SADAYUKI OKADA

NOMINAL CONCEPTUAL EXPANSIONS IN PREDICATIONAL AND MODIFICATIONAL CONTEXTS

1 INTRODUCTION

This paper deals with the conceptual expansion of nominal expressions, focusing on body-part terms, with regard to two types of linguistic contexts of occurrence, namely, predicational and modificational contexts. In the predicational context of a clause, a comparison is to be made between argument nominals and adjunct nominals. Arguments are selected by the predicate of a clause, and they are central participants in contrast to adjuncts that are in the periphery of the predicational context. In the modificational context of word combinations, a parallel comparison is to be made between heads and modifiers. Heads are the main participants in word combinations, in contrast to modifiers that work as restrictors of the head elements. In both contexts, there is a basic asymmetry between the central participants (namely, arguments and heads) and peripheral participants (namely, adjuncts and modifiers), in that the former exhibit a wider variation of expanded references in comparison to the latter. This systematic difference suggests a plausible route of semantic permeation of nominal conceptual expansions from central to peripheral participants.

The research in this paper consists of three parts: section A deals with the distribution of conceptual expansions in predicational contexts, namely, the comparison between arguments and adjuncts; section B deals with modificational contexts, namely, the comparison between heads and modifiers; and section C summarizes the findings in the former two sections and discusses the correlation between the two contexts of meaning extensions. We deal first with English data from section 3 to section 5, and then we briefly look at Japanese data as an additional support for the present analysis in the sections from 6 to 8. Before the main discussion, we briefly look at the definition of and the hypothesis regarding nominal conceptual expansions in the next section.

2 CONCEPTUAL EXPANSION OF NOMINALS

In this paper, *the conceptual expansion* of a nominal is defined as follows:

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(1) An indirect reference in which a nominal refers not to its default referent Ri, but to another referent Rj beyond the range of Ri. (cf. Hilpert 2006: 126)

This definition is an adaptation of the original definition of metonymy in Hilpert (2006: 126). In particular, it changes the original definition by replacing a "linguistic sign" with "a nominal" (because we are only concerned with nominal expressions) and adds the further qualification "beyond the range of R_i."
This definition excludes instances of active zone-profile discrepancy from the domain of conceptual expansion.

(2) fill up the car (=gas tank of the car), wash the car (=exterior of the car), vacuum-clean the car (=interior of the car)

In these cases, the entity physically acted upon is *the car*. Different aspects of the entity are activated as the relevant part, but the reference itself does not extend beyond the range of the referent of the nominal (*the car*), so they are not regarded as instances of expansion.

At the same time, the definition does not exclude metaphorical extensions as long as they are taken to refer to things beyond the range of the default referents.

(3) the mouth of the river (=outfall), the shoulder of the road (=side)

This crossover treatment of metaphor and metonymy is in line with views against the strict division of these two figures of speech, as in Barnden (2010) and Evans (2010).

Regarding extended references, many people say many different things, but as far as I know, the following question does not seem to have attracted much attention of the researchers in the field, that is, under what conditions are nominal conceptual expansions plausibly licensed? I will delve into this problem using quantitative illustrations from a preliminary corpus survey.

Waltereit (1999) and Sweep (2009) are exceptional among researchers in that they dealt with the problem of the licensing condition of metonymical (or in the present term, conceptual) expansions. They both observe that direct objects are the best loci of the expansion. Waltereit goes farther and proposes a hierarchy: *Direct object* > *Subject* > *Others.* This hierarchy predicts that when a direct object is present (in a transitive sentence), it is selected as the target of expansion, and when an object is absent (in an intransitive sentence), the subject argument is selected as the origin of expansion. Nominals in other grammatical functions are considered unlikely to become the target of extension from the start.

However, the hierarchy is not without exception. Waltereit himself admits that there are a number of instances violating the hierarchy. This approach is too restrictive to deal with the actual variation of extended nominal references. As shown in (4), subjects are sometimes expanded even when direct objects are present in transitive sentences, and even adjuncts can be expanded in the presence of subject and object, as in (5).

(4) Subject over object
a. **The flute** has a cold today. (=player of the flute)

b. **The White House** isn't saying anything. (=officials in the U.S. government)
c. **Some new blood** may change the whole situation. (=some new people)
d. **The Times** didn't ask any question at the press conference. (=reporter from The Times)

(5) Adjunct over subject/object
a. John is absent today from the rehearsal, along with **the flute**.
b. We haven't got any positive reactions, other than the one from **the White House**.
c. In addition to **some new blood**, we need to think seriously about the reformation.
d. At the press conference, the president lost his temper because of the comment of **The Times**.

At the same time, from the actual observation of meaning extensions, I think it is true that arguments are more likely to be the target of expansion, in comparison to adjuncts, but there does not seem to be any particular preference between subject and object. Therefore, I would like to present a working hypothesis in this paper as follows:

(6) Hypothesis: Expanded references attested in an argument position will not necessarily be found in adjunct positions, while those in adjuncts will also be found in arguments. In other words, conceptual expansions licensed only in adjuncts are not likely to be obtained.

When an extended reference is established in argument positions, in some cases, the extended meaning may be permeated into adjuncts, and employed in these positions as well so that the same extended interpretations can be attested in both argument and adjunct positions. If this is likely as a story of semantic permeation, we expect to find a distributive asymmetry between argument and adjunct nominals as presented in the hypothesis.

Turning back to the examples in (4) and (5), they are counterexamples to the hierarchical approach by Waltereit, but they are compatible with the hypothesis in (6) because the types of expansion attested in adjuncts in (5) are also attested in argument positions in (4). They are the types of expansion that are not limited to adjunct positions.

3 Data collection in predicational contexts (section A in English)

For the corroboration of the hypothesis, I conducted a quantitative data analysis using the British National Corpus (BNC) and tried to look into the distribution of the expanded references in a wide variety of actual nominal usages. This is a preliminary survey of nominal sense distribution with 16 body-part terms and involves collecting 250 tokens of argument usages and the same number of tokens of adjunct usages for each nominal (cf. Handl 2011). All the examples are classified with regard to literal/expanded references and with regard to the distinction between argument and adjunct. If the hypothesized asymmetry between arguments and adjuncts is corroborated, the proposed route of

semantic permeation from arguments to adjuncts will become plausible.

The following 16 body-part terms are selected for the survey: *Back, Brain, Brow, Ear, Eye, Face, Finger, Foot, Hair, Hand, Head, Heel, Mouth, Nose, Shoulder,* and *Waist*. (In the case of *Heel* and *Waist*, the number of argument uses did not reach 250 due to the low frequency of the body-part terms.) I have some notes on the procedure of data processing.

(i) The distinction between arguments and adjuncts is not at all discrete (Garcia-Miguel 2007). Arguments directly selected by a predicate without the help of an adposition are easily identified, but a problem arises in the case of oblique arguments. We need to resort to a reference work to decide whether a given oblique expression is counted as an argument. The reference has to be exhaustive and list as many lexical entries as possible. A valency dictionary, such as Herbst et al. (2004), is very elaborate and precise, but the entries are fairly limited in number, so it is not suitable as a reference for the present purpose. I consulted Kenkyusha's New English-Japanese Dictionary, 6th edition, containing more than 260,000 entries. I adopted the procedure of (a) identifying the sense of a predicate connected to the nominal in question in the dictionary entries, (b) checking whether a preposition is specified as a collocate under the sense specification, and (c) counting the complement of that preposition as an oblique argument. This judgment derives from the assumption that collocational selection is an indicator of argumenthood, as suggested by Reinhart and Reuland (1993: 664).

(ii) A second note is in order regarding idiomatic usages. Body-part terms are known for the wealth of idiomatic combinations. When the whole combination is taken as a whole metaphorically/metonymically to refer to some other entity, the body-part terms are counted as literal because the nominal per se does not extend its reference. Instances are listed in (7a). When the nominal can be replaced with some other noun equivalent to its extended meaning in the context, the term is regarded as expanding its reference. Examples are given in (7b).

(7) a. from head to toe (completely), put a foot wrong (make mistakes), turn one's back on(dissociate)—literal
b. lose face (prestige/honor), above one's head (knowledge/intelligence), have an eye for (perspective), catch one's eye (attention), follow one's nose (instinct)—expanded

Here I present only data regarding EYE and HAND due to space limitations. Regarding EYE, Table 1 shows that literal cases in arguments are 84 in number, and 166 cases are found to be somehow extended in meaning. The details of the breakdown are shown in the table. Regarding adjuncts, 170 cases are literal, and 80 are expanded. The breakdown is in the bottom row. (8) and (9) are example sentences for each of the extended references. The same convention of exposition is adopted for the nominal HAND in Table 2, but relevant

examples are omitted because of space limitations. As far as the present survey is concerned, the only exception running counter to the hypothesis in (6) is HAND in Table 2. (The boldface and underlines in the examples are explained in section 5.)

Table 1: EYE (singular) Argument Literal: 84 Adjunct Literal: 170

AE	166 (Attention 87, Line of sight 25, Vision/sight 24, Perspective 10, Aim/interest 6, Eye-like object 4, Disposition in the eye 4, Observer/vigilance 3 Region 3)	33.2%
JE	80 (Perspective 26, Vision/sight 12, Attention 10, Aim/interest 8, Eye-like object 8, Observer/vigilance 6, Disposition in the eye 6, Region 4)	16.0%

(8) AE (Argument Expanded)

a. Some people at the church door caught his **eye**…(A0N) (attention)
b. I cast my **eye** over the front page of the Telegraph…(A0R) (line of sight)
c. No interesting touch or invention of form escaped his **eye**. (A04) (sight/vision)
d. Many skills such as ploughing … or developing an **eye** for livestock may take years to obtain…(ARS) (perspective)
e. The proposals also have a safeguard in takeovers, where a predator often has his **eye** on a rich pension scheme. (A85) (aim/interest)
f. …a bad weather cyclone has a center of low pressure that sucks air at ground level in an anticlockwise spiral, to form its eye into a right handed helix. (ADX) (eye-like object)
g. It was a <u>kind intelligent eye</u> too…(ABL) (disposition expressed in the eye)
h. The quickness of the hand deceiving the **eye** and all that. (A0D) (observer/vigilance)
i. For his pains he received a <u>black eye</u>, …(ACW) (region around the eye)

(9) JE (Adjunct Expanded)

a. With a sharp ear for dialogue and an **eye** for the engagingly surreal, ⋯ (AHA) (perspective)
b. …the finished product is a smooth curve which resembles what we might have drawn if we had smoothed the raw data by **eye**; …(B16) (sight/vision)
c. They partly justified this [parents' duty of choosing how many children they have] by an **eye** upon the too rapid growth of population in some countries. (A68) (attention)
d. Like most shows which are manufactured with an **eye** to commercial success, …, this one will probably fail. (A5E) (aim/interest)
e. The swing of the hurricane was bringing them back into the **eye** of the storm. (AMU) (eye-like object)
f. Meanwhile, the British Expeditionary Force (BEF) had been safely ferried to France under the <u>watchful eye</u> of the British Navy. (CLX) (observer/vigilance)

g. …Thomas Cook watched the great North American continent, which was then virgin territory untrampled by the feet of British tourists, with a covetous eye. (ASJ) (disposition in the eye)
h. …I force him to put the Hoover round on pain of a black eye. (AC3) ((region) around the eye)

Table 2: HAND (singular) Argument Literal:204 , Adjunct Literal: 122

AE	46 (Control: 34, Person: 6, Assistance:2, Skill: 2, Writing: 1 Playing cards: 1)	9.2%
JE	128 (**Side: 119**, Writing: 4, Person: 3, Control: 1, Playing cards: 1)	25.6%

The nominal "hand" is employed to designate, at the very least, *control, person, skill, assistance, handwriting, playing cards,* and *side*. However, the last meaning is attested only in adjuncts in the present database. This is a very frequent sense, which is almost exclusively realized in the phrasal combination of *on the one hand* and *on the other hand*. But historical facts support our hypothesis in this case, too.

According to the OED, the first relevant citation, (10), shows that it has a very old history of argument usage. This does not necessarily prove that its usage actually started in arguments, but it at least demonstrates that the argument use has a very old record in the history of this expanded reference. Moreover, the phrasal combinations *on the one hand* and *on the other hand* are innovated at a later stage in the history of this nominal in the 17th century, as shown in (11). The nominal still has a very close relation with the concept of *side* because the phrases *right hand side* and *left hand side* frequently appear in the corpus (more than 300 times in the BNC) irrespective of the argument status of the nominal. The sense is almost exclusively realized by adverbial phrases at present, but it was, and still seems to be, intrinsically possible for the nominal to designate the concept of *side*.

(10) OED hand (B.4) "side/direction" (the first citation)
c1000 Sette Ephraim on his swiþran hand þæt wæs on Israheles wynstran hand.
'(He) set Ephraim on his right side that was on Israhele's left side.'
(11) OED hand (B. 32i) "on (the) one hand, on the other hand"
a. 1638 My mother…being sicke on one hand, and my selfe on the other.
b. 1705 We are obliged to depart without our Money: But on the other hand, the next time we come hither, we are sure to be honestly paid.

This exceptional meaning has a very old history of argument usage. It took the route of waning away in argument positions and is now realized by more frequent adjunctive combinations. Taking into consideration this historical development, the hypothesis presented in (6) is corroborated, and the asymmetrical distribution between arguments and adjuncts suggests a plausible route of semantic permeation of expanded references from arguments to adjuncts.

4 Data collection in modificational contexts (section B in English)

Now we move on to section B dealing with the survey of the modificational context of word combinations. The 16 body-part terms employed in section A are also used in this part of the research. I consulted five dictionaries (*OED ver. 4.0, Eijiro on the Web* (as of March, 2016)*, Kenkyusha's New English-Japanese Dictionary 6th edition, Progressive Reverse English-Japanese Dictionary, Reverse Dictionary of English Nominal Compounds*) and picked up word combinations consisting of two words and involving the relevant body-part terms as either the left hand or the right hand member of the combinations. This time, the classification of expanded meanings is based on the position of the body-part terms as a head (right-hand member) or as a modifier (left-hand member). Only the result of the research regarding EYE is listed in this paper, in Tables 3. [1]

Table 3: EYE

Sense	Head usage	Modifier usage
(i)line of sight	wall eye, cross eye	eye beam, eye direction
(ii)vision/sight	lazy eye, bird's eye, eagle eye	eye chart, eye dialect, eye reach, eye witness
(iii)eye-like object	hurricane eye, cat's eye, screw eye, scroll eye	eye pattern, eye wall
(iv)observer/ vigilance	private eye, hawk eye, weather eye, outward eye	eye dog, eye servant, eye service
(v)disposition	fish eye, evil eye, dog eye, etc. (many combinations of adj.+eye)	
(vi)perspective	adult eye, batting eye, critical eye, expert eye, worm's eye	
(vii) region	black eye	
(viii) attention		eye catcher, eye grabber (pred-comp)

A glance at the distribution shows that nominals in head positions exhibit a wider variation of expanded meanings. This is the same with all the other body-part terms. The exception where the extended reference is only attested in adjuncts is the case of "attention" for the nominal EYE. This meaning, found in combinations such as "eye-catcher/eye-catching/eye-grabber/eye-grabbing," is peculiar in that its meaning is licensed by the underlying predicate-complement relation between the predicate in the head position and the complement EYE in the modifier position, as in "catch one's eye/grab the eye of someone." As is verified in the preceding section, argument positions are the basic loci of meaning extensions, and the meaning in question is carried over to the modifier position of word combinations. The exceptional behavior of those verbal compounds is not without any reason. They can be counted as instances of argument extensions.

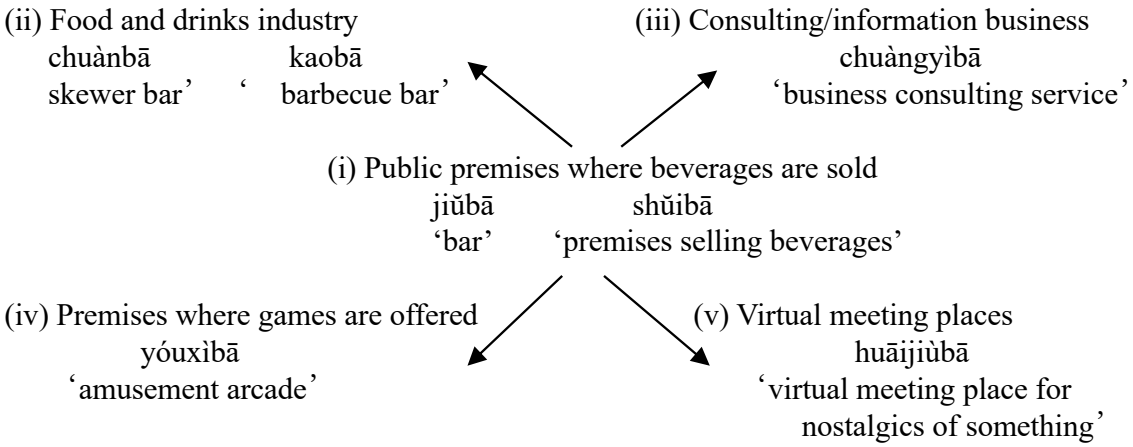
Summarizing the results of this distributional survey, head positions are more productive in licensing the meaning extensions, with reasonable exceptions based on the

[1] Body-part nouns in word combinations can sometimes be interpreted in a number of ways. For instance, *eagle eye* can mean "keen eye sight," "person with a keen eye sight," or "a perspective/view of an eagle." In the lists, the nouns are classified according to one of their possible interpretations. Distributional asymmetries can be demonstrated with at least one example attested for each of the extended meanings, so I do not list all the possible explications of a body-part noun in a given word combination.

underlying predicate-complement relations.

As supporting evidence for the distribution, Arcodia (2011) reported a similar semantic distribution of the Chinese loan-word "bā," which comes from the English noun "bar," a place where alcoholic drinks are served. In the head position, this loan-word has extended its meanings in a number of ways, as illustrated in (12), while in the position of modifiers, it has not yet developed its meaning beyond the range of its literal referent, as in (13).

(12) Arcodia (2011: 124) head use for 吧 bā



(13) Arcodia (2011: 127) modifier use for 吧 bā

吧女	吧台	吧員
bānǔ	bātái	bāyuán
bar-woman	bar-counter	bar-personnel
'barmaid'	'bar counter'	'bartender'

It seems to take some time before the meaning extensions permeate into the modifier position. To summarize this section, it seems safe to say that heads and modifiers show an asymmetry in the distribution of expanded references, in parallel with the predicational context of argument/adjunct distinctions.

5 Distribution of data in predicational and modificational contexts (section C in English)

The result of the survey presented thus far is summarized, and a part of the summary is shown in Table 4. This is a very long list, so the whole table is provided in Appendix A.

Table 4: (A part of the) Summary table of predicational and modificational contexts

Word	**Sense**	**Argument**	**Adjunct**	**Head**	**Modifier**
Eye	Eye-like object	◎	◎	○	○
	Vision/sight	◎	◎	○	○
	Observer/vigilance	◎	○watchful	○	○
	Perspective	◎	◎	○	
	Disposition in the eye	○evil, glittering	○covetous	○	
	Line of sight	◎		○	○
	Attention	◎	◎		○
	Aim/interest	◎	◎		
	Region	○black	○black	○	
Mouth	opening	◎	◎	○	○
	words	◎	◎	○	○
	person	○every		○	
	speaker	(○loud)	(○big)	○	
TOTAL	-	58 (◎ 49○ 9)	44 (◎28○16)	58	45
+ extra	-	67 (◎50○17)	56(◎28○28)	-	-

The leftmost column lists the 16 body-part terms, and the next column shows the extended meanings. The third and the fourth columns specify whether the meaning is attested in argument and adjunct positions, respectively (in the database).

Regarding the third and fourth columns, the double circles mean that the present data include at least one case where the extended meaning is attested in a nominal whose premodifier consists of only necessary determiners such as articles, demonstratives, or possessive nouns. The present research deals only with singular forms of body-part terms because we aim to compare predicational and modificational contexts, and in the latter context, only singular forms can be used in the position of modifiers (e.g., eye contact vs. *eyes contact). For the sake of uniformity of the data collection, I collected only singular forms of body-part terms. Now singular common nouns are necessarily accompanied by some determiners. In the case of ◎, with the exception of the minimum determiners, the nominals can stand alone without the modification by any other premodifiers. Additionally, they can still be understood as referentially extended. Examples are included in (8) and (9), and they are shown in bold face.

Single circles in the table show that these meanings are attested by nominals only when assisted with additional premodifiers. Those are the meanings requiring additional premodifiers for the designation of the expected reference, as far as the present database is concerned. The examples with underlines in (8) and (9) are instances of this type. As for (8g), in the entry for the meaning of "disposition," the OED (eye 5c) says, "with adjectives, expressing the disposition or feeling of the person looking (as angry, contemptuous, friendly, jealous, loving, wondering)." The adjectives listed in the table beside the single circles are examples of premodifiers.

Circles within parentheses indicate that they were not found within the 500 data sample but are attested with additional data search by enlarging the range of data. All body-part

terms have wider variations of semantic extensions in arguments in comparison to adjuncts, and no exception was found where adjuncts exhibited wider variations of extended references. Even in the case of HAND, where the exceptional meaning of "side" is attested, as far as the type variation of extension is concerned, argument positions exhibited a wider variation in comparison to adjuncts.

The last two columns in Table 4 show the distribution in head/modifier positions. Further, the rows at the bottom show the number of semantic extensions attested in each category. The TOTAL indicates the number of cases attested within the 500 samples, and "+ extra" shows the sum of the original data and the additional ones beyond the 500 samples. In the predicational and modificational contexts, central participants (namely, arguments and heads) are more likely to be the target of semantic expansions, and participants in the periphery (namely, adjuncts and modifiers) are likely to exhibit part of the variations of extensions licensed by the central participants.

The distributions of the predicational/modificational contexts are summarized from a different viewpoint in Table 5. This table displays the distributions on the basis of the types of occurrence in predicational contexts and shows how they are related to the distributions in the context of modification. The results of the extra data search in the BNC are included because clearer differences are detected with the addition of extra data (but the same tendency holds even in the limited data sample of 500 instances).

Table 5: Distribution of data in C (extra data included)

	argument	adjunct	number of cases		head OK/ head X	modifier OK/modifier X
A	◎	◎	27		24/3	24/3
B	◎	○	16	50	15/1	11/5
C	◎	---	7		3/4	3/4
D	○	◎	1		1/0	1/0
E	○	○	12	17	12/0	5/7
F	○	---	4		1/3	0/4
G	---	◎	0		0/0	0/0
H	---	○	0	2	0/0	0/0
I	---	---	2		2/0	1/1

In this table, extended meanings are classified according to whether they are attested without the assistance of additional premodifiers (◎), with the assistance of premodifiers (○), or not at all attested (---). We have adopted the distinction between argument/adjunct in predicational contexts, and the possible combinations of these two types of variables form nine groups (from category A to category I), as illustrated in the left column. The numbers in the central columns show the type frequency of relevant semantic extensions belonging to each category. The right-hand columns illustrate whether the extended meanings belonging to each category are also attested in head/modifier positions. For instance, the row of category A says that meanings attested without premodification in both argument and adjunct positions are 27 in number, and out of these, 24 meanings are attested in head/modifier positions, and 3 are not attested in either position. The same convention of presentation applies to all the other categories. Now from this table, at least the following observations can be made:

(14) Correlation between predicational and modificational contexts

a. Meanings in category A, which are attested in argument/adjunct positions without the help of premodifiers, are very likely to be also found in head/modifier positions in word combinations. The rate of use is very high (24/27=89.0%). These meanings are understood without the assistance of premodifiers, and they occur freely in both argument and adjunct positions. There is no restriction on the positioning of the nominals, and they can stand alone without the help of additional modifiers. Those meanings are conventional and are likely to be established as lexical meanings of the terms. For example, BROW (top/edge), FACE (front/surface), HEAD (leader), NOSE (front/tip), MOUTH (opening), BACK (backward space).[2]

b. Meanings in categories A, B, and C, which are attested in argument positions without premodifiers, are many in number and frequently used in both heads and modifiers (Head: 42/50=84.0%, Modifier: 38/50=76.0%). However, in the case of modifiers, the rate of use reduces from category A to B and from B to C. For an expanded meaning to be used in modifiers, occurrence restrictions such as additional premodifiers or limited usage in argument positions should be somehow lifted. That is, Category A meanings are the ideal input for modifier use (A:24/27=88.9%, B: 11/16=68.8%, C: 3/7=42.9%).

c. Meanings in categories E & F are likely to be attested in heads, but the rate of use in modifiers reduces drastically (Head:13/16=80.1%, Modifier: 5/16=30.1%). These 16 meanings somehow require premodification for the designation of the extended meanings (single circles). Extended meanings requiring the help of premodifiers for the designation of extended references seem unlikely to be used in modifier positions. In two-word combinations, modifiers are restrictors for the following head nouns, and they are not restricted by any other elements because they are the first elements of the word combinations. Those usages requiring premodification (or other restrictors) are not likely to play the role of restrictors for other elements because the meaning of restrictors need to be understood without the

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[2] As explained by Momiyama (2002), one possible criterion of the basicness of lexical meanings is whether the meaning is expressed by the term without the help of modifiers.

(i) *Koko-ni mono-o oka-nai-de-kudasai.*
Here-LOC thing-ACC put-NEG-particle-DECL
'Don't put things here.'

(ii) *Watashi-no-yoona mono-ga shusseki-shite yoroshii-deshoo-ka.*
I-GEN-like one-NOM present-do be.allowed-DECL-Q
'Is someone like me allowed to be present?"

(iii) **Mono-ga shusseki-shite yoroshii-deshoo-ka.* (Momiyama 2002: 107)
Thing-NOM present-do be.allowed-DECL-Q
'Is something allowed to be present?' (Intended: 'Is someone (like me) allowed to be present?')

Mono can designate either physical entities or human beings. But the default referent of this nominal is "entities," and in the reading of "human beings," some modifier is required, as demonstrated by the contrast between (ii) and (iii). Abbreviations in the glosses (here and in the following sections) are as follows: ACC=accusative, CLA=classifer, COMP=complementaizer, DECL=declarative, GEN=genitive, LOC=locative, NEG=negative, NOM=nominative, POL=politeness marker, Q-=question marker, TOP=topic

In a parallel manner, Category A meanings are amply conventional, establishing a status close to the default reading.

assistance of additional modifiers.

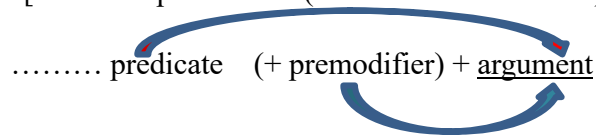
(15) The relation between argument/adjunct and premodifiers
   a. There are 16 cases of meaning extensions in category B, where premodifiers are required only in adjunct positions. These meanings can be attested without the assistance of premodifiers when the nominal is an argument. In contrast, there is just one case in category D where premodifiers are required only in argument positions, whereas in adjuncts they can stand alone without premodifiers. (A set phrase "per head" where the noun "head" refers to a person is the only example in D.) This pattern of modification seems to be rather exceptional.
   b. Meaning extensions requiring no premodification in argument positions (categories A, B and C) are 50 in number, while those requiring no premodification in adjuncts (categories A, D and G) are 28 in number. Moreover, 27 out of 28 belong to category A, which contains highly conventional expanded meanings. This means that basically only highly conventional types of meanings are available for meaning extensions in adjuncts without additional modifications.

   These two facts in (15a) and (15b) seem to indicate that in the case of adjuncts, premodifiers are more likely to be expected. Adjuncts are peripheral participants in the predicational context of a clause, and their marginality should be somehow amended by adding semantic clues of premodifiers.

(16) The comparison between arguments and adjuncts and between heads and modifiers
   a. Cases belonging to categories G, H, and I that are not attested in argument positions are fewer in number than cases belonging to categories C, F, and I, which are not attested in adjunct positions (2:13). Cases not attested in adjuncts are many in number, while cases not attested in arguments are very few in number. The productivity of meaning expansions in argument positions is corroborated from this categorization, too.
   b. Meanings attested in modifier positions are more restricted than those found in head positions: all categories from A to I show that the number of cases attested in heads are larger than or equal to the number of cases found in modifiers. Section 4 showed the asymmetry in word combinations from the perspective of body-part terms. Here, the asymmetry is observed in terms of the distributions observed in the predicational contexts. From this perspective too, the asymmetry is corroborated.

As an illustration of the four contexts of semantic extensions, the schemas in (17) may represent their differences in a simple way.

(17) a. Argument use: 67 types of conceptual expansions
[central in predication/(central in modification)]



b. Adjunct use: 56 types of conceptual expansions
[peripheral in predication/(central in modification)]

c. Head use: 58 types of conceptual expansions
[central in modification]

d. Modifier use: 45 types of conceptual expansions
[peripheral in modification]
< modifier + head >

We have argument/adjunct uses in predicational contexts and head/modifier uses in modificational contexts. First, arguments in (17a) are given clues of selection restrictions from the main predicate and also, possibly, from the modifiers inside the noun phrase of which they are the heads. Moreover, they are central participants in the event described in the sentence. Therefore, the identification of an appropriate extended meaning in a particular context is readily processed. Because of their central status in the predication, the arguments deserve to be given enough processing effort for the identification, and selectional clues should be amply provided. In short, this is the ideal position for generating a new contextual meaning.

Adjuncts in (17b) are in the periphery of a sentence, and they may not be given enough clues for the meaning extension from the perspective of sentential predication. But in terms of the modificational structure of a noun phrase, they are in the head position to which additional modifiers can supply semantic clues. This situation is not different from that of head nominal positions in word combinations, as in (17c). In both cases, they have a certain kind of centrality from the perspective of modificational contexts so that part of the extensions attested in argument positions is also found in these positions.

The last context of use is the modifier positions in word combinations, as in (17d). In this position, the nominals are not likely to be given semantic restrictions. Rather, they are restrictors for the following head nouns. Moreover, they are peripheral elements in the modificational structure, so the processing effort for a new extension is not likely to be allocated to nominals in this position. This is a position for extensions with high conventionality, which the human processor can get access to quite easily without the assistance of semantic restrictions from predicates or modifiers.[3]

[3] Postmodification is not considered in this paper. Postmodifiers consist of a heterogeneous group of structures, such as PPs, APs, relative clauses, and participial clauses. They cannot be the input for the modifier position in word combinations, so a parallel comparison between the predicational and modificational contexts cannot be

As mentioned earlier, arguments are the main loci of meaning extensions, and one revealing case in point is found with the body-part term BROW in (18).

(18) a. …she was alone again…until the next sulky brow slouched into view and stole her hopeful heart away. (A0L)
b. Often has the aching brow of royalty resigned its crown... (FAE)

In these instances, first, the premodifiers dictate the meaning extension of BROW to "facial expression," and this subject is combined with intentional action verbs such as "slouch" "steal" and "resign." The meaning extension goes beyond "facial expression," and this noun can be interpreted as referring to "a person with the designated facial expression." This type of usage where BROW is used as the subject of an intentional action verb, referring to a person, is very rare. Only two occurrences are found in the whole BNC database. This meaning is not yet attested in adjuncts, or in the head or modifier positions in word combinations, either. Additionally, no dictionary, as far as I consulted, lists this sense in the lexical entry of BROW yet.

This usage may survive and prevail, or it may perish in the coming decades. Each nominal has its own history of semantic extensions, and it may not be easy to find generalizations in this field of research. There will still be productive and unproductive routes for meaning extensions and some motivations for the productive extensions.

In conclusion, from the distributions of nominal conceptual expansions in predicational and modificational contexts, we can make the following claims:

(19) a. Expanded references attested in an argument position will not necessarily be found in adjunct positions, while those in adjuncts will also be found in arguments. In other words, conceptual expansions licensed only in adjuncts are not likely to be obtained. (=(6))
b. In parallel, in the modificational context of word combinations, head nominals exhibit wider variations of conceptual expansions in comparison to modifier nominals. Exceptional verbal compounds can be accounted for with the underlying predicate-complement relation between the head and the modifier elements.
c. The distributions attested in (19a) and (19b) point to the plausible route of semantic permeation of extended nominal references from central to peripheral elements.

In a sense, the modificational structure of word combinations can be regarded as a microcosm of the predicational context of clauses.

6 Data collection in predicational contexts (section A in Japanese)

expected with this type of modifiers. I will leave this question for future research.

As an additional support for the research in English, I carried out the same type of survey with 16 Japanese body-part terms by using data from BCCWJ (Balanced Corpus of Contemporary Written Japanese). They are ASHI (leg), ATAMA (head), HANA (nose), HARA (belly), HESO (navel), HIGE(beard), KAO (face), KATA (shoulder), KOSHI (lower back), KUBI (neck), KUCHI (mouth), ME (eye), MIMI (ear), NODO (throat), TE (hand), and UDE (arm). Basically the same tendency holds in this language, too. We have three notes on the survey procedure in the predicational context of the argument/adjunct distinction:

(20) Segregation of argument/adjunct: *The Digital Daijisen Japanese Dictionary* (2009 version) is used as a reference, and the nominals in the postpositional phrases that are employed in example sentences under the relevant heading of the relevant predicate in the dictionary are counted as arguments.

(21) Japanese has many combinations of noun phrases where two nominals are connected by "no" (genitive marker), namely, "X no Y." On the status of X in this structure, for the sake of convenience, I classified it into the following three groups.

(a) When Y is a physical object possessed by X, X is the possessor (modifier) of Y, and is counted as an instance of adjunct. For example, *amama-no ke* head-GEN hair 'hair of the head,' *te-no yubi* hand-GEN finger 'finger of the hand,' *koshi-no hone* lower.back-GEN bone 'bone of the lower back'.

(b) When Y is an eventive or predicative nominal, the noun phrase is considered to be equivalent to a proposition, and X is counted as an argument of Y. This "no" can be interpreted as equivalent to a nominative marker. For example, *kata-no kori* stiffness-GEN shoulder 'stiffness of the shoulder' (the shoulder's being stiff), *te-no ugoki* movement-GEN hand 'movement of the hand' (the hand's moving), *ashi-no hayasa* leg-GEN swiftness 'swiftness of the leg' (the leg's being swift).

(c) The other cases of X are regarded as modifiers of Y and classified as adjuncts. For example, *atama-no ue* head-GEN up 'above the head,' *hana-no mawari* nose-GEN around 'around the nose,' *koshi-no ichi* lower.back-GEN position 'at the height of the lower back'.

(22) Chinese characters have many possible pronunciations in Japanese, and only occurrences with the default pronunciations of body-part terms are included for the sake of uniformity in the database. For instance, in the case of 頭 (head), possible pronunciations include "Atama," "Tou," "Zu," "Tumuri," and "Kashira." Only instances with the pronunciation of "Atama" are counted in the survey. The same principle applies to all the other body-part terms.

With these points in mind, I carried out a data search in section A. In conclusion, we have six exceptional cases. The first exception is MIMI (ear), designating "listeners." (Only relevant examples are cited.)

Table 6: MIMI (ear) [AL: 222, JL: 240]

AE	28 (Sense of hearing: 26, Tip of a thing: 2)	5.6%
JE	10 (Sense of hearing: 6, Tip of a thing: 3, **Listeners: 1**)	2.0%

Adjunct use

(23) *Mokuyoo-no shinya-wa mimi-no kazu-ga tarinai. Tokyo-FM-de-wa ichi-ji han kara ni-ji han made…*(Listeners) (PB46 00190)
Thursday-GEN midnight-TOP ear-GEN number-NOM few. Tokyo-FM-LOC-TOP one-o'clock half from 2-o'clock half to…
'The number of **ears** is few on Thursday midnights. TOKYO-FM broadcasts from 1:30 to 2:30….'

Argument use

(24) *Mokuyoo-no shinya-wa mimi-no kazu-ga tarinai. Demo kinyoo-no shinya-ni-wa takusan-no mimi-ga kiite-kurete-iru.*
Thursday-GEN midnight-TOP ear-GEN number-NOM few. But Friday-GEN midnight-LOC-TOP many-GEN ear-NOM listen-benefactive-exist
'The number of **ears** is small on Thursday midnights. But many **ears** are listening on Friday midnights.'

This meaning is attested in (23). It is an exceptional usage, appearing in an essay on radio programs. It is used at the beginning of the essay, and no other use referring to "listeners" appears in the whole text. We find it to be a kind of nonce use, which is understandable in the particular context of an essay on radio programs. It would be a little difficult to understand this sentence if it was uttered out of blue.

However, in this case, too, once the adjunct use is established, it is also possible to use it in an argument position, as in (24). It demonstrates that an extended reference admitted in an adjunct is readily accepted in arguments, so a meaning extension allowed exclusively in adjuncts is not attested in this case, either.

The second exception is KUBI (neck), referring to the act of "beheading."

Table 7: KUBI (neck) [AL: 213, JL: 220]

AE	37 (Head: 28, Life: 5, Status: 1, Neck-like object: 1, Unemployment: 1, Tip/top: 1)	7.4%
JE	30 (Head: 17, Neck-like object: 8, Life: 2, **Beheading: 2**, Tip/top: 1)	6.0%

(25) …Kubi-no zashiki-ni naori moosu-hodo-no-koto, juuroku-shichi-do…
(Beheading) (LBq2 00023)
…Neck-GEN room-LOC seat POL-like-GEN-matter, sixteen-seven-times…
'… (He was) on the verge of setting himself in the room for beheading sixteen to seventeen times.'

(26) Mukoo-ni tsuita-ra, omae-wa kubi-da. (Unemployment) (LBf9 00196)
There-LOC arrive-if, you-TOP be.fired-DECL
'When we get there, you will be fired.'

This is used in a set phrase of *kubi-no za/zashiki* (beheading-GEN seat/room) 'seat/room for beheading,' and it is used only in the context of execution in the old days. Recently, this phrase appears only in historical texts and novels. As for the act of beheading, *kubi* is also used in the phrase of *kubi-ni suru* (neck-LOC DECL), which at present means "fire

someone." The historical development of this phrase is not so evident, but it is generally believed that the meaning of unemployment for *kubi-ni suru* derives from the act of beheading, as is described in Japanese dictionaries such as *Nihon Kokugo Daijiten* and *Koojien*. If this is the case, the argument use of *kubi* in (26) meaning "unemployment" is the counterpart of the adjunct use of beheading in *kubi-no za/zashiki* (seat/room for beheading). This may not be an exception once we take into consideration the meaning change from 'beheading' to 'unemployment' for the phrase of *kubi-ni suru*.

The other exceptions are HANA (nose) in the sense of "beginning" and "tip," ASHI (leg) in the sense of "transportation means," and TE (hand) in the sense of "type." They are all attested in argument positions in the extra data search, and historical data show that they were used in argument positons at an early stage of their lexical histories, so I will omit the details of related data. [4]

From the survey, we can say that in the case of Japanese also, the working hypothesis in (6) is corroborated. Namely, meaning extensions licensed only in adjuncts are not attested in this language, either.

7 Data collection in modificational contexts (section B in Japanese)

Now we move on to section B. I used *Digital Daijisen On-line Dictionary* (as of February 2017) for the data collection. We have seven exceptions of modifier use where no corresponding head use was attested. However, six out of the seven are again licensed by the underlying predicate-complement relation between the head and the modifier, so they are motivated by the productivity of argument nominals for meaning extensions.

(27) a. *heso-magari* navel-twisting 'hard to please, disobedient'
b. *ude-zuku* arm-using.up 'with all one's might'
c. *atama-dashi* head-exposing 'cueing, resuming to the beginning'
d. *kao-kiki* face-working 'having credit'
e. *me-kubari* eye-distributing 'paying attention'
f. *te-gire* hand-cutting 'cutting off a relation'

The last exception is NODO (throat), meaning 'singing voice,' which is attested in the word combination of *nodo jiman* throat-be.proud 'being proud of one's singing voice.' No example with the same extended meaning is listed in the dictionary with the nominal in the head position. However, it is fairly easy to call to mind the phrase of *jiman no nodo* be.proud-GEN throat 'a beautiful voice one is proud of' in which *nodo* is used as the head. This is not listed because 'X no Y' is taken to be a combination of phrases rather than of words. It is counted as a phrasal unit, inappropriate for lexical entries in the dictionary.

[4] Body-part nouns such as *me* (eye) and *te* (hand) are also used as suffixes, as in *nibam-me* (the second) and *samban-te* (the third). The phrases mean almost the same without the suffixes: *niban* (the second), *samban* (the third). Those body-part nouns are used as meaningless morphemes without specific references, so they are not included in the lists. The gradience between meaningful and meaningless morphemes is a difficult question, and here I classified the meanings only as much as I could.

8 DISTRIBUTION OF DATA IN PREDICATIONAL AND MODIFICATIONAL CONTEXTS (SECTION C IN JAPANESE)

As for the tables in this section, the overall table with all the attested meaning extensions is presented as Appendix B, and only the summary table of the distribution is cited here. Basically the same tendency observed in the English case is detected, but the tendency is less clear when compared with the English counterpart.

Table 8: Distribution of data in C (extra data included)

	argument	adjunct	number of cases		head OK/head X	modifier OK/modifier X
A	◎	◎	21		14/7	14/7
B	◎	○	13	49	9/4	9/4
C	◎	---	15		5/10	5/10
D	○	◎	3		2/1	2/1
E	○	○	23	34	23/0	13/10
F	○	---	8		5/3	3/5
G	---	◎	2		1/1	1/1
H	---	○	2	11	1/1	0/2
I	---	---	7		6/1	4/3

(28) Correlation between predicational and modificational contexts
   a. Meanings in category A that are attested in argument/adjunct positions without the help of premodifiers are likely to be found in head/modifier positions. The rate of use is high (14/21=66.7%).
   b. Meanings in categories A, B, and C, which are attested in argument positions without premodifiers, are many in number and frequently used both in heads and modifiers (Head/Modifier: 28/49=57.1%). The rate of use reduces from categories A, B, to C. For an expanded meaning to be used in modifiers, occurrence restrictions such as the limited usage in argument positions should be somehow lifted (A:14/21=66.7%, B: 9/13=69.2%, C: 5/15=33.3%).
   c. Meanings in categories E, F, and H (which are attested only with the help of premodifiers) are likely to be attested in heads, but the rate of use in modifiers is reduced (Head: 29/33=87.9%, Modifier: 16/33=48.5%).

(29) The relation between argument/adjunct and premodifiers
   a. There are 13 cases of meaning extensions in category B, where premodifiers are only required in adjunct positions. In contrast, there are only three cases in category D where premodifiers are required only in argument positions.
   b. Meaning extensions requiring no premodification in argument positions (categories A, B and C) are 49 in number, while those requiring no premodification in adjuncts (categories A, D, and G) are 26 in number. Moreover, 21 out of the 26 belong to category A.

(30) The comparison between arguments and adjuncts and between heads and modifiers

a. Cases belonging to categories G, H, and I that are not attested in argument positions are fewer than cases belonging to categories C, F, and I that are not attested in adjunct positions (11:30). The productivity of meaning expansions in argument positions is corroborated.

b. Meanings attested in modifier positions are more restricted than those found in head positions: all categories from A to I show that the number of cases attested in heads are larger than or equal to the number of cases found in modifiers.

One reason for the murkier result is that, as mentioned earlier, there are seven exceptional cases of extensions in modifiers not attested in head positions because of the underlying predicate-complement relation or of the phrasal status of the relevant example. The number of exceptions is much larger in Japanese. And this fact partly raised the rate of use in modifier positions.

Another is that *Digital Daijisen on-line Dictionary* (which I used for the search of word combinations in section B) lists many different types of word combinations that are attested very rarely in the whole BCCWJ corpus (namely, those usages that are not attested within the 500 data samples). As a result, the number of Category E increased with the additional data search, and it made the difference between the groups of A to C and of D to F smaller.

At the same time, we still have a similar tendency observed in Japanese, and it seems to support the basic distributional property of meaning extensions; that is, extended meanings permeate from central participants to peripheral participants both in the context of sentential predication and modification in word combinations. With the data collection in the last three sections, I believe the conclusions presented with the English data in (19) are also basically corroborated with Japanese data.

REFERENCES

Arcodia, Giorgio (2011) A construction morphology account of derivation in Mandarin Chinese. *Morphology* 21: 89-130.

Barnden, John (2010) Metaphor and metonymy: Making their connections more slippery. *Cognitive Linguistics* 21: 1-34.

Evans, Vyvyan (2010) Figurative language understanding in LCCM theory. *Cognitive Linguistics* 21: 601-662.

García-Miguel, José (2007) Clause structure and transitivity. In Dirk Geeraerts and Hubert Cuyckens (eds.) *The Oxford handbook of cognitive linguistics*, 753-781. Oxford: Oxford University Press.

Handl, Sandra (2011) *The conventionality of figurative language*. Tübingen: Narr Verlag.

Herbst, Thomas, David Heath, Ian F. Roe, and Dieter Götz (2004) *A valency dictionary of English*. Berlin: Mouton de Gruyter.

Hilpert, Martin (2006) Keeping an eye on the data: Metonymies and their patterns. In Anatole Stefanowitsch and S. Gries (eds.). *Corpus-based approaches to metaphor and*

metonymy, 123-151. Berlin: Mouton de Gruyter.
Momiyama, Yosuke (2002) *Ninchi imiron-no shikumi*. [*The Mechanism of Cognitive Semantics*.] Tokyo: Kenkyusha.
Okada, Sadayuki (2009) Comparative Standards and the Feasibility of Conceptual Expansion. *Cognitive Linguistics* 20: 395-423.
Reinhart, Tanya and Eric Reuland (1993) Reflexivity. *Linguistic Inquiry* 24: 657-720.
Sweep, Josephine (2009) Metonymy without a referential shift. In Bart Botma and Jaqueline van Kampen (eds.) *Linguistics in the Netherlands 2009,* 103-114. Amsterdam: John Benjamins.
Waltereit, Richard (1999) Grammatical constraints on metonymy. In Klaus-Uwe Panther and Günter Radden (eds.) *Metonymy in language and thought,* 233-253. Amsterdam: John Benjamins.

DICTIONARIES

Digital daijisen 2009 ver. (2009) Tokyo: Shogakukan.
Digital daijisen on-line, as of February 2017. https://dictionary.goo.ne.jp/jn/
Eijiro on the web, as of March, 2016. http://eow.alc.co.jp/
Shin eiwa daijiten [Kenkyusha's new English-Japanese dictionary] 6th ed. (Digital version) (2002) Tokyo: Kenkyusha.
Koodansha Nihongo Daijiten 2nd ed. (1995) Tokyo: Kodansha.
Koojien 6th ed. (Digital version) (2008) Tokyo: Iwanami shoten.
Nihon kokugo daijiten 2nd ed. (2000-2002) Tokyo: Shogakukan.
Oxford English dictionary ver. 4.0 on CD-ROM (2009) Oxford: Oxford University Press.
Proguressube eigo gyakubiki jiten. [Progressive reverse English-Japanese dictionary] (1999) Tokyo: Shogakukan.
Gyakubiki eigo meishifukukougo jiten. [Reverse dictionary of English nominal compounds](1998) Tokyo: Hokuseido.
Koojirin 6th ed. (1983) Tokyo: Sanseido.

CORPORA

British National Corpus Online (BNC) Shogakukan Corpus Network
https://scnweb.japanknowledge.com/BNC2/.
Balanced Corpus of Contemporary Written Japanese (BCCWJ)
https://chunagon.ninjal.ac.jp/bccwj-nt/search.

Sadayuki Okada
okadas@let.osaka-u.ac.jp

NOMINAL CONCEPTUAL EXPANSIONS IN PREDICATIONAL AND MODIFICATIONAL CONTEXTS

APPENDIX A

The whole table for section C (English)

Word	Sense	Argument	Adjunct	Head	Modifier
Finger	finger-like object	◎	◎	○	○
Waist	waist-like part	◎	◎	○	○
Ear	sense of hearing	◎	◎	○	○
	listener	◎	○non-West-Indian		
Hair	hair style	◎	◎	○	○
	hair-like part	◎	(○cross)	○	○
Brain	intellect	◎	○first-class	○	○
	consciousness/ sense	◎	◎	○	○
	person	◎	○business	○	○
Shoulder	shoulder-like part	◎	◎	○	○
	shoulder injury	◎			
	person	○fatherly			
Back	back part	◎	◎	○	○
	backward space	◎	◎	○	○
	temporal pastness	(○play)	(○flash)	○	○
	reverse direction	(○splash)	(○splash)	○	○
Brow	top/edge	◎	◎	○	○
	intelligence	○middle	○middle	○	○
	complexion	◎	○fierce, angry	○	
	person	○sulky			
Foot	measuring unit	◎	◎	○	○
	base/bottom	◎	◎	○	○
	soldier	◎	○45th	○	○
	rhyme unit	(◎)	(○rhythmic)	○	
Mouth	opening	◎	◎	○	○
	words	◎	◎	○	○
	person	○every		○	
	speaker	(○loud)	(○big)	○	
Heel	shoe/sock	◎	◎	○	○
	bottom part	◎	◎		
	villain	◎			
	kicking in a scrum	◎			
	person			○	

Nose	top/front	◎	◎	○	○
	smell	◎	○fruity, lemony	○	○
	instinct/sense of smell	◎	◎	○	○
	interest	○collective			
	person			○	○
Face	surface/front	◎	◎	○	○
	complexion	◎	◎	○	○
	prestige/honor	◎	(○public)	○	○
	external appearance	◎			
	person	◎	○new	○	
	type face	(○bold)	(○bold)	○	
Head	leader	◎	◎	○	○
	top/front	◎	◎	○	○
	mind	◎	◎	○	○
	person	○good	◎	○	○
	head-like object	◎	(○flower)	○	○
	knowledge/ intelligence	◎	(○good)	○	○
	addict	(○acid, pot)	(○acid)	○	○
Eye	eye-like object	◎	◎	○	○
	vision/sight	◎	◎	○	○
	observer/ vigilance	◎	○watchful	○	○
	perspective	◎	◎	○	
	disposition in the eye	○evil, glittering	○covetous	○	
	line of sight	◎		○	○
	attention	◎	◎		○
	aim/interest	◎	◎		
	region	○black	○black	○	
Hand	person/worker	◎	○helping	○	○
	control	◎	○physician’s	○	○
	assistance	◎		○	○
	skill/labor	◎		○	○
	writing	◎	○flowing	○	
	player’s cards	○good	○anti-Protestant	○	
	side	(○right)	○one, other	○	
	hand-like object	(○hour)	(○hour)	○	○
	clapping	(○big)	(○big)	○	

TOTAL	-	58 (◎ 49 ○ 9)	44 (◎28 ○16)	58	45
+ extra	-	67 (◎50 〇17)	56(◎28 〇28)	-	-

APPENDIX B

The whole table for section C (Japanese)

Word	**Sense**	**Argument**	**Adjunct**	**Head**	**Mod-ifier**
髭 beard	beard-like object	○ 玉 蜀 黍 の (corn's)	◎	○	○
	person	◎	○奴		
のど throat	voice	◎	◎		○
	throat-like part	◎	◎		
肩 shoulder	shoulder-like part	◎	○洋服の (clothes')	○	○
	throwing ability	◎		○	
耳 ear	sense of hearing	◎	◎	○	○
	tip of a thing	○パンの(bread's)	○木綿豆腐の (tofu's)	○	○
	listener		◎		
臍 navel	temper	◎	◎		○
	navel-like object	◎	◎		
	center	◎	◎		
腕 arm	arm-like object	◎	◎	○	○
	skill	◎	◎	○	○
	power				○
鼻 nose	top/tip	(○岬の(cape's))	○岬の(cape's)	○	○
	beginning	(○出(issuing))	◎	○	
	sense of smell	◎	○鋭い(keen)		
	snivel	◎			
腹 belly	belly-like part	○ゆびの(finger's)	○ゆびの (finger's)	○	○
	mind	◎	◎	○	○
	anger	◎	◎	○	○
	baby		(○中宮 (Empress))	○	
腰 lower-back	waist-like (central) part	○裳の(clothes')	○巾着の (pouch's)	○	○
	attitude	◎		○	
	elasticity	◎		○	○

	sword			○	
頭 head	beginning	○来週(next week)	◎		○
	person	○坊主(bold head)		○	○
	mind	◎	◎		
	intelligence	◎	◎	○	
	hair	◎			
首 neck	head	◎	◎	○	○
	neck-like part	◎	◎	○	
	life	◎	○左兵衛督の (Sahyoe's)		
	status	◎			
	unemployment	◎			
	beheading		○首の座 (room for)		
	top/front	○乳(nipple)	○乳(nipple)	○	
顔 face	person	○よく見る (frequent)		○	○
	attitude	○物わかりのいい (understanding)	○素知らぬ (indifferent)	○	
	complexion	◎	○疲れた(tired)	○	○
	representative	○社の(shrine's)	○魚町銀天街の (shopping street's)	○	○
	credit	◎			○
	aspect	○違う(different)			
	looks	◎	◎		
口 mouth	opening	◎	◎	○	○
	taste	◎		○	○
	words	◎	◎	○	○
	beginning	(○秋(autumn))	(○秋(autumn))	○	○
	person			○	○
	job	○護衛の(guard's)			
	unit	(○一(one))	(○一(one))	○	○
	tip			○	
足 leg	leg-like part	◎	◎	○	○
	bottom			○	○
	walking/running	◎	◎	○	○
	transportation	(◎)	◎	○	○
	transition	○陽(sun)	(○日(sun))	○	
	speed	(○船(ship))	(○逃げ (escaping))	○	
	trace/vestige	◎			
	coming/going	○グルメ達の (gourmets')		○	
	distance	(◎)			

目 eye	vision/sight	◎	◎	○	○
	eye-like object	(○台風の (typhoon's))	(○台風の (typhoon's))	○	○
	section	(○境(border))	(○境(border))	○	○
	pattern/space in pattern	(◎)	(○網(net))	○	○
	disposition	◎	○好奇の (curious)	○	○
	attention	◎			○
	scale/division of scale		(◎目一杯(full))	○	○
	perspective	◎	○男の(male)	○	○
	line of sight	◎	○まっすぐな (straight)		
	affection	◎			
	state/situation	○見た(apparent)	○見た(apparent)	○	
	experience	○痛い(hurting)		○	
	person			○	
	prospect	(○勝ち(winning))	(○勝ち (winning))	○	
手 hand	hand-like object	(○熊(bear-like))	(○熊(bear-like))	○	○
	handwriting			○	○
	skill/labor	◎	○人の(human)	○	○
	move in a game	◎	(○三十三(33))	○	○
	means/method	◎	○あの(that)	○	○
	person/worker	◎	○男(male)	○	○
	cooperation	○奥さんの(wife's)			
	Injury	(○深(deep))	(○痛(hurting))	○	○
	control	○曹操の (Cao Cao's)		○	○
	type/kind	(○この(this))	○この(this)	○	○
	act	◎		○	
	army	(○寄せ(attacking))	(○寄せ (attacking))	○	○
	side	(○裏(back))	(○山(mountain))	○	
	money	(○酒(sake))	(○元(capital))	○	
	clapping	(○八開 (eight-tim)))		○	
	route/passage	(○水の(water's))	(○水の(water's))	○	
	relation	(◎)			○
TOTAL		62(◎45○17)	45(◎25○20)	66	51
+ extra		83(◎49○34)	63(◎26○37)	-	-