

Pre-Nominal NP-*no* Modifiers in Japanese: Syntactic Duality and Order of Occurrence

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Perhaps no single words in any language is more versatile and, hence, more ambiguous than the Japanese particle *no*. It connects two nominals (nouns and noun phrases) in a multitude of meaningful relations. For example, the meanings of *no* as in *Tom no shashin* include: *ownership* ('that belongs to'), *performer* ('taken by'), *graphic content* ('that has a picture of'), *beneficiary* ('[taken, developed, purchased, etc.] for the sake of'), and *source* ('that comes from').

Needless to say, students of Japanese as a foreign language will find the use of *no* quite challenging, and a thorough knowledge of the particle will indeed be indispensable for their studies.

This paper will conduct a survey of the particle *no* that appears in the pre-nominal modifier, i.e., *no* in [[NP-*no*]+[NP]]. Along with an examination of the "multitude of meaningful relations" expressed by *no*, two specific findings will be aimed for: (i) the syntactic duality of NP-*no* modifiers, and (ii) the order of NP-*no* pre-nominal modifiers occurring in a cluster.

In the first half of the paper, we will observe that *BBC-no, ryôri-no bangumi* ("BBC's cooking programs") is grammatical, but not **ryôri-no, BBC-no bangumi*, proposing that there are two syntactically distinct classes of NP-*no* modifiers: *adjunct* and *complement*. When an adjunct modifier and a complement modifier appear side by side, the former will always precede the latter.

In the second half of the paper, we will see that while no special order is observed in a sequence of two or more adjunct modifiers appearing side by side, a sequence of complement modifiers is rigidly ordered.

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Semantic Versatility of the Particle *No*

The Japanese particle *no* connects two nominals (nouns and noun phrases) in a multitude of meaningful relations—for example,

- (1) possessor: *chichi no kuruma* (“Dad’s car”)
 time: *haru no arashi* (“storms in spring”)
 location: *sara no tabemono* (“food on a plate”)
 material: *denim no jeans*¹ (“denim jeans”)

This paper will examine the particle *no* which appears in the pre-nominal modifier: i.e., in $[[NP_1\text{-}no]+[NP_2]]$. Along with an examination of the multitude of meaningful relations expressed by *no*, two specific findings will be aimed for: the syntactic duality of NP-*no*, and the order of NP-*no* modifiers occurring in a cluster.

One of the difficulties in analyzing the meanings of NP-*no* modifiers is that the use of NP-*no* is highly contextual, and it will often be hard to isolate a single unique meaning without sufficient context. *America no* in (2) below, for example, is open to several possible semantic interpretations.

- (2) *America no ryokô kyaku wa taitei nimotsu ga sukunai.*

“Tourists $\left\{ \begin{array}{l} \text{(traveling)} \\ \text{(coming)} \\ \text{(going)} \end{array} \right\}$ from to America usually travel light.”

Another difficulty is that the *no*-modifier often expresses a number of related but not exactly identical ideas, and that a semantic delimitation can be arbitrary.

- (3) *Tom no hikôki* (*hikôki*: “plane”)

Where *no* can refer to *ownership* (Tom as the owner), *operator* (a crew member on or off duty), *occupant* (a passenger aboard now, or one who is scheduled, or makes it a rule, to fly in this particular plane). The question is how many different meanings ought to be identified.

To facilitate the process of semantic delimitation of NP-*no*, we propose that pre-nominal NP-*no* modifiers be divided into two classes on the basis of certain distinctive syntactic behavior.

Duality of NP-*no* Modifier and Syntactic Evidence

The two noun phrases below look exactly identical, except for the obvious lexical difference of the respective modifier: *media* as opposed to *content*.

- (4) *BBC no bangumi* (“BBC’s programs”)
 (5) *ryôri no bangumi* (“cooking programs”)

However, an important structural difference exists between the two phrases.

¹ The English loan words appearing in all our examples will be given in the original (English) orthography, unless the semantic and/or phonetic shift is so gross as to make the correspondence unidentifiable.

It will be disclosed if an additional (pre-nominal) modifier is placed right before the head noun *bangumi*. Compare (6) and (7) below, where (4) and (5) are expanded with an adjective phrase (OMOSHIROI: “interesting”), a relative clause (SAKUYA MITA: “. . . which I saw last night”), or another NP-*no* (GOGO NO: “in the afternoon”):

(6) *BBC no* {OMOSHIROI / SAKUYA MITA / GOGO NO} *bangumi*

(7) **ryôri no* {OMOSHIROI / SAKUYA MITA / GOGO NO} *bangumi*

The results are self-explanatory.²

One may note that with (6), not only can the interposed elements appear where they are, but they can also be moved to the phrase-initial position with no change in meaning, as shown below:

(6') {OMOSHIROI / SAKUYA MITA / GOGO NO} *BBC no bangumi*

With (7), on the other hand, the added modifiers are felt to be in the wrong place: they ought to be placed in the position immediately before the head noun (i.e., “the pre-HN position” henceforth). That this in fact is the case is verified in:

(7') {OMOSHIROI / SAKUYA MITA / GOGO NO} *ryôri no bangumi*

In sum, the modifier *ryôri no* is restricted to the pre-HN position, and no modifier is permitted to intervene between itself and the head noun. By contrast, *BBC no* is *position-free* and not confined to the pre-HN position.

One's quest for the possible reasons for the structural difference between (4) and (5) will inevitably lead to the observation that *ryôri no* and *BBC no* represent two syntactically different classes of pre-nominal modifier. That *ryôri no* allows no other modifier to appear after it clearly points to a close, inseparable structural relationship that exists between that kind of modifier and the head noun. Obviously, with another class of *no*-modifiers, of which *BBC no* is one, no such structural linkage exists. For easier reference, we will distinguish between a position-sensitive modifier like *ryôri no* and a position-free modifier like *BBC no*, by calling them *complement* and *adjunct*, respectively.³

The following two noun phrases will most convincingly contrast the complement and the adjunct.

(8) a. *BBC no ryôri no bangumi*

b. **ryôri no BBC no bangumi*

(8a) is syntactically well-formed with the complement *ryôri no* appearing in the proper place (pre-HN position). In (8b), with the intervening adjunct which removes *ryôri no* from the pre-HN position, well-formedness is not achieved.

That the adjunct is really position-free may also be verified by placing two or more adjuncts side by side in front of the same head noun. For example,

² Some of the strings in (7) definitely sound more acceptable than others. Refer to Mori (1995) for an explanation.

³ In support of the complement-adjunct dichotomy, further evidence is available, pertaining to topicalization. See Mori (1992b; 1995).

- (9) *BBC no, gogo no, ni-jikan han no, senshû no bangumi*⁴ (“BBC’s two-and-a-half-hour afternoon program last week”)

All but the last modifier are removed from the pre-HN position, suggesting that they are all adjuncts. With *senshû no*, one can employ the method of *scrambling* to determine its status. The application of *scrambling* to (9) will yield:

- (9') $\left\{ \begin{array}{l} BBC\ no,\ senshû\ no,\ ni-jikan\ han\ no,\ gogo\ no \\ gogo\ no,\ ni-jikan\ han\ no,\ senshû\ no,\ BBC\ no \\ senshû\ no,\ gogo\ no,\ BBC\ no,\ ni-jikan\ han\ no \\ \text{etc.} \end{array} \right\} bangumi$

That these are all grammatical proves that none of these modifiers is confined to the pre-HN position. In short, they are all adjuncts.

Now, consider (10) below, where the complement *ryôri no* has been added:

- (10) *BBC no, gogo no, ni-jikan han no, senshû no, ryôri no bangumi*

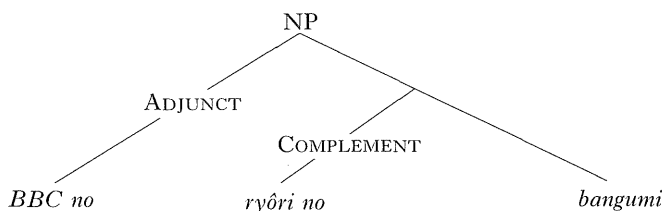
Since *ryôri no* is supposed to be confined to the pre-HN position, the relocation of it to any other position should be unsuccessful. And that indeed is the case:

- (10') $\left\{ \begin{array}{l} *BBC\ no,\ ryôri\ no,\ senshû\ no,\ ni-jikan\ han\ no,\ gogo\ no \\ *ryôri\ no,\ gogo\ no,\ ni-jikan\ han\ no,\ senshû\ no,\ BBC\ no \\ *senshû\ no,\ gogo\ no,\ ryôri\ no,\ BBC\ no,\ ni-jikan\ han\ no \\ \text{etc.} \end{array} \right\} bangumi$

Since all these modifiers except for *ryôri no* are adjuncts which permit scrambling, as established in (9'), none of them is responsible for the syntactic distortion present in (10'); it is ascribed solely to *ryôri no* appearing in the wrong place.

The diagram below shows the structural relations among the adjunct, the complement, and the head noun.⁵

- (11)



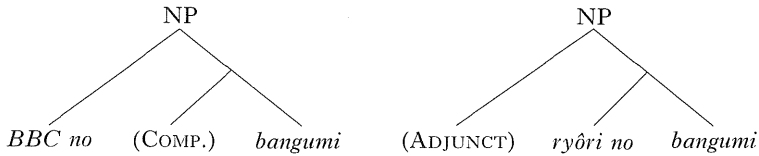
The complement is more closely related to the head noun than the adjunct is, directly modifying the head noun. The adjunct relates to the head noun only indirectly, modifying the entire sequence of the complement and the head noun,

⁴ After each NP-*no*, there is a conspicuous phonological juncture (indicated by the use of a comma), signaling that it modifies the head noun rather than the nominal that immediately follows it. See [13] in the text.

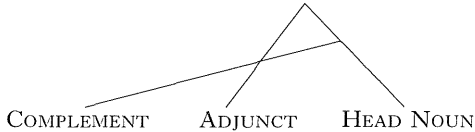
⁵ The details of how *no* is derived are deleted. Selkirk (1982: 36 ff) reaches a similar structural account in his analysis of English “verbal compounds.” For a theoretical account of *complement* and *adjunct* based on the bar theory, see Mori (1992a; 1992b).

and not just the head noun. (12a) sketches the structure where the adjunct or the complement is missing. “Line-crossing” shown in (12b), which causes the complement and the adjunct to be transposed, will certainly be impermissible.

(12) a.



b.



Incidentally, there is a type of pre-nominal modification structure which is confusingly similar, but totally irrelevant, to that under consideration, e.g.

(13) *Hawaii no oji no fudôsan*

Hawaii no can modify either the head noun *fudôsan* or the immediately following noun *oji*. The meaning will differ accordingly: ‘my uncle’s real estate, which is in Hawaii’ (i.e., [*Hawaii no* [*oji no fudôsan*]]) v.s. ‘the real estate of my uncle who is in Hawaii’ (i.e., [*Hawaii no oji*] *no fudôsan*).

This structural difference is normally signaled by certain phonological features. In [*Hawaii no* [*oji no fudôsan*]], noticeable juncture, and possibly a change in pitch, are observed between the two modifiers, but none of that will occur in [[*Hawaii no oji*] *no fudôsan*]. In this paper, we will be concerned only with the modification structure where each of the *no*-modifiers relates independently to the head noun, and none to the immediately following modifier.

Meanings of NP-*no* Modifier

So far, we have established the syntactic duality of the pre-nominal NP-*no* modifier: adjunct and complement. Now, the complement and the adjunct will be examined in terms of semantic roles, or meanings. The NP-*no* modifier as adjunct has a number of semantic roles, as distinct from those of the NP-*no* modifier as complement. First, we will look at the major meanings of the adjunct modifier, followed by a discussion on the meanings of the complement modifier.⁶

Adjunct Modifier

[A1] *Possessor* [of something]

HAHA NO *tokei* (“my mother’s watch”)

OJI NO *fudôsan* (“my uncle’s real estate”)

JIBUN NO *kuruma* (“one’s own car”)

⁶ See Mori (1993) for a more comprehensive list of complements and adjuncts.

{OJI NO \rightleftharpoons HAWAII NO} *fudôsan* (“my uncle’s real estate in Hawaii”)

In this last example, behind the adjunct of *possessor* (OJI NO) appears another modifier (in **FULL BOLD-FACE**). The order of the two modifiers is reversible, which is indicated by the use of a two-way arrow. That suggests that they are both position-free and are, hence, adjuncts. [HAWAII NO: *locative information*. See [A10] below.]

[A2] *User, tentative owner, occupant, etc.*

TOM NO *office/computer* (“Tom’s office/computer”)

SAN-NEN-SEI NO *kyôshitsu* (“3rd year students’ classrooms”)

MUSUKO NO *heya* (“our son’s room”)

{TOM NO \rightleftharpoons DAIGAKU NO} *office* (“Tom’s office at the university”)

[DAIGAKU NO: *possessor* [A1] or *entirety* [A6]]

[A3] *Relationship*

KENJI NO *sensei/kyôdai* (“Kenji’s teacher/siblings”)

KO-INU NO *kainushi* (“the owner of the puppy”)

KYOTO NO *shimai-toshi* (“Kyoto’s sister city”)

{KENJI NO \rightleftharpoons KÔKÔ-JIDAI NO} *sensei* (“Kenji’s high school teacher”) [KÔKÔ-JIDAI NO: *temporal information* [A9]]

[A4] *Member* [of an establishment/institution]

TOM NO *kaisha/kuni* (“Tom’s company/country”)

MUSUME NO *yôchien* (“my daughter’s kindergarten”)

{TOM NO \rightleftharpoons TOKYO NO} *kaisha* (“Tom’s company in Tokyo”) [TOKYO NO: *locative information* [A10]]

[A5] *Establishment* [of which someone/something is a part]

WAKABA DAIGAKU NO *gakusei/kyôju-jin* (“students/faculty of Wakaba University”)

NIHON NO *jinkô* (“the population of Japan”)

{NIHON NO \rightleftharpoons GO-SEN-MAN NO} *rôdô jinkô* (“50 million working population of Japan”) [GO-SEN-MAN NO: *counter* [A7]]

[A6] *Entirety* [modifying parts]

ZÔ NO *mimi* (“an elephant’s ears”)

GO-GATSU NO *chûjun* (“the middle part of May”)

KYOTO NO *hokubu* (“the northern part of Kyoto”)

{ZÔ NO \rightleftharpoons UCHIWA-GATA NO} *mimi* (“an elephant’s fan-shaped ears”) [UCHIWA-GATA NO: *physical appearance* [A11]]

[A7] *Counter*

SAN-BIKI NO *koneko* (“three kittens”)

NI-JIKAN NO *kyûkei* (“a two-hour break”)

NI-DO NO *hômôn* (“two visits”)

{SAN-BIKI NO \rightleftharpoons TONARI NO} *koneko* (three kittens of one’s neighbor”) [TONARI NO: *establishment* [A5]]

[A8] *Producer, performer, sponsor, writer, etc.*

TANIZAKI NO *shôsetsu* (“Tanizaki’s novels”)

KÔSHIRÔ NO *Hamlet* (“Hamlet by Koshiro”)

BBC NO *bangumi* ("BBC's programs")

PTA NO *bazaar* ("a bazaar by PTA")

SEIKÔ NO *tokei* ("a Seiko watch")

{BBC NO \rightleftharpoons EDDIE NO} *bangumi* ("Eddie's program on BBC")

BBC NO and EDDIE NO are both the adjunct of *producer*, *performer*, etc., and are reversible, just as are any two adjuncts appearing side by side.

[A9] *Temporal information*

HARU NO *arashi* ("storms in spring")

MEIJI JIDAI NO *sakka* ("writers in the Meiji era")

GOGO NO *shuppatsu* ("departure in the afternoon")

{SHICHI-JI NO \rightleftharpoons BBC NO} *news* ('7 o'clock news on BBC') [BBC NO: *producer*, etc. [A8]]

[A10] *Locative information*

JIKKEN SHITSU NO *computer* ("a computer in the laboratory")

HAWAII NO *oji/uchi* ("one's uncle / home in Hawaii")

HITAI NO *ase* ("perspiration on the forehead")

{JIKKEN SHITSU NO \rightleftharpoons NI-DAI NO} *computer* ("two computers in the laboratory") [NI-DAI NO: *counter* [A7]]

[A11] *Physical appearance and features*

MARU-GAO NO *hito* ("a round-faced person")

JEANS NO *josei* ("a woman in jeans")

AKAI KUBIWA NO *neko* ("a cat with a red collar")

BAIKU NO *otoko* ("a man on a motorbike")⁷

{MARU-GAO NO \rightleftharpoons JEANS NO} *otoko* ("a round-faced man in jeans")

MARU-GAO NO and JEANS NO are both the adjunct of *physical appearance and features*.

[A12] *Agent* [of an event / state of being]

The head noun in this construction is usually a noun derived from an adjective (*yasusa*), an adjectival noun (*idaisha*), or a verb (*môke*), or what is commonly known as "a verbal noun"⁸ like *tôrai* and *kekkon*.

HARU NO *tôrai* ("the coming of spring")

ANI NO *kekkon* ("my big brother's marriage")

KION NO *teika* ("drop of temperature")

CHICHI NO *idaisha* ("the nobleness / fame of my father")

BUKKA NO *yasusa* ("the low price of things")

{TOM NO \rightleftharpoons KODOMO JIDAI NO} *kinbensa* ("Tom's diligence as a child")

[KODOMO JIDAI NO: *temporal information* [A9]]

Examples of a cluster of three or more adjuncts are provided below. Although some of them may be stylistically somewhat disputable, syntactically

⁷ BUS/TAXI/KISHA NO, as in BUS/TAXI/KISHA NO *otoko* ("a man in a bus/cab/train"), is the adjunct of *locative information* (see [A10] above), just as is EKI/TANA/DAIGAKU NO ("in the station / on the shelf / at the university").

⁸ Martin (1975: 179). Verbal nouns correspond in large part to Chomsky's "neutral lexical items" (1970: esp. 193) and Koptjevskaja-Tamm's "action nominals" (1993: 3).

they are all well-formed. Again, all these modifiers are position-free and may be rearranged in any order.

- a. {AMERICA DAITORYÔ NO [A12] ⇔ KYONEN NO [A9] ⇔ NI-DO NO [A7]} *hôn-ichi* ("The U.S. President's two visits to Japan last year")
- b. {TENJI-KAI NO [A10] ⇔ NISSAN NO [A8] ⇔ TAISHÔ JIDAI NO [A9] ⇔ HARD-TOP NO [A11]} *kuruma* ("Nissan hard-top cars of the Taishô era at the fair")
- c. {KONO RUGBY CLUB NO [A5] ⇔ WAKABA DAIGAKU NO [A5] ⇔ NI-MEI NO [A7] ⇔ CHÔHATSU NO [A11] ⇔ KOTOSHI NO [A9]} *senshu* ("two long-haired players in this rugby club this year from Wakaba University")

A multi-adjunct construction will become ambiguous if the constituent adjunct(s) permit plural interpretations, which indeed is quite common. That will be true regardless of the order of the constituent adjuncts—for example,

- a. {SAGA KEN NO, NEW YORK NO} *shimai-toshi*
If {[A3], [A10]}, *then* ("Saga Prefecture's sister city in NY")
If {[A10], [A3]}, *then* ("NY's sister city in Saga Pref.")
- b. {TOM NO, DAIGAKU NO, JIKKEN SHITSU NO} *computer*
If {[A2], [A1], [A10]}, *then* ("a computer for Tom's use, owned by the university, installed in the lab.")
If {[A1], [A2], [A10]}, *then* ("a computer owned by Tom, for use at the university, installed in the lab.")
If {[A1], [A10], [A2]}, *then* ("a computer owned by Tom, installed in the university, for laboratory use")

Complement Modifier

[C1] *Material*

Material refers to what something is chiefly made out of or what collectively constitutes something.

TOMATO NO *soup* ("tomato soup")

KINU NO *kimono* ("a silk *kimono*")

GOMI NO *yama* ("a heap of garbage")

HITSUJI NO *mure* ("a herd of sheep")

{*TOMATO NO, NABE NO → NABE NO, TOMATO NO} *soup* ("tomato soup in a pan")

The alternative shown to the left of the arrow is ungrammatical because the intervening adjunct NABE NO (*locative information* [A10]) removes the complement from the pre-HN position. The alternative given to the right of the arrow, where the complement appears in the proper place, is grammatical.

One interesting syntactic feature of the complement is that the accompanying particle *no* is often deleted, yielding nominal *compounds*: e.g., TOMATO NO *soup* → TOMATO-*soup*; TAKE NO *kago* → TAKE-*kago*.⁹ The deletion of *no*, or compounding, will not apply to the adjunct.¹⁰ The particle *no*, wherever deletable, will be placed in square brackets ([NO]); phonetic changes in the head noun or modifier resulting from the drop of *no*, if any, will also be indicated as follows:

/h (→ b) *ashi*/ for /*hashi* → *bashi*/; /FUNE (→ A)/ for /FUNE → FUNA/.

[C2] *Physical content*

Physical content refers to what is contained or stored in something else.

GOMI NO *fukuro* ("a bag containing trash")

SPICE NO *can* ("a can containing spices")

NAGA-ISU NO *heya* ("a room with long chairs")

Physical content shares many of its lexemes with *use/purpose* (see [C5] below), resulting in ambiguities: for example, GOMI NO *fukuro* can also mean "a bag used for keeping garbage (viz. a garbage bag)."

{*SPICE NO, HANA-GARA NO → HANA-GARA NO, SPICE NO} *can* ("a can with floral design in which spices are stored") [HANA-GARA NO: adjunct of *physical appearance* [A11]]

[C3] *Graphic/verbal content*

Graphic content refers to a picture or drawing in photographs, paintings, figures, illustrations, etc., and *verbal content* to the written or spoken contents of discussions, explanations, signs and notices, letters, news, etc.

KAZOKU [NO] *shashin* ("a picture of one's family")

YÔGISHA [NO] *list* ("a list of suspects")

OBAKE [NO] *h* (→ *b*) *anashi* ("ghost stories")

{*YÔGISHA NO, KEISATSU NO → KEISATSU NO, YÔGISHA [NO]} *list* ("the police list of suspects") [KEISATSU NO: adjunct of either *possessor* [A1] or *locative information* [A10]]

[C4] *Field of speciality*

Field of speciality refers to a special area or field as of a restaurant, a profession, a publication, etc.

EIGO [NO] *kyôin* ("a teacher of English")

CHÛKA [NO] *restaurant* ("a Chinese restaurant")

RUGBY [NO] *senshu* / *magazine* / *kyôshitsu* ("rugby players / magazines / class")

⁹ *No*-deletion is a far-reaching operation; yet, there are instances where it is not triggered. Various factors seem to govern it, but one of them is clearly lexical, e.g., *America-ryokô* but **America-tabi* ("a trip to/in America"); **fune-ryokô* but *funa-tabi* ("a trip by ship"). Thus, despite compounding being applicable only to the complement, it only serves as a confirmation, but not as a test, of complement.

¹⁰ Thus, SHACHÔ NO *kuruma* → **SHACHÔ kuruma*; SHICHI-JI NO *news* → **SHICHI-JI news*; BBC NO *bangumi* → **BBC bangumi*. But *no* in the adjunct of *agent* may be deleted, as in: NANMIN [NO] *zôka* ("increase of refugees"); TENKÔ [NO] *kaifuku* ("improvement of the weather"); JYÔKYÔ [NO] *akka* ("deterioration of the situation"). This, however, is an entirely different operation from compounding under consideration. Compare:

$\left[\begin{array}{l} \text{NANMIN, } zôka \\ \text{TENKÔ, } kaifuku \\ \text{JYÔKYÔ, } akka \end{array} \right]$	vs.	$\left[\begin{array}{l} \text{NANMIN-hogo} \\ \text{TENKÔ-chôsa} \\ \text{JYÔKYÔ-handan} \end{array} \right]$	("protection of refugees") ("investigation of the weather") ("judgement of the situation")
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With the phrases on the left, there is a noticeable juncture (and possibly a change in pitch) after the initial nouns. The deletion of *no* in these phrases is *abbreviation* (as opposed to *compounding* in the phrases on the right), commonly employed in telegrams, memos, headlines, etc.

{*HATSUON NO, PAPERBACK NO → PAPERBACK NO, HATSUON [NO]} *jisho* (“a paperback pronunciation dictionary”) [PAPERBACK NO: adjunct of *appearance* [A11]]

[C5] *Use/purpose*

Use/purpose refers to what something is designed or used for. Some lexical representations of this complement are ambiguous, referring also to *physical content*. (See GOMI NO *fukuro* under [C2].)¹¹

GOMI [NO] *f* (→ *b*) *ukuro* (“a garbage bag”)

JOSHI [NO] *toire* (“a ladies’ room”)

KAZE [NO] *k* (→ *g*) *usuri* (“cold medicine”)

RYOKÔ [NO] *tsumitate* (“saving money, or money saved, for a trip”)

{*KAZE NO, HIKIDASHI NO → HIKIDASHI NO, KAZE [NO]} *kusuri* (“cold medicine in the drawer”) [HIKIDASHI NO: adjunct of *locative information* [A10]]

[C6] *Means/language*

Means is relevant to transportation, communication, manufacturing, etc.

DENWA [NO] *renraku* (“notification by phone”)

FUNE (→ A) [NO] *tabi* (“a trip by ship”)

HANGÔ NO *meshi* (“rice cooked in a canteen”)

SENPAKU [NO] *yusô* (“transport by ship”)

Language includes not only a particular language, such as English and Japanese but a writing system (*hiragana*), accent (*doitsu-go namari*), a tone of voice, etc.

EIGO [NO] *kaisetsu* (“explanations in English”)

KO-GOE NO *hanashi* (“chat in a whispering voice”)

DOITSU-GO NAMARI NO *enzetsu* (“a speech in German accent”)

HIRAGANA BAKARI NO *tegami* (“a letter written entirely in hiragana”)

{*FUNO NO, NATSU NO → NATSU NO, FUNE (→ A) [NO]} *tabi* (“a boat trip in the summer”) [NATSU NO: adjunct of *temporal information* [A9]]

[C7] *Source*

Source refers to a place, thing, or person that something comes or derives from.

TOKYO NO *okyaku-san/nimotsu* (“visitors/luggage from Tokyo”)

GAIKOKU [NO] *seihin* (“foreign products”)

KOKUMIN NO *koe* (“citizens’ voice”)

KAWA [NO] *s* (→ *z*) *akana* (“fish from a river”)

GINKÔ [NO] *yûshi* (“a loan from a bank”)

TANIN NO *shinsetsu* (“kindness from others”)

{*KAWA NO, AKAI OBIRE NO → AKAI OBIRE NO, KAWA [NO]} *s* (→ *z*) *akana* (“a river fish with a red tail fin”) [AKAI OBIRE NO: adjunct of *appearance* [A9]]

¹¹ Unlike the complement of *use/purpose*, the particle *no* in the complement of *physical content* probably never drops—thus, GOMI NO *fukuro* (either *physical content* or *use/purpose*), but GOMI *bukuro* (only *use/purpose*).

[A11]]

[C8] *Destination*

Destination refers to a goal or destination to be aimed at.

TOKYO NO *okyaku-san/nimotsu* (“visitors/luggage going to Tokyo”)

HOKKAIDO NO *tabi* (“a trip to Hokkaido”)

TOKYO [NO] *tôchaku* (“one’s arrival at Tokyo”)

NOMIYA NO *shiharai* (“a payment to a bar”)

Lexemes for *destination* and *source* sometimes overlap, when ambiguities will arise. Compare the first example here with that in [C7]. *No* expresses a diametrically opposite direction: *to* as opposed to *from*.

{*TOKYO NO, TOM NO → TOM NO, TOKYO [NO]} *tôchaku* [“Tom’s arrival in Tokyo”] [TOM NO: adjunct of *agent* [A12]]

[C9] *Recipient*

Recipient refers to a person to whom something is directed or extends.¹²

RÔJIN [NO] *iryô* (“medical care for the aged”)

SEISAN-SHA [NO] *rieki* (“benefit for producers”)

HOKÔ-SHA [NO] *meiwaku* (“inconveniences to pedestrians”)

KÔSHI NO *sharei* (“fee to be paid to the lecturer”)

{*RÔJIN NO, BYÔIN NO → BYÔIN NO, RÔJIN NO} *iryô* (medical care for the aged at hospitals) [BYÔIN NO: adjunct of *locative information* [A10]]

[C10] *Cause*

Cause refers to a reason or cause conducive to some action or condition.

RYOKÔ [NO] *ts* (→ *z*) *ukare* (“fatigue from a trip”)

KAZE [NO] *netsu* (“fever from a cold”)

OIL SHOCK NO *dageki* (“a blow from oil shortage”)

TEAM WORK NO *shôri* (“victory through teamwork”)

YAKEDO NO *kizu* (“a scar caused by a burn”)

{*OIL SHOCK NO, KIGYÔ NO → KIGYÔ NO, OIL SHOCK NO} *dageki* (“a blow that the oil crisis has given to businesses”) [KIGYÔ NO: adjunct of *recipient* [A9]]

[C11] *Place of event*

Place of event modifies the head noun which refers to some kind of activity or event, hence, normally verbal nouns (see [A12]) like *chûsha* (“parking”) and *taizai* (“sojourn”), verb-derivatives like *kurashi* (“life”) and *môke* (“earnings”), or quasi-verbal nouns like *jiko* (“accident”) and *matsuri* (“festival”).¹³

ROJÔ [NO] *chûsha* (“parking on the street”)

HOTEL [NO] *taizai* (“one’s stay in a hotel”)

¹² The distinction between *destination* and *recipient* can be hazy, as we shall see later in reference to (31b) and (42).

¹³ Probably, the nouns derived from adjectives (e.g., *yasusa*) and adjectival nouns (*shizukasa*) also occur with *place of event*—e.g., NIHON NO, KURUMA NO *shizukasa*; GAIKOKU NO, YASAI NO *yasusa*. In at least one structural interpretation of these phrases, the initial *no*-modifier modifies the head noun (i.e., “cars being quiet *in Japan*” and “vegetables being cheaper *in foreign countries*”).

TOKAI [NO] *k* ($\rightarrow g$) *urashi* ("life in the city")
 KÔSATEN NO *jiko* ("accidents in intersections")
 {*HOTEL NO, SHÛ-MATSU NO \rightarrow SHÛ-MATSU NO, HOTEL NO} *taizai* (one's stay
 at a hotel on weekends) [SHÛ-MATSU NO: adjunct of *temporal information* [A9]]

[C12] *Object*

Object occurs with the head noun which refers to some kind of action, as we will see in more detail from (34) onward.

KENNEDY NO *ansatsu* ("assassination of Kennedy")
 SHIZEN NO *hakai* ("destruction of nature")
 YÔGISHA NO *taiho* ("arrest of a suspect")
 {*JÔHÔ NO, SEIFU NO \rightarrow SEIFU NO, JÔHÔ NO} *kôkai* ("the government's
 release of information") [SEIFU NO: adjunct of *agent* [A12]]

Multi-complement Modification

Preliminary Observations

We have seen that since the adjunct is not restricted to the pre-HN position, two or more adjuncts can appear side by side in any order. Furthermore, the sequence of two or more adjuncts, plus *one* complement, is also possible, as long as the complement is the last modifier to appear, occupying the pre-HN position. The ongoing observations can be formulated as follows:

- (14) a. $[A_{1\alpha} + (C)]$ HN
 b. BUT: $*[C + A_{1\alpha}]$ HN ($A_{1\alpha}$: "one or more adjuncts")

There is yet another type of pre-nominal modification structure which has not been taken into account: a sequence of two or more complements, with or without any preceding adjunct(s)—namely,

- (15) $[A_{0\alpha} + C_{2\alpha}]$ HN ($A_{0\alpha}$ ="any number of adjuncts, including zero";
 $C_{2\alpha}$ ="two or more complements")

However, if the complement, as previously observed, is really restricted to the pre-HN position, all but the last complement in (15) will necessarily violate that rule, yielding ill-formed modification. That certainly has proven to be the case when an adjunct or adjuncts force(s) the complement to vacate the pre-HN position—hence, (14b).

Curiously, however, our evidence points to the syntactic legitimacy of a cluster of two or more complements as in (15), e.g.,

- (16) a. {NEW ZEALAND NO, KIWI NO} *wine* ("kiwi fruit wine from NZ")
 b. {KISHÔCHÔ NO, RADIO NO, TSUNAMI NO} *jôhô* ("a report from the
 weather bureau over the radio on *tsunami*")

(16a) has two complements: *source* [C7] and *material* [C1] (in that order), and (16b) has three: *source* ([C7]), *language* ([C6]), and *verbal content* ([C3]). As we shall see later, a sequence of even four or more complements is also possible.

Importantly, each of the complements in (16a) or (16b) can also occur by itself with the respective head noun with no neighboring complement(s)—thus,

- (17) a. $\left\{ \begin{array}{l} \text{NEW ZEALAND [NO]} \\ \text{KIWI [NO]} \end{array} \right\} \text{ wine}$ b. $\left\{ \begin{array}{l} \text{KISHÔCHÔ [NO]} \\ \text{RADIO [NO]} \\ \text{TSUNAMI [NO]} \end{array} \right\} \text{ jôhō}$

Clearly, these modifiers are related separately to the head noun, and no binding effect is in operation among them. (See the discussion at (13) above.)

In any case, the multi-complement construction shown in (15) is grammatical, despite the fact that, in a cluster of complements, only the last one appears in the pre-HN position. This will call for a reconsideration of the earlier postulate that the complement is confined to the pre-HN position. It is no longer fully accurate, accounting only for the construction that contains a single complement.

First, a complement may appear alone, or two or more complements may form a (successive) cluster, and in either case, a complement or a complement cluster occurs immediately before the head noun. No extra modifier is allowed between the head noun and a complement or a complement cluster, nor it is allowed inside the cluster.

As a necessary corollary, the constraint, observed in (14b), that all complements appear to the right of any adjunct(s) present also holds true.

Another constraint concerning multi-complement modification concerns the ordering of the constituent complements. Unlike adjuncts which, in a cluster, can appear in completely random order (see (9')), some sort of fixed order is observed in the arrangement of complements. Let us look at (16a) and (16b) once again, to confirm that the order of complements is never arbitrary:

- (19) a. $\ast\{\text{KIWI NO, NEW ZEALAND NO}\} \text{ wine}$
 b. $\left\{ \begin{array}{l} \ast\{\text{RADIO NO, TSUNAMI NO, KISHÔCHÔ NO}\} \\ \ast\{\text{KISHÔCHÔ NO, TSUNAMI NO, RADIO NO}\} \\ \ast\{\text{TSUNAMI NO, KISHÔCHÔ NO, RADIO NO}\} \end{array} \right\} \text{ jôhō}$

The order to be followed in a sequence of complements will be our second major task in this survey and be pursued in the remainder of the paper.

Data

In considering the order of complements, special attention must be paid to the data to be presented as evidence. First of all, some lexical representations (viz. examples) of certain combinations of complements may not be readily accepted. Consider the sequence of *use/purpose* and *physical content*—which, in this order, is valid (see the next subsection on order of complement modifiers): e.g., (i) *kôkû-bin no, recipe no fûtô* ('air mail envelope where recipes are kept'); (ii) *saihô no, hagire no iremono* ('a sewing-kit case containing waste pieces of cloth'); (iii) *gakkô-iki no, taisô-gi no fukuro* ('one's school bag containing his/her P.E. clothes'). All these examples are supposed to be syntactically well-formed.

Note however that while the last two examples are devoid of awkwardness, the first one sounds quite awkward and will probably be rejected by many Japanese speakers. The reason lies in its referent. Instances of multi-comple-

ment modification, such as (i), where reference to hypothetical or unconventional ideas and situations obscures or even conceals syntactic well-formedness, require caution.

There is another reason for which natural examples of multi-complement construction are often hard to come by. As one may note by going over the list of complements above (i.e., [C1] through [C12]), the complement is, by nature, prone to semantic equivocality, due in large part to its distinctive role in speech: economization of syntax for stylistic ellipsis.¹⁴ If explicitness is sought, therefore, the use of complement modifiers is inappropriate; they should be replaced by longer and less equivocal syntactic options, such as a relative clause as in: *receipt no haitte-iru kôkû-bin no fûtô*.¹⁵

Another factor contributing to the obscurity of syntactic well-formedness, particularly true of multi-complement modification, is the length of utterances. In (20) below, for example, the longer the modification, the less natural it is.¹⁶

- (20) {HONSHA NO} *tsûtatsu* (“a notice from the head office”)
 {HONSHA NO, SHISHA NO} *tsûtatsu* (“... to branch offices”)
 {HONSHA NO, SHISHA NO, DENWA NO} *tsûtatsu* (“... by telephone”)
 {HONSHA NO, SHISHA NO, DENWA NO, KINKYŪ KAIGI NO} *tsûtatsu* (“... regarding an emergency meeting”)

But again, this concerns frequency of occurrence, stylistic preference, and so forth—problems which lie outside the scope of syntax.

A still more difficult problem which may make the multi-complement modification appear untenable is that a lexically identical NP-*no* modifier often allows a number of possible interpretations. Consider:

- (21) a. TOM NO *shashin* (*shashin*: “snapshot”)
 b. TOM NO, DIAMOND HEAD NO *shashin*

In (21a), not only is it possible to interpret TOM NO as either an adjunct¹⁷ or a complement, but, even as a complement alone, it is ambiguous in at least three ways: (i) *source* (“that comes from Tom”); (ii) *recipient* (“that has been taken, developed, etc., for Tom”); (iii) *graphic content* (“that has a picture of Tom”).

In (21b), at least the second modifier (a complement) is unambiguous (*graphic content*), though the initial complement remains either *source* or *recipient*. Plainly, (21b) is a far more revealing example, evidencing the definite precedence of either *source* or *recipient* over *graphic content*—which may easily be confirmed by reversing the two complements, as in: *DIAMOND

¹⁴ English prepositions and genitives have an analogous function, responsible for ambiguities as in: *the love of God*, *his talk on the TV show*, *those books and magazines about the fireplace*, and *John’s problem* (the problem John faces vs. your problem about John).

¹⁵ Note that the relative clause modifier (*recipe ga haitte-iru*) now precedes the complement *kôkû-bin no* (i.e., *use/purpose*), because a complement allows nothing to intervene between itself and the head noun, other than another complement. See (14b) and (15).

¹⁶ *No* before the head noun is often deleted. The more complements cluster together, the more plausible, and more sensible indeed, it is to delete *no* wherever possible.

¹⁷ TOM NO as an adjunct is also ambiguous: *possessor* (“that belongs to Tom”), *user* (“that Tom uses”), or *producer* (“that was taken by Tom”).

HEAD NO, JOHN NO *shashin*.

In short, to uncover the interrelations among complements, lexically unambiguous data are prerequisites, but as many of such relations are uncovered, disambiguation of complements will also become easier.

Order of Complement Modifiers

Let us examine the order of the complements identified in the previous section, starting with *material*, *physical content*, *graphic/verbal content*, and *use/purpose*. Study (22a) through (22d) below, to observe that *material* precedes *physical content*, *graphic/verbal content*, or *use/purpose*, but follows *field of speciality*.¹⁸ Furthermore, it is clear from (22e) and (22f) that *use/purpose* has precedence over *physical content* or *graphic/verbal content*.

- (22) a. *material—physical content*
GLASS NO, PASTA NO *yôki* (“a glass container that contains pasta”)
- b. *material—graphic/verbal content*
KI NO, “CHÛSHA KINSHI” [NO] *fuda* (“a wooden sign saying *No Parking!*”)
WASHI NO, TSURU NO *kakejiku* (“a rice-paper scroll with a drawing of a crane”)
- c. *material—use/purpose*
PLASTIC NO, KOZENI NO *saifu* (“a plastic coin purse”)
- d. *field of speciality—material*
AINU KÔGEI NO, KI NO *horimono* (“wood carvings in Ainu art craft”)
- e. *use/purpose—physical content*
GAKKÔ-IKI NO, TAISÔ-GI NO *fukuro* (“one’s school bag containing P.E. clothes”)
- f. *use/purpose—graphic/verbal content*
NIHON-GO CLASS NO, KANJI NO *jisho* (“a *kanji* dictionary for a Japanese class”)
NEN-MATSU SALE NO, “DAI BARGAIN” NO *kanban* (“a sign for a year-end sale, which says *Big Bargain*”)

A combination of *physical content* and *graphic/verbal content* is not available, suggesting that the two complements are mutually exclusive: where one appears, the other will not. That is almost self-evident, in that things like paintings and snapshots, or dictionaries and signs, which are commonly associated with graphic or verbal content are normally not for storing things in them. Conversely, boxes and bags, associated with some physical content, have little

¹⁸ As seen at (17) above, the two or more complements that appear in these and the following examples can also appear independently. Thus,

$\left[\begin{array}{l} \text{CHÛKA [NO]} \\ \text{TAMAGO [NO]} \end{array} \right] \text{ soup}$ but $\left[\begin{array}{l} \text{WASHI NO} \\ \text{TSURU NO} \end{array} \right] \text{ kakejiku}$

Besides, the deletion of *no* for compounding also applies in most cases (e.g., TAMAGO-soup; CHÛKA-soup), but not in *all* cases (*WASHI-kakejiku; *TSURU-kakejiku).

relevance to graphic¹⁹ or verbal content. Thus, *physical content* and *graphic/verbal content* which are in complementary distribution will be represented hereafter: {*physical content* ~ *graphic/verbal content*}.

From the ongoing observations, one can derive the following:

- (23) *field of speciality—material—use/purpose—{physical content ~ graphic/verbal content}*

Examples of different combinations of these complements may not be amiss.

- (24) a. *field of speciality—material—use/purpose*
CHŪKA NO, TETSU NO, AGEMONO [NO] *nabe* (“an metal frying pan in Chinese cooking”)
b. *field of speciality—material—use/purpose—physical content*
KAGAKU NO, GLASS NO, JIKKEN-YÔ NO, YAKUHIN [NO] *yôki* (“a glass container for experiments in chemistry with some chemical inside”)
c. *field of speciality—material—graphic/verbal content*
AINU KÔGEI NO, KI NO, KUMA NO *horimono* (“a wood carving of a bear in Ainu art craft”)

Now, let us turn to *means/language*

- (25) a. *use/purpose—means—material*
YŪ-SHOKU NO, HANGÔ NO, YASAI [NO] *ryôri* (“a vegetable dish for supper, fixed in a canteen”)
b. *use/purpose—language—material—graphic/verbal content*
JIKO BÔSHI NO, EIGO NO, KI NO, “CHŪSHAKINSHI” NO *tatefuda* (“a wooden *No Parking!* sign board in English for the prevention of accidents”)

Though *means* and *language* have been coupled (*means/language*), they occur either independently as in (25), or jointly as in (26) below. In either case, they fall between *use/purpose* and *material*. Besides, when the two complements appear together, the order is not important—hence, {*means* ⇌ *language*}.

- (26) {*means* ⇌ *language*}
{TEREBI [NO] ⇌ CHŪGOKU-GO [NO]} *commercial* (“Chinese-language commercial messages on TV”)

To incorporate {*means* ⇌ *language*}, (23) will be expanded as follows:

- (27) *field of speciality—use/purpose—{means ⇌ language}—material—{physical content ~ graphic/verbal content}*

Source and *destination* will be examined next.

- (28) a. *source—field of speciality—language*
AMERICA NO, GENGO-GAKU NO, EIGO [NO] *ronbun* (“English articles from America in the field of linguistics”)
b. *source—use/purpose—material*
CHŪGOKU NO, KEKKON SHIKI NO, KINU NO *ishô* (“wedding costume

¹⁹ The *no*-modifier as in *hanagara no pot* (“a pot with floral designs”) or *kôtaku-inga no shashin* (“glossy photos”) should not be confused with the complement of *graphic content*; it is the adjunct of *physical appearance*.

from China, made of silk")

- c. *source*—{*means* \rightleftharpoons *language*}—*graphic/verbal content*

KISHÔCHÔ NO, TEREBI NO \rightleftharpoons EIGO NO, TSUNAMI [NO] *jôhō* ("an English report on TV from the weather bureau on *tsunami*")

- d. *source*—*material*

NEW ZEALAND NO, KIWI [NO] *wine* ("kiwi fruit wine from New Zealand")

Source precedes all the complements seen in (27), plus even *destination*, as in:

- (29) a. *source*—*destination*—*physical content*

ZENKOKU NO, KOBE-SHI NO, KYŪEN BUSSHI NO *nimotsu* ("packages of relief goods from the entire nation to Kobe City")

- b. *source*—*destination*—*use/purpose*

TOKYO HONSHA NO, KAKU-SHISHA NO, BONUS NO *kane* ("bonus money from the Tokyo head office to all branch offices")

Examples where *source* and *destination* appear together, such as those in (29), are rare, but if they do, they are right next to each other, and in this order. In short, *source* appears ahead of all complements examined so far, i.e.,

- (30) *source*—*destination*—*field of speciality*—*use/purpose*—{*means* \rightleftharpoons *language*}—*material*—{*physical content* \sim *graphic/verbal content*}

Finally, let's see where *recipient* and *cause* will fit in.

- (31) a. *recipient*—*cause*

YUSHUTSU GYÔSHA NO, EN-DAKA [NO] *dageki* ("a blow to exporters with the strengthening of yen")

- b. *source*—*recipient*—*cause*

PTA NO, KÔSHI NO, KÔEN NO *sharei* ("the speaker's fee from PTA for his/her talk")

Source precedes *recipient*, which in turn precedes *cause*.

The distinction between *destination* and *recipient* is often not as easy to make as one wishes, especially when *source* is present, as in (31b). Actually, however, the exact distinction between these complements is not crucial since they are mutually exclusive, i.e., {*destination* \sim *recipient*}.

(31) shows that *cause* follows—or more correctly, occurs somewhere behind *recipient*, or as it has just been revised, behind {*destination* \sim *recipient*}. In (32) below, the exact place of *cause* is between *field of speciality* and *use/purpose*.

- (32) a. *field of speciality*—*cause*

NIHON KEIZAI NO, EN-DAKA [NO] *fukyô* ("depression in Japanese economy, due to the strengthening of yen")

- b. *cause*—*use/purpose*

EN-DAKA NO, YUSHUTSU SOKUSHIN [NO] *tokurei-hô* ("a special law, motivated by the strengthening of yen, for promoting exports")

With that, the sequencing of complements is completed:

- (33) *source*—{*destination* \sim *recipient*}—*field of speciality*—*cause*—*use/purpose*—{*means* \rightleftharpoons *language*}—*material*—{*physical content* \sim *graphic/verbal content*}

The foregoing observations regarding the order of complements have been limited to a certain type of pre-nominal modification. The head noun appearing in all our examples so far refers to some *thing*, tangible or otherwise, such as *hasami* ("scissors"), *horimono* ("carvings"), *jôhō* ("information"), *dageki* ("a blow"), and so on. For convenience's sake, let's call this type of noun "the noun of *non-action*."

The head noun can also refer to some sort of *action* (i.e., "the noun of *action*"). The kind of noun of *action* that is particularly relevant to us is the verbal noun or the verb-derivative (see [A12] and [C11]), such as *taishoku* ("resignation"), *yusō* ("transport"), *kurashi* ("life"), and *mōke* ("earnings"). We will now examine the order of complements which modify the noun of *action*.

Depending on whether the head noun refers to *action* or not, certain differences are observed in the modifying complements. One such difference is that not all complements identified in (33) with the noun of *non-action* occur with the noun of *action*, and vice versa. Lexically, certain complements are not cohesive with one or the other type of noun. Specifically, *material*, *physical content*, and *graphic content* will not occur with the noun of *action*.

On the other hand, the complement of *object* occurs only with the noun of *action*, or to be precise, with one class of nouns of *action*, as illustrated in (34a), as opposed to those as in (34b).

- (34) a. KANKYÔ [NO] *hakai* ("destruction of environment")
 GENSHI-RYOKU [NO] *riyô* ("use of atomic energy")
 b. KAWASE SÔBA NO *hendô* ("change in exchange rate")
 RIRITSU NO *teiraku* ("fall of interest rates")

While the modifiers in (34a) are both the complement of *object*, those in (34b) are the adjunct of *agent*. Again, that can be verified, as shown below, by the interposition of an extra adjunct—in this case, *saikin no* "recent" (*temporal information*). The complement in (35a), though not the adjunct in (35b), is clearly out of place.

- (35) a. *KANKYÔ NO *saikin no hakai* (→ *saikin no* KANKYÔ [NO] *hakai*)
 *GENSHI-RYOKU NO *saikin no riyô* (→ *saikin no* GENSHI-RYOKU [NO] *riyô*)
 b. KAWASE SÔBA NO *saikin no hendô* (↔ *saikin no* KAWASE SÔBA NO *hendô*)
 RIRITSU NO *saikin no teiraku* (↔ *saikin no* RIRITSU NO *teiraku*)

Another difference between the noun of *action* and the noun of *non-action* is in the modifier pertaining to a *place*. It is possible to qualify either type of noun by furnishing some sort of *place* modifier. For the noun of *non-action*, that is done by an adjunct (i.e., *locative information* [A10]), but for the noun of *action*, by a complement (i.e., *event of place* [C11]). Compare:

- (36) a. HATAKE NO *shigoto* ("work in a vegetable garden") [complement]
 b. HATAKE NO *yasai* ("vegetables in a garden") [adjunct]

Again, unlike the adjunct in (37b), the complement in (37a) will not tolerate the presence of the adjunct *natsu no* ("in the summer time") in this position.

- (37) a. *HATAKE NO *natsu no shigoto* (\rightarrow *natsu no* HATAKE NO *shigoto*)
 b. HATAKE NO *natsu no yasai* (\rightleftharpoons *natsu no* HATAKE NO *yasai*)

In sum, apart from *material*, *physical content*, and *graphic content* which are lexically not cohesive with the noun of *action*, all the others, including *object* and *place of event*, are potential complement modifiers for it, as illustrated below. The complement of *object* has been shown in the position where it normally appears, though it is optional and hence placed in parentheses.

- (38) a. *Source*: TOKYO NO, (NIMOTSU NO) *hassô* ("the sending off of packages from Tokyo")
 b. *Destination*: ENKAKU-CHI NO, (YÛBIN-BUTSU [NO]) *haitatsu* ("delivery of mail to remote places")
 c. *Recipient*: PTA NO, (SAN-ZEN EN NO) *kifu* ("donation of 3,000 yen to the PTA")
 d. *Cause*: ZEIKIN NOGARE NO, (CHÔBO [NO]) *kaizan* ("juggling of books for tax evasion")
 e. *Use/purpose*: DAIGAKU JUKEN NO, (YOSÔ MONDAI [NO]) *fukushû* ("review of anticipated problems in preparation for college-admission exams")
 f. *Field of speciality*: GENGO-GAKU NO, (HÔGEN [NO]) *chôsa* ("linguistic survey of dialects")
 g. *Means*: SENPAKU NO, (BUKI [NO]) *yusô* ("transport of weapons by ship")
 h. *Language*: NIHON-GO NO, (SHIYÔHÔ [NO]) *setsumei* ("explanation of how to use it in Japanese")
 i. *Place of event*: SEKAI-JÛ NO, (KANKYÔ [NO]) *hakai* ("worldwide destruction of the environment")
 j. *Verbal content*: ZEIKIN [NO] *setsumei* ("explanation about tax")
 k. *Object*: JÔHÔ NO *kôkai* ("release of information")

Note that *object*, if present, follows all the other complements: namely, it is the last modifier to appear, closest to the head noun. It may also be noted that *object* will not occur with *verbal content* (see (38j)), suggesting that no noun (of *action*) takes both *object* and *verbal content* at the same time. Thus, the last complement that appears in a sequence of complements is either *object* or *verbal content*, i.e., {*verbal content* ~ *object*}.

The question now is in what order these complements appear before the noun of *action*. To state our conclusion first, there is no significant difference in the order of complements attributable to the different type of head noun.

In (39) below, one can observe that *place of event* precedes all of the potential complements for the noun of *action* listed in (38).

- (39) a. *place of event—object*
 DALLAS NO, KENNEDY [NO] *ansatsu* ("assassination of Kennedy in Dallas")
 b. *place of event—verbal content*
 KAIGI NO, TEIAN [NO] *setsumei* ("explanation of a proposal at a

- meeting”)
- c. *place of event—language—object*
FUTA NO, NIHON-GO NO, KUMITATE-KATA NO *setsumeï* (“Japanese directions on the cover about how to put it together”)
 - d. *place of event—means*
TOKAI NO, DENSHA [NO] *tsûkin* (“commuting by train in the city”)
 - e. *place of event—field of study*
NIHON NO, KÔKO-GAKU [NO] CHÔSA (“archeological survey in Japan”)
 - f. *place of event—use/purpose*
STADIUM NO, SHIAI [NO] *junbi* (“preparations for a game at a stadium”)
 - g. *place of event—cause*
HIGHWAY NO, TÔKETSU [NO] *jiko* (“accidents on highways caused by freezing”)
 - h. *place of event—recipient*
KATEI NO, KODOMO NO *eikyô* (“influences upon children at home”)
 - i. *place of event—destination*
JUNGLE NO, TEKI-CHI [NO] *totsugeki* (“a rush [of troops] in a jungle into the enemy’s territory”)
 - j. *place of event—source*
KATEI NO, OYA NO *eikyô* (“influences of parents at home”)

In short, *place of event* appears at one end of the sequence of complements, and {*verbal content* ~ *object*} at the other, and somewhere between the two appear all the other complements. Let us look at what goes on between these two complements.

- (40) a. *field of speciality—{means ⇌ language}*
GAKKÔ KYÔIKU NO, RADIO [NO] ⇌ EIGO [NO] *hôsô* (“radio broadcast in English in the area of school education”)
- b. *field of speciality—cause*
BOXING NO, SAKUSEN MISU NO *haiboku* (“defeat due to strategic errors in boxing”)
- c. *field of speciality—use/purpose*
KAGAKU NO, HEIWA KYÔZON NO *kenkyû* (“research in science for peace and coexistence”)
- d. *cause—use/purpose*
EIGYÔ FUSHIN NO, ZEIKIN NOGARE NO *tôsan* (“bankruptcy due to business stagnation, for tax evasion”)
- e. *use/purpose—{means ⇌ language}—verbal content*
NANMIN KYÛSAI NO, RADIO NO ⇌ TA-GENGO NO, KIKIN [NO] *yobikake* (“a multi-lingual appeal for funds over the radio for relief of refugees”)

First of all, field of speciality appears before *means* or *language*. Again, *means* and *language* may appear either individually or in an order-free cluster

—thus, {*means* \rightleftharpoons *language*}. Next, *field of speciality* also precedes *cause* and *use/purpose*, which in turn appear in this order. Finally, *use/purpose* has precedence over {*means* \rightleftharpoons *language*}, and {*means* \rightleftharpoons *language*} over *verbal content*.

- (41) *place of event*—*field of speciality*—*cause*—*use/purpose*—{*means* \rightleftharpoons *language*}—{*verbal content* \sim *object*}

Let's look into the position of *source*, *destination*, and *recipient*. The confusion between *destination* and *recipient* (see (31)) is also observed before the noun of *action*, especially where, as in (42a), the action referred to in the head noun is not exactly *directional*. Compare it with (42b).

- (42) a. HOKÔSHA [NO] *meiwaku* ("inconveniences to pedestrians")
 CLUB NO *kifu* ("donation for a club")
 SHAKAI [NO] *hōshi* ("service to the public")
 JINTAI NO *eikyō* ("effect on the human body")
 b. HOKÔSHA NO *chirashi* ("flyers for pedestrians")
 CLUB [NO] *kanyū* ("enrollment in a club")
 SHAKAI [NO] *fukki* ("return to society")
 JINTAI NO *chūnyū* ("injection to the human body")

Again, the two complements will be treated as {*destination* \sim *recipient*}. *Source* and {*destination* \sim *recipient*} appear in this order.

- (43) a. *source*—{*destination* \sim *recipient*}—*object*
 MONBUSHÔ NO, SHIRITSU GAKKÔ NO, KENKYŪ-HI [NO] *josei* ("The Ministry of Education's subsidization of research expenses for private schools.")
 b. *source*—{*destination* \sim *recipient*}—*means*
 ISHI NO, HIGAI-SHA NO, KEGA [NO] *chiryō* ("doctors' treatment of injuries for victims")

As it has been noted in (29), the co-occurrence of *source* and {*destination* \sim *recipient*} is rare, and when they appear next to each other, as in (43), the distinction between *destination* and *recipient* will be even hazier.²⁰

Finally, all the complement modifiers for the noun of *action*, surveyed from (34) onward, will be put together:

- (44) [*place of event*—*source*—{*destination* \sim *recipient*}—*field of speciality*—*cause*—*use/purpose*—{*means* \rightleftharpoons *language*}—{*verbal content* \sim *object*}] + HN (noun of *action*)

²⁰ *Source* (complement) in (43b) should not be confused with the adjunct of *agent*. To see the difference, let us place the complement of *place of event*, GENBA NO, in the initial position: i.e.,

(i) GENBA NO, ISHI NO, HIGAI-SHA NO, KEGA [NO] *chiryō* ("doctors' treatment of injuries for victims at the site")

Since no adjunct can appear to the right of a complement (see (14b')), ISHI NO cannot be an adjunct; it is a complement (*source*). In (ii), the order of the first two modifiers is reversed; yet, the well-formedness is intact. (The meaning is substantially the same.)

(ii) ISHI NO, GENBA NO, HIGAI-SHA NO, KEGA [NO] *chiryō*

But in (ii), ISHI NO appears to the left of the complement (*place of event*), suggesting that it is an adjunct (*agent*), rather than a complement.

Compare this with the order of complements modifying the noun of *non-action* established in (33). Clearly, there are far more similarities than differences between the two sets of order. The differences are limited to the presence of *place of event* and *object* but the absence of *material*, *graphic content*, and *physical content* in (44). No significant discrepancy is noted about the order itself.

CONCLUSION

The adjunct and the complement manifest distinct syntactic behavior. First, they differ in the relative position to one another: the adjunct before the complement. Secondly, unlike adjuncts, complements appear in fixed order in multi-complement modification. By way of consolidating our findings, the following will be presented. Again, the use of (\rightleftharpoons) indicates the possibility of *scrambling*.

- a. $_A$ [*Suzuki shi no* (A8) \rightleftharpoons *NHK no* (A5/8) \rightleftharpoons *getsu-yôbi roku-ji kara no* (A9) \rightleftharpoons *documentary keishiki no* (A11) \rightleftharpoons *ni-jikan han no* (A11)] + $_C$ [*kôkôsei-muke no* (C5), *radio no* (C6), *hikô mondai no* (C3)] + *hôsô bangumi*
 (“NHK’s two-and-a-half-hour documentary-style radio program by Suzuki from 6:00 on Monday for high school students on the problem of delinquency”)
- b. $_A$ [*kaisha no* (A6) \rightleftharpoons *mae no* (A9) \rightleftharpoons *shain no* (A2) \rightleftharpoons *chika no* (A10)] + $_C$ [*datsui-yô no* (C5), *locker no* (C2)] + *heya*
 (“the company’s former dressing room in the basement for the employees, equipped with lockers”)
- c. $_A$ [*tana no* (A10) \rightleftharpoons *hanagara no* (A11) \rightleftharpoons *roku-mai no* (A7)] + $_C$ [*cake no* (C5), *tôki no* (C1)] + *sara*
 (“six China plates with floral designs on the shelf, for serving cake”)
- d. $_A$ [*otôto no* (A12) \rightleftharpoons *setogiwa no* (A9)] + $_C$ [*byôshô no* (C11), *kumon no* (C10)] + *sakebi*
 (“my brother’s cry in agony at the last moment in his sickbed”)
- e. $_A$ [*daigaku-jidai no* (A9) \rightleftharpoons *chichi no* (A8)] + $_C$ [*gengo-gaku no* (C4), *zenchi-shi no* (C3)] + *ronbun*
 (“a linguistic paper on prepositions done by my father while in college”)
- f. $_A$ [*saku-nen no* (A9) \rightleftharpoons *roku-do no* (A7)] + $_C$ [*Kyushu no* (C9), *taifû no* (C10)] + *higai*
 (“damage done to Kyushu by six typhoons last year”)
- g. $_A$ [*keiji no* (A12) \rightleftharpoons *hachi-jikan no* (A11)] + $_C$ [*torishirabe-shitsu no* (C11), *donari-goe no* (C6), *yôgi-sha no* (C12)] + *jînmon*
 (“detectives’ eight-hour interrogation of the suspect in a roaring voice in the interrogation room”)
- h. $_A$ [*Hanako no* (A3) \rightleftharpoons *Wakaba Daigaku no* (A5)] + $_C$ [*Africa no* (C7), *eigo no* (C4)] + *sensei*

- (“Hanako’s teacher of English from Africa at Wakaba University”)
- i. ${}_A[kinnen\ no\ (A9) \rightleftharpoons geinô-jin\ no\ (A12)] + {}_c[charity\ bangumi\ no\ (C8),\ zen'i\ no\ (C5/10)] + shutsuen$
 (“entertainers’ appearance on charity programs out of good will in recent years”)
 - j. ${}_A[nihon-sha\ no\ (A6) \rightleftharpoons IBM\ no\ (A8)] + {}_c[kôgai\ bôshi\ no\ (C5),\ computer\ no\ (C2/6)] + sôchi$
 (“IBM’s pollution-prevention computer device installed in Japanese cars”)
 - k. ${}_A[saikin\ no\ (A9)] + {}_c[nihon\ no\ (C11),\ shûkyô\ dantai\ no\ (C9),\ hô\ no\ (C6)] + sabaki$
 (“recent Japanese judicial judgment on religious organizations”)
 - l. ${}_A[kotoshi\ no\ (A9)] + {}_c[Kenji\ no\ (C7),\ otôsan\ no\ (C8),\ tanjôbi\ no\ (C5),\ necktie\ no\ (C2)] + okurimono$
 (“this year’s present of a tie from Kenji to his father for his birthday”)
 - m. ${}_A[chôsa-kai\ no\ (A12)] + {}_c[manjô\ itchi\ no\ (C6),\ setchû-an\ no\ (C12)] + saitaku$
 (“the investigation committee’s adoption of a compromise proposal with unanimity”)

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