

“Before the ruling party submitted the bill to the Diet session, the bureaucrats stayed up all night to write the draft.”

c. [Bush daitooryoo-ga hakone-ni tootyaku]-no ori, Koizumi

[Bush president-nom hakone-to arrival]-*no* time Koizumi

syusyoo-ga mizukara demukae-ta.

prime minister-nom himself go-meet-past

“When President Bush arrived in Hakone, Prime Minister Koizumi himself went out to greet him.”

If the differences in the case-particles indicate that verbal nouns project either a noun phrase or a clause, the differences should also be reflected in adjectival/adverbial modification of verbal nouns. In (40.a) and (40.c) below, the verbal noun *teisyutu* ‘submission’ is modified by an adverb, and by an adjective in (40.b) and (40.d).

- (40) a. [Yotoo-ga houan-o kokkai-ni *awatadasiku* teisyutu]  
 [ruling party-nom bill-acc the Diet-to **hurriedly** submission]  
 no mae, kanryoutati-wa tetuyade souan-o kaitei-ta.  
 -no before bureaucrats-top all-night draft-acc writing-past  
 “Before the ruling party hurriedly submitted the bill to the Diet session, the bureaucrats stayed up all night to write the draft.”
- b. \*[Yotoo-ga houan-o kokkai-ni *awatadasii* teisyutu]  
 [ruling party-nom bill-acc the Diet-to **hurried** submission]  
 no mae, kanryoutati-wa tetuyade souan-o kaitei-ta.  
 -no before bureaucrats-top all-night draft-acc writing-past
- c. \*[Yotoo-no houan-no kokkai-e-no *awatadasiku*  
 [ruling party-gen bill-gen the Diet-to-gen **hurriedly**  
 teisyutu] no mae, kanryoutati-wa tetuyade souan-o kaitei-ta.  
 submission]-no before bureaucrats-top all-night draft-acc  
 writing-past
- d. [Yotoo-no houan-no kokkai-e-no *awatadasii*  
 [ruling party-gen the Diet-to-gen bill-gen **hurried**  
 teisyutu] no mae, kanryoutati-wa tetuyade souan-o kaitei-ta.  
 submission]-no before bureaucrats-top all-night draft-acc  
 writing-past

As predicted when the arguments of a verbal noun are marked by the case-particle *-no*, which generally appear in nominal phrase, only adjectival modification is possible, and when these arguments are marked by case-particles associated with clauses, only adverbial modification is acceptable.

Apart from the observations made by Shibatani and Kageyama (1988) and Tsujimura (1996) that verbal nouns without the light verb can project clauses in temporal adjuncts, I point out that verbal noun clauses (VN-clauses) are not restricted to appear in temporal adjuncts. In the examples in (41) VN-clauses appear in adjuncts expressing reason and circumstance.

- (41) a. [Bush daitouryoo-ga Kyoto-ni syukuhaku] no tame,  
 [Bush president-nom Kyoto-to stay]-*no* reason,  
 genjyuna keibitaisei-ga sik-are-ta  
 strict guard system-nom lay-pass-past  
 “Since President Bush was going to stay/was staying in  
 Kyoto, a strict security system was organized.”
- b. [Jun-ga London-ni syuttyou]-no tugo-de  
 [Jun-nom London-to business trip]-*no* circumstance-by  
 kaigi-ga toriyameni nat-ta.  
 meeting-nom cancelled become-past  
 “Under the circumstances in which Jun is going to be/is/was  
 in London on business, the meeting was cancelled.”
- c. [Ryokou dairiten-ga hoteru-to soodan]-no ue, betu-no  
 [travel agency-nom hotel-with discussing]-*no* top, other

heya-ga tehais-are-ta.

room-gen arrange-pass-past

“As the result of the discussion between the travel agency and the hotel, other rooms were prepared.”

The examples in (42) show that VN-clauses can function as pronominal modifiers.<sup>5</sup>

- (42) a. [[Sanban sen-ni tootyaku] no ressyu]-wa 17:30 hatu  
 [[No. 3 track-at arriving] gen train]-top 17:30 departing  
 Tokyo-yuki de-su.  
 Tokyo-bound copular-honorific.  
 “The train that is arriving/arrived at Track No. 3 is bound for Tokyo, departing at 17:30.”
- b. [[Taro-ga itaria-de syukuhaku] no hoteru]-wa izen-wa  
 [Taro-nom Italy-in staying] gen hotel-top past-top  
 kizoku-no siro dat-ta.  
 noble-gen castle copular-past  
 “The hotel in which Taro is going to stay/is staying/stayed in Italy was once a nobleman’s castle.”

In the examples in (43) the VN-*suru* clauses corresponding to the VN-clauses in (42) form relative clauses.

- (43) a. [[Sanban sen-ni tootyaku-sita] ressyu]-wa 17:30 hatu Tokyo-  
 [[No. 3 track-at arrive-did] train]-top 17:30 departing Tokyo-

yuki de-su.

bound copular-honorific.

“The train that arrived at Track No. 3 is bound for Tokyo, departing at 17:30.

b. [[Taro-ga itaria-de syukuhaku-suru] hoteru]-wa izen-wa  
[Taro-nom Italy-in stay-do] hotel-top past-top

kizoku-no siro dat-ta.

noble-gen castle copular-past

“The hotel in which Taro is going to stay in Italy was once a nobleman’s castle.”

Assuming that the VN-clauses in (42) have a structure that parallels the structure of the VN-*suru* relative clauses in (43), the structure of the bracketed noun phrases in (42) will be illustrated as in (44).

(44)  $[_{NP} [_{CP} Op_i [_{TP} \dots t_{DPi} \dots VN] no N_i ]$

The words *ato* ‘after’, *mae* ‘before’, *ori* ‘occasion/time’, *sai* ‘instance’, *tame* ‘reason’, *ue* ‘top’ are nouns as they reveal properties characteristic of N: (i) they can be modified by demonstratives such as *kono* ‘this’ and *ano* ‘that’, (ii) they can follow a noun with the genitive-case particle *-no*, (iii) they can be followed by a postposition such as *de* and *ni*. These characteristics are shown in the following examples.

(45) a. Kono ato-de, Jun-ga kuru-hazu-da.

this after-in Jun-nom come-likely-pres



“After this, Jun is likely to come.”

b. Ano ori-ni-wa syusyoo-mo hinans-are-ta.

that occasion-in-top premier-too criticize-pass-past

“In that occasion, the premier was criticized as well.”

(46) a. Syokuji-no mae-ni oinorisuru.

Meal-gen before-in pray

“(We) pray before meals.”

b. Jisin-no sai-ni-wa erebeetaa-wa tsuka-e-nai.

Earthquake-gen instance-in-top elevator-top use-possible-not

“In the event of earthquake, elevators cannot be used.”

Having established that the words that appear after the sequence of a VN-clause and the particle *-no* are nouns, the structure of adverbial VN-clauses is illustrated as in (47) below.<sup>6</sup>

(47)  $[_{NP} [_{CP} DP_{subj} (XP) VN ]-no N] (P)$

## 2.2 Deriving the Nominal Properties of VN-Clauses

Let us now turn to the particle *-no*, which has thus far been left unidentified. Japanese has several homophonous particles *-no* with different functions. In the structures discussed in this article, a plausible function of *-no* seems to be either a nominalizer or the genitive case particle. I will argue below that *-no* that mediates between the VN-clause and the following N should be analyzed as the genitive case particle.

I will begin the discussion by considering whether the particle *-no*

immediately following VN-clauses can be a nominalizer. The nominalizing particle *-no* (glossed as Ner) attaches to a clause as shown in example (48).

- (48) [[Jun-ga kaisya-o yame-ta]-no]-o Akiko-wa  
 [[Jun-nom company-acc quit-past]-Ner]-acc Akiko-top  
 sitteiru.  
 knows  
 “Akiko knows that Jun quit the company.”

One characteristic of the nominalizer *-no* is that it can be replaced by the noun *koto* ‘fact/thing’.

- (49) [[Jun-ga kaisya-o yame-ta]-koto]-o Akiko-wa sitteiru.  
 [[Jun-nom company-acc quit-past] fact]-acc Aliko-top knows  
 “Akiko knows (the fact) that Jun quit the company.”

The particle *-no* following VN-clauses, however, cannot be replaced by *koto* as illustrated in (50).

- (50) a. [Koizumi syusyoo-ga gaimudaijin-o  
 [Koizumi prime minister-nom foreign minister-acc  
 kootetu]-no sai, kare-no sijiritu-ga agat-ta.  
 replacing]-no occasion he-gen approval rating-nom rise-past  
 “When Prime Minister Koizumi replaced the Foreign  
 Minister, his approval rating went up.”

- b. \*[Koizumi syusyoo-ga gaimudaijin-o  
 [Koizumi prime minister-nom foreign minister-acc  
 kootetu] koto sai, kare-no sijiritu-ga agat-ta.  
 replacing] fact occasion he-gen approval rating-nom rise-  
 past

The fact that *-no* cannot precede a noun when a VN-clause modifying the noun is replaced by a corresponding VN-*suru* clause indicates that nouns modified by VN-clauses do not require the preceding clauses to be nominalized. In fact, as shown in (51) neither the nominalizer *-no* nor *koto* is possible after VN-*suru* clauses in such contexts as:

- (51) a. [Koizumi syusyoo-ga gaimudaijin-o kootetu  
 [Koizumi prime minister-nom foreign minister-acc replace  
 -sita] sai, kare-no sijiritu-ga agat-ta.  
 -did] occasion he-gen approval rating-nom rise-past  
 “When Prime Minister Koizumi replaced the Foreign  
 Minister, his approval rating went up.”
- b. \*[Koizumi syusyoo-ga gaimudaijin-o kootetu  
 [Koizumi prime minister-nom foreign minister-acc replace  
 -sita]-no sai, kare-no sijiritu-ga agat-ta.  
 -did]-Ner occasion he-gen approval rating-nom rise-past
- c. \*[Koizumi syusyoo-ga gaimudaijin-o kootetu  
 [Koizumi prime minister-nom foreign minister-acc replace  
 -sita] koto sai, kare-no sijiritu-ga agat-ta.

-did] fact occasion he-gen approval rating-nom rise-past

d. [Sanban sen-ni tootyaku-suru] ressyawa Tokyo yuki

[[No. 3 truck-in arrive-do] train]-top Tokyo bound

desu.

-copular-honorific

“The train arriving in Truck No. 3 is bound for Tokyo.”

e. \*[Sanban sen-ni tootyaku-suru] no/koto ressyawa Tokyo

[[No. 3 truck-in arrive-do] Ner/fact] train]-top Tokyo

yuki desu.

bound copular-honorific

Still another argument against analyzing the particle *-no* associated with VN-clauses as a nominalizing particle comes from the fact that the sequence of VN-clause followed by the particle *-no* cannot be followed by a case particle or the topic marker *-wa*. When the nominalizing particle *-no* attaches to a clause, the resulting nominalized constituent needs to be attached by a case-particle, the topic marker, or the like as already seen in example (48) above. Example (48) contrasts with (52) below where the nominalized constituent is without a case-particle.

(52) \*[[Jun-ga kaisya-o yame-ta]-no] Akiko-wa sitteiru.

[[Jun-nom company-acc quit-past]-Ner] Aiko-top knows

“Akiko knows that Jun quit the company.”

A fairly strong case has been made to rule out the possibility of *-no* being a nominalizing particle after VN-clauses. We are left with the

other possibility mentioned above. If the particle *-no* after VN-clauses is the genitive-case particle, a question arises as to why the particle is obligatory after VN-clauses while it is excluded after VN-*suru* clauses in the same contexts.

The following examples illustrate that a case particle can attach to a clause only when it is first associated with an N-element like *-no* and *koto*.<sup>7</sup>

- (53) a. \*[Jun-ga syatyoo-ni syuunin-suru]-ga sudeni  
 [Jun-nom president-to assumption-do]-nom already  
 ketteis-are-ta.  
 decide-pass-past  
 “Jun’s taking up the post as the company president was already decided.”
- b. [Jun-ga syatyoo-ni syuuninsuru-suru koto/no]-ga sudeni  
 [Jun-nom president-to assumption-do fact/Ner]-nom already  
 ketteis-are-ta.  
 decide-passive-past

As observed in (51.b) and (51.c), in the contexts where both VN-clauses and VN-*suru* clauses are possible, the latter cannot take a nominalizer. Therefore, case-particles including the genitive-particle cannot appear immediately after VN-*suru* clauses.

If a case-particle cannot attach to an un-nominalized clause, this leads to another question as to why the genitive-case particle can attach to VN-clauses, which exhibit clausal properties. The problem posed

here for VN-clauses seems analogous to the problem of gerunds being preceded by a preposition. In both cases, a verbal projection is associated with an item which is normally associated only with the nominal category. In the following it will be suggested that the problem of the genitive-case particle attached to VN-clauses can be given principally the same explanation as the account proposed for gerunds.

Verbal nouns in VN-clauses do not display verbal morphology, and these clauses do not denote independent temporal values. Thus, like English gerunds, VN-clauses are non-finite clauses. Suppose that the non-finite T in VN-clauses contains a feature with a nominal property, an equivalent of the feature  $N_T$  proposed for gerunds. If in Japanese the presence of  $N_T$  and the features licensing verbal morphology are complementary, the absence of verbal morphology in VN-clauses would be explained. The presence of the genitive *-no* can also be attributed to the nominal property of  $N_T$ . Since in VN-*suru* clauses  $N_T$  is not present, the genitive-case particle cannot be licensed. The structure involving a VN-clause can now be represented as in (54).

$$(54) \quad [_{TP} DP_{Subj} [_{VP} (XP) VN ] [_{T} -finite, N_T] ] -gen N$$

Assuming further that in Japanese a case-particle projects its own projection, KP, the structure in (54) can be rendered even more similar to that of gerunds.

$$(55) \quad [_{KP} [_{TP} [_{VP} (XP) VN ] [_{T} -finite, N_T] ] [_{K} -gen] ] N$$

In (55) the genitive-case particle takes TP of a VN-clause as the complement, which appears comparable to a prepositional complementizer taking a gerundive TP as the complement.

I will end the discussion by suggesting the possibility of the genitive-case particle *-no* appearing as an instance of a complementizer after VN-clauses. The examples in (56) below indicate that the complementizer *toyuu* can appear after VN-clauses in place of the genitive case-particle *-no*.<sup>8</sup>

- (56) a. [[Minsyutoo-ga senkyo-de taihai] toyuu] ori,  
 [[democratic party-nom election-in big-loss] Comp] time  
 too-ga bunnretu-sita.  
 party-nom break-up-did  
 “When the Democratic Party experienced a huge loss in the  
 election, the party was split.”
- b. [[[Minsyutoo-ga senkyo-de taihai] toyuu ] kekka]  
 [[[democratic party-nom election-in big-loss] Comp] result]  
 -wa yosousi-nak-katta.  
 -top expect-not-past  
 “The result that the Democratic Party experienced a huge  
 loss in the election was not expected.”

Unlike the genitive-case particle *-no*, the complementizer *toyuu* can also appear after VN-*suru* clauses as shown in the following examples.

- (57) a. [[Minsyutoo-ga senkyo-de taihai-suru] toyuu]  
 [[democratic party-nom election-in big-loss-do] Comp]

ori, too-ga bunnretu-sita.

time...

- b. [[[Minsyutoo-ga senkyo-de taihai-suru  
 [[[democratic party-nom election-in big-loss-do]  
 toyuu kekka-wa yosousi-nak-katta.  
 Comp]result]-top expect-not-past

Since, as shown in these examples, *toyuu* can appear after either VN-clauses or VN-*suru* clauses, its occurrence does not depend on N<sub>T</sub>. The structure of VN-clauses and VN-*suru* clauses in (56) and (57) can be illustrated as follows:

- (58) a. [<sub>CP</sub> [<sub>TP</sub> [<sub>VP</sub> (XP) VN ] [<sub>T</sub> -finite, N<sub>T</sub> ] ] [<sub>C</sub> *toyuu* ] ]  
 b. [<sub>CP</sub> [<sub>TP</sub> [<sub>VP</sub> (XP) VN-*suru* ] [<sub>T</sub> -finite ] ] [<sub>C</sub> *toyuu* ] ]

To the extent that analyzing *toyuu* as a complementizer is correct, the sentences in (56) confirm the clausal status of VN-clauses. It may be suggested further that the genitive-case particle *-no* can appear after VN-clauses as an instance of a complementizer that conforms to N<sub>T</sub>. I will not further explore this possibility on this occasion, but leave it for future inquiry.

### 3. Conclusion

*V-ing* forms in English and verbal nouns in Japanese share the property of projecting the nominal or verbal (clausal) category. I have proposed that these alternative possibilities are due to the properties of functional features which they merge with. The nominal properties



observed in gerunds and VN-clauses are shown to be attributable to a non-finite T-feature with a nominal property. Due to this feature, gerunds can become the complement of P, which appears as a prepositional complementizer, and the genitive-case particle can follow VN-clauses. The analysis presented in the article suggests that classifying functional features into the dichotomy of N-related and V-related features may not be adequate. Certain flexibility allowed for the choice of features associated with a word could result in co-occurrence of the properties normally associated with distinct categories.

### Notes

- 1 As the complement of N and A, gerunds, like DPs, need to be preceded by a preposition.
  - (i) a. John's preference of [Meg's studying French]
  - b. John's preference of [Meg studying French]
  - c. John's proof of [the theorem]
  - (ii) a. We are aware of [John's taking the bar exam].
  - b. We are aware of [John taking the bar exam].
  - c. We are aware of [John's eagerness].
- 2 Pesetsky and Torrego (2004) argues that the clause introducing *that* and *for* are not C but a particular realization of T moved to C. They extend this analysis to Ps taking gerundive complement and argue that the category P is a kind of T, which occupies a position within certain DPs (gerunds) that parallels the position occupied by T in CP. This article does not take P as T itself. I will argue that in gerunds Ps are prepositional complementizers that correlate with T that licenses the gerundive inflection on V.
- 3 The observation presented in Abney (1987) that POSS-ing gerunds show more nominal characteristics than ACC-ing gerunds could be attributed to the relative prominence of [+N<sub>r</sub>] in POSS-ing reflected in the subject case. For example,

POSS-ing fares better in the embedded subject position.

(i) a. I believe that John's smoking stogies would bother you.

b. ?I believe that John smoking stogies would bother you. (Abney 1987: 172)

Sentential adverbs also produce contrast between the two. While sentential adverbs are possible in ACC-ing, they do not produce equally felicitous sentence in POSS-ing. For example,

(ii) a. John probably being a spy, Bill thought it wise to avoid him.

b. ?\*John's probably being a spy, Bill thought it wise to avoid him. (Abney 1987: 180)

4 As Tsujimura (1996: 138) describes verbal nouns in Japanese also include loan words as well as deverbal nouns of Japanese origin.

a. English loan words	kisu	"kiss"
	deeto	"date"
	doraibu	"drive"
b. deverbal nouns	torihiki	"trading"
(Japanese origin)	toriatukai	"handling"
	torisimari	"picking up"
	ukekotae	"answer"

5 In adjuncts of reason/circumstance, verbal nouns can project to nominal projections as in adjuncts of time. In contrast, VN-NP cannot appear as a prenominal modifier.

[Jun-no London-e-no syuttyou]-no tsugou-de kaigi-ga toriyameni nat-ta.

[Jun-gen London-to-gen business trip]-gen circumstance-by meeting cancelled become-past

"Due to Jun's business trip to London, the meeting was cancelled"

\*[Sanban sen-e-no tootyaku] no ressyawa 17:30 hatu Tokyo-yuki de-su.

[No. 3 truck-in-gen arriving] gen train-top 17:30 departing Tokyo-bound copular-honorific.

6 There are also words that can appear directly after a VN-clause without the particle-*no*.

(i) [Keiji-ga yougisya-o jinmon]-tyuu, sinhannin-ga tukamat-ta.

detective-nom suspect-acc interrogation]-while, real culprit-nom be-arrested  
 “While the detective was questioning the suspect, the real culprit was arrested.”

(ii) [proi daigaku-o sotugyoo]-**sidai**, Jun-i-wa kagyoo-o tui-da.

[proi university-acc graduation]-as soon as Jun-top family business-acc succeed-past

“As soon as he graduated from the university, Jun-i succeeded the family business.”

(iii) [proi daigaku-o sotugyoo]-**go**, Jun-i-wa kagyoo-o tui-da.

[proi university-acc graduation]-after Jun-i-top family business-o succeed-past

“After he graduated from the university, Jun succeeded the family business”

While the nouns discussed in the text, *sai*, *ori*, *tame*, etc. are among the native Japanese vocabulary, the nouns like *tyuu* ‘while’, *sidai* ‘as soon as’ and *go* ‘after’ are of Chinese origin. The words in the latter class are bound forms, and thus they can only appear affixed to the immediately preceding word. Therefore, *-no* cannot mediate between these nouns and VN clauses.

7 Interrogative clauses can be followed by the topic-marker and case-particles.

(i) [Dare-ni sekinin-ga aru ka]-wa saibansyo-ga handan-suru-daroo.

[who-to responsibility-nom be Q]-top court-nom decision-do-future

“The court will decide who is responsible.”

(ii) [[Dare-ni sekinin-ga aru ka]-no handan]-wa muzukasii.

[who-to responsibility-nom be Q]-gen decision-top difficult

“It is difficult to decide who is responsible.”

(iii) [Dare-ni sekinin-ga aru ka]-o saibankan-ga kimeru.

[who-to responsible be Q]-acc court-nom decide

“The court will decide who is responsible.”

8 Nakau (1973) argues that *toyuu* is the noun complementizer, which is involved in the embedding of a sentence as a complement to a noun as opposed to *to* and *yooni* involved in predicate complementation. Since the distribution of VN-clauses is restricted to the position immediately preceding a noun, they cannot be followed

by a complementizer belonging to the latter type. Examples containing these complementizers are as follows.

- (i) [[Kinoko-wa gan-oyoboo-ni kooka-ga aru<sub>TP</sub>] toyuu<sub>CP</sub>] syutyou<sub>NP</sub>]-wa  
 [[[Mushroom-top cancer-prevention-to effect-nom have] C] claim]-top  
 settokuryoku-ga aru.  
 persuasiveness-have  
 “The claim that mushrooms are effective in cancer prevention is persuasive.”
- (ii) [[Kinoko-wa gan-yoboo-ni kooka-ga aru<sub>TP</sub>] to<sub>CP</sub>] iw-are-ru.  
 [mushroom-top cancer-prevention-to effect-nom have] C] say-pass-pres  
 “It is said that mushrooms are effective in cancer prevention.”
- (iii) [[Kinoko-wa gan-yoboo-ni kooka-ga aru<sub>TP</sub>] yooni<sub>CP</sub>] omow-are-teiru.  
 [[mushroom-top cancer-prevention-to effect-nom have] C] think-pass-  
 progress.-pres  
 “Mushrooms are believed to be effective in cancer prevention.”

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