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What a nominal predicate may mean: eel, merfolk, and other creatures

https://doi.org/10.1515/ling-2023-0126
Received June 21, 2023; accepted July 7, 2024; published online October 1, 2024

Abstract: A nominal predicate construction (NPC; e.g. "Cicero is {Tully/an orator}") typically indicates the relation of identity or inclusion. NPCs, however, may receive marked interpretations as well, as in "I'm the ham sandwich" and "Their car is a peculiar color"; the former does not entail that the speaker is identical to the sandwich, and the latter does not entail that the car belongs to a set of colors. This article identifies, classifies, and analyzes such marked NPCs in English and Japanese, thereby enriching the taxonomy of NPCs acknowledged in the existing literature. It will be argued that both Japanese and English NPCs may indicate either (i) one of a handful of relatively specific semantic relations including the one of identity/inclusion, or (ii) an unspecified relation that is to be contextually inferred. The English NPC is semantically less flexible than the Japanese one, being compatible with a narrower range of specific semantic relations and allowing the unspecified-relation interpretation less leniently. The English NPC, on the other hand, is more liberally used in comparison to its counterparts in some related languages (e.g. German). The analysis put forth makes a good vantage point for general-linguistic and typological inquiries as to how languages in general may contrast with each other in terms of what types of situations can be described with a NPC.

Keywords: nominal predicate construction; eel construction; mermaid construction; deferred equative; Japanese; English

1 Introduction

It has been acknowledged in the literature that nominal predicate constructions (NPCs) – those constructions where a noun phrase, often accompanied by a copula, is predicated over a subject noun phrase – come in different varieties. Higgins's (1979) four-way taxonomy of copular constructions, which largely overlap with NPCs, has been highly influential.

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(1) a. **equative**
Cicero is Tully.
b. **predicational**
Cicero is {an orator/famous/at the podium}.
c. **specificational**
The director of Anatomy of a Murder is Otto Preminger.
d. **identificational**
That (woman) is Sylvia.
([a], [c], and [d] from Mikkelsen 2011: 1806)

How the putative four types are related to each other, and whether this taxonomy could be simplified or improved in one way or another, have been matters of debate (Mikkelsen [2011] and references therein). It will be fair to say that, at any rate, the equative and predicational constructions are the less marked among the four types.[1]

This work aims to identify and analyze some marked varieties of nominal predicate constructions in English and Japanese, which superficially resemble Higgins's equative/predicational constructions but receive rather different interpretations. This amounts to developing a more elaborate taxonomy of NPCs, from a perspective distinct from those taken in the prominent existing studies of NPCs, such as Partee (1986), Rieppel (2007), and Mikkelsen (2011).

Henceforth, I will refer to Higgins's equative construction as the "identity-type NPC", and his predicational construction with a nominal predicate as the "inclusion-type NPC". Furthermore, the two will be collectively referred to as the identity/inclusion-type NPC. (2a, b) respectively illustrate an identity-type NPC and an inclusion-type NPC from Japanese;[2] the choice between *wa* and *ga* on the subject is concerned with the pragmatic-functional status of the subject, *ga* signaling the subject being the focus or a part thereof (Oshima [2021] and references therein).

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1 With a specificational construction, the subject of a question tag does not match the subject of the anchor (the main clause), suggesting that the (apparent) subject NP plays a role distinct from the one that the subject of a typical clause, including the equative and predicational constructions, plays.

(i) *The director of Anatomy of a Murder is Otto Preminger, isn't it?*
(Mikkelsen 2011: 1810)

An identificational clause is characterized by having a demonstrative NP as its subject; according to Higgins (1979: 237), it is "typically used for teaching the names of people or of things".

2 The abbreviations used in glosses are: Acc = accusative, Attr = attributive, Aux = auxiliary, Caus = causative, Cl = classifier, Comp = complementizer, Cop = copula, Dat = dative, DP = discourse particle, Gen = genitive, Ger = gerund, Hon = honorific, HonT = honorific title, Inf = infinitive, LM = linking marker, Neg = negation, NegAux = negative auxiliary, Nom = nominative, Npfv = nonperfective, Pl = plural, Plt = polite, Pot = potential, Prs = present, Pst = past, Psv = passive, SHon = subject honorific, Th = thematic *wa* (ground/topic-marker).

(2) a. *Raicho {wa/ga} Haru da.*
R. {Th/Nom} H. Cop.Prs
'Raicho is Haru.'
b. *Raicho {wa/ga} sakka da.*
R. {Th/Nom} writer Cop.Prs
'Raicho is a writer.'

I will take up three types of marked NPCs that express a relation other than the one of identity or inclusion. The first is *the attribute-specificational NPC*, where a certain attribute (size, age, color, etc.) of the subject NP's referent is described. Examples from English are provided in (3). To my knowledge, the markedness of this type of NPCs has attracted little attention in the literature.

(3) a. *The fish was {(about) this/#a}* ***size****.*
b. *My tongue is a #(strange)* ***color****.*
c. *Your mother was your* ***age*** *when she started her business.*

The attribute-specificational NPC is also found, and comes in a wider variety, in Japanese.

The second type is *the associative NPC*, which exists in Japanese but not in English. An associative NPC expresses that the subject NP's referent, a sentient entity, is associated with the predicate NP's referent, an abstract entity, in a certain way. A key feature that characterizes this construction is that its predicate NP is necessarily accompanied by a complement clause (whose subject is often null and coreferential with the matrix subject). Two examples are given in (4).

(4) a. *Ken wa jinin suru* ***ikoo*** *da.*
K. Th resign do.Prs intention Cop.Prs
'Ken intends to resign.'
b. *Ken wa koohii wa karada ni ii toiu* ***iken*** *da.*
K. Th coffee Th bodt Dat good.Prs LM opinion Cop.Prs
'Ken is of the opinion that coffee is good for health.'

The associative NPC extensionally overlaps with, but does not completely match, what has been called the "mermaid construction" in the literature.

The third type of the semantically marked NPC is *the open-ended-relation NPC*; one example each from English and Japanese is given in (5)/(6).

(5) (a restaurant customer to a waitperson who brought several dishes to the table)
I'm ***the ham sandwich****.*

(6) *Boku {wa/ga}* ***unagi*** *da.*
I {Th/Nom} eel Cop.Prs
'I ate some eel, I caught an eel, I study the life of eel, …'

In an open-ended-relation NPC, the semantic relation between the subject and predicate NPs is hardly constrained, and the hearer needs to identify it based on contextual cues. The open-ended-relation NPC in English is discussed under the rubric of "deferred equative" by Ward (2004); the one in Japanese has been called the "eel construction (eel sentence)", after an oft-cited example involving *unagi* 'eel' as its predicate NP (Hoffer 1972: 220–222; Okutsu 1978; Sakahara 1996; Tokizaki 2003).

I will examine the features and licensing conditions of these marked NPCs from grammatical, semantic, and pragmatic perspectives, and develop a formal semantic analysis for each type. It will furthermore be discussed that, while both languages have an attribute-specificational NPC and an open-ended-relation NPC, there are some interesting differences. Pointers to future cross-linguistic investigations will be provided toward the end.

2 Default and non-default interpretations

One of my key claims is that an NPC (in a given language) can be polysemous in a way similar to how Vikner and Jensen (2002) discuss that the English prenominal genitive construction, "N_1's N_2", is.

It has long been observed that in the genitive construction, the semantic relation holding between the referents of N_1 and N_2 can be of various kinds. Vikner and Jensen (2002: 192) remark that the NP *the girl's teacher* "may refer to the person who is the teacher of the girl, or to the teacher she has married, or to the teacher she is going to interview, or to the teacher she is blackmailing, or to the teacher she is dreaming of, etc."

They argue that the possible interpretations of the genitive construction can be sorted into two major types. On the first type, which they term the *lexical* (or default) interpretations, the construction indicates that one of the following four semantic relations holds between the referents of N_1 and N_2: (i) the inherent relation, (ii) the part-whole relation, (iii) the agentive (creatorship) relation, and (iv) the control relation (subsuming ownership).

(7) a. *the girl's teacher*
'the person who is the teacher of the girl' (inherent relation)
b. *the girl's nose*
'the nose which is part of the girl' (part-whole relation)
c. *the girl's poem*
'the poem that the girl has written' (agentive relation)
d. *the girl's car*
'the car which the girl has at her disposal' (control relation)
(adapted from Vikner and Jensen 2002: 195)

These four interpretations are "privileged" in being available without a supporting context, although the availability of each is constrained by the lexical semantics of N_1 and N_2 (hence the label "lexical interpretation"). For the inherent relation to hold, N_2 has to be a relational nominal, such as *sister*, *picture*, or deverbal *arrival*, and furthermore its selectional constraints have to be compatible with N_1. For the part-whole relation to hold, the referent of N_2 must be a plausible mereological part of that of N_1, which is the case for *the car's tires* but not for *the tree's tires*. The agentive relation may hold only between an entity with intellectual capacity and an artifact. The control relation is constrained relatively loosely, but still requires N_1 to refer to a sentient entity.

On top of these four lexical interpretations, Vikner and Jensen (2002) posit the *pragmatic* (or non-default) interpretation, on which the construction merely indicates that some sort of pragmatically significant relation holds between the referents of N_1 and N_2, yielding "a heterogeneous mass" of interpretations such as follows:

(8) a. *the girl's teacher*
'the teacher whom the girl has married, the teacher she is dreaming of, …'
b. *the girl's nose*
'the nose that the girl has drawn, the nose that she has operated on, …'
c. *the girl's poem*
'the poem that the girl has discovered, the poem she is always talking about, …'
d. *the girl's car*
'the car which the girl has ordered, the car she has smashed to pieces, …'
(adapted from Vikner and Jensen 2002: 195)

A hallmark of the pragmatic interpretation is that, unlike the lexical ones, it requires an appropriate supporting context. In Vikner and Jensen's (2002: 195) words: "the construction of pragmatic interpretations […] cannot be carried out on the basis of lexical knowledge alone, but depends essentially on pragmatic knowledge and discourse knowledge".

While Vikner and Jenssen's division of lexical and pragmatic interpretations seems highly sensible, I find these labels somewhat misleading, as it is clear that the hearer often picks up the intended "lexical" interpretation (e.g. to determine whether *the girl's painting* is to be assigned the relational, agentive, or control interpretation) based on pragmatic considerations, and that the lexical contents provide crucial clues for the hearer to successfully figure out whether a "pragmatic" or "lexical" interpretation is intended and, if the former is the case, what kind of pragmatic relation is at issue. For this reason, I will henceforth use the term *specific-*

relation interpretation in place of "lexical" interpretation, and the term *open-ended-relation* interpretation in place of "pragmatic" interpretation.

I adopt here the run-of-the-mill treatment of the English definite NP as a generalized quantifier (GQ) with an existence/maximality presupposition, as in (9); "$\sqsubseteq$" stands for the (individual or material) parthood relation (Link 1998).[3]

(9) *the meaning of the definite NP* "the *α*"
$\lambda P[\exists x{:}\alpha'(x) \,\&\, \forall y[\alpha'(y) \rightarrow [y \sqsubseteq x]][P(x)]]$
$\Leftrightarrow \lambda P[\iota x{:}\alpha'(x)[P(x)]]$
(e.g. $\lambda P[\iota x{:}\mathbf{girl}(x)[P(x)]]$)

(10) For any context c, world w, and assignment g, $[\![\exists x{:}\phi[\psi]]\!]^{c,w,g}$ is defined only if $[\![\hat{}\exists x[\phi]]\!]^{c,w,g} \in$ CG(c) (i.e., it is common ground in c that "$\exists x[\phi]$"); if defined, $[\![\exists x{:}\phi[\psi]]\!]^{c,w,g} = [\![\exists x[\phi \,\&\, \psi]]\!]^{c,w,g}$.

By and large following Vikner and Jenssen's formulations, I will assume that a given instance of the English genitive construction conveys one of the five constructional meanings schematically represented in (11). Proper names like *Ann* too are taken to denote GQs here (e.g. $Ann \mapsto \lambda P[P(\mathbf{ann})]$).

(11) *the meaning of* "*α*'s *β*"

a. **the specific-relation interpretations**

i. the inherent interpretation (e.g. *Ann's teacher*)
$\lambda X[\lambda Q[\lambda P[\iota x{:}X(\lambda y[Q(x,y)])[P(x)]]]](\alpha')(\beta')$
(e.g. $\lambda P[\iota x{:}\mathbf{teacher\text{-}of}(x,\mathbf{ann})[P(x)]]$)

ii. the part-whole interpretation (e.g. *Ann's nose*)
$\lambda X[\lambda Q[\lambda P[\iota x{:}Q(x) \,\&\, X(\lambda y[\mathbf{part\text{-}of}(x,y)])[P(x)]]]](\alpha')(\beta')$
(e.g. $\lambda P[\iota x{:}\mathbf{nose}(x) \,\&\, \mathbf{part\text{-}of}(x,\mathbf{ann})[P(x)]]$)

iii. the agentive interpretation (e.g. *Ann's poem*)
$\lambda X[\lambda Q[\lambda P[\iota x{:}Q(x) \,\&\, X(\lambda y[\mathbf{creator\text{-}of}(y,x)])[P(x)]]]](\alpha')(\beta')$
(e.g. $\lambda P[\iota x{:}\mathbf{poem}(x) \,\&\, \mathbf{creator\text{-}of}(\mathbf{ann},x)[P(x)]]$)

iv. the control interpretation (e.g. *Ann's car*)
$\lambda X[\lambda Q[\lambda P[\iota x{:}Q(x) \,\&\, X(\lambda y[\mathbf{control}(y,x)])[P(x)]]]](\alpha')(\beta')$
(e.g. $\lambda P[\iota x{:}\mathbf{car}(x) \,\&\, \mathbf{control}(\mathbf{ann},x)[P(x)]]$)

b. **the open-ended-relation interpretation** (e.g. *Ann's politician*)
$\lambda X[\lambda Q[\lambda P[\iota x{:}Q(x) \,\&\, X(\lambda y[\mathbb{R}(y,x)])[P(x)]]]](\alpha')(\beta')$
(e.g. $\lambda P[\iota x{:}\mathbf{politician}(x) \,\&\, \mathbb{R}(\mathbf{ann},x)[P(x)]]$)
where $\mathbb{R}$ is a free variable to be evaluated as the contextually relevant relation.

3 "$\sqsubseteq$" occurring in (9) is interchangeable with "=" in cases where *α* is a singular count noun.

In what follows, I will discuss (i) that the English NPC may receive two major types of specific-relation interpretations: (a) the unmarked "identity/inclusion" interpretation and (b) the "attribute-specificational" interpretation, and the Japanese NPC may receive one more type: (c) the "associative" interpretation; and (ii) that the NPCs in both languages allow an open-ended-relation interpretation, but the Japanese NPC does so more readily than the English one.

3 The attribute-specificational NPC

In English sentences like (12a–c) (≈ [3] above) and Japanese ones like (13a–c), the predicate NP denotes a certain feature of the referent of the subject, rather than (i) the referent of the subject itself (as in *Cicero is Tully*) or (ii) the set of entities, or collection of substance, to which the subject NP's referent belongs (as in *Cicero is an orator*, *This liquid is aqua regia*).

(12) a. *The fish was (about) this* ***size****.*
b. *My tongue is a strange* ***color****.*
c. *Your mother was your* ***age*** *when she started her business.*

(13) a. *Sakana wa kono kurai no* ***ookisa*** *datta.*
fish Th this approximately Cop.Attr size Cop.Pst
'The fish was about this size.'
b. *Shita ga hen na* ***iro*** *da.*
tongue Nom strange Cop.Attr color Cop.Prs
'(My/your/his/her/…) tongue is a strange color.'
c. *Sono toki, okaasan wa ima no kimi to onaji* ***nenrei*** *datta.*
that time mother Th now Gen you with same age Cop.Pst
'At that time, (your) mother was the same age as you are now.'

I will refer to (i) this type of NPCs as the "attribute-specificational NPC", (ii) the relation between the subject and predicate NPs expressed there as the "attribute specification", and (iii) the head of the predicate NP as the "attribute noun". The choice of the term "attribute" is inspired by the notion of attribute-value pairs utilized in constraint-based syntactic theory and elsewhere. (14), adapted from Sag et al. (2003: 53), exemplifies a bundle of attribute-value pairs represented in the form of attribute-value matrix (AVM).

(14)

NAME	Stanford University
FOUNDERS	⟨Leland Stanford, Jane Stanford⟩
YEAR OF FOUNDATION	1881
PHONE NUMBER	650-723-2300

In many cases (but not always; see below), an attribute noun must be accompanied by a modifier, such as an adjective, genitive, or exophoric or anaphoric demonstrative (*The beast was the size #*[*of a sedan*], *My tongue is a #*[*strange*] *color*).

Not all languages have an attribute-specificational NPC; sentences like (12a–c), for example, are not amenable to word-by-word translation into German or French.

(15) a. *My car is the same color as yours.*
b. *Mein Auto {hat/#ist} die gleiche Farbe wie deins.* (German)
(lit.) 'My car {has/is} the same color as yours.'
c. *Ma voiture est #(de) la même couleur que la tienne.* (French)
(lit.) 'My car is (of) the same color as yours.'

How commonly the attribute-specificational NPC is found across languages and language families, and in what ways different languages may contrast as to what types of attribute-specificational NPC they tolerate, are interesting issues calling for systematic inquiries. In what follows, I will compare the patterns in English and Japanese in some detail, as an initial step to such cross-linguistic investigations.

3.1 The semantic types of attribute nouns

3.1.1 State concepts expressible with attribute nouns

Concepts expressible with an attribute noun largely overlap with ones expressible with an adjective; indeed, oftentimes an attribute-specificational NPC can be approximately paraphrased with an adjectival predicate construction.[4]

(16) a. *The fish was (about) this **size**.*
*≈ The fish was (about) this **big**.*
b. *He'll soon be the same **height** as me.*
*≈ He'll soon be as **tall** as (but not **taller** than) me.*
c. *It is not the same **quality** as the earlier model.*
*≈ It is **worse** (or **better**) than the earlier model.*
([b] and [c] adapted from Huddleston 2002: 1139)

4 Some attribute-specificational nominal predicates and adjectival predicates can be paraphrased with prepositional predicates involving "*of* + NP" (Pullum and Huddleston 2002: 659).

(i) *This box is **of** the same size as that one. ≈ This box is the same size as that one. ≈ This box is as large as that one.*

(ii) *This matter is **of** much importance. ≈ This matter is very important.*

This work will not discuss how this construction compares with, and may be diachronically related with, the attribute-specificational NPC and the adjectival construction.

To systematically examine what types of concepts are amenable to rendition with an attribute-specificational NPC, I tentatively posit the following list of major classes of state concepts, building on Dixon's (2010: 73–76) list of semantic types that are expressible, in at least some languages, with the adjective category.[5]

(17)
- a. AGE: 'new', 'young', 'old', etc.
- b. VALUE: 'good', 'bad', 'expensive', 'important', 'popular', 'valuable', etc.
- c. COLOR: 'red', 'black', 'white', etc.
- d. PHYSICAL PROPERTY
  - i. SIZE: 'big, 'small', 'tall', 'wide', 'deep', etc.
  - ii. WEIGHT: 'heavy', 'light', etc.
  - iii. SHAPE: 'round', 'flat', etc.
  - iv. HARDNESS/TEXTURE: 'hard', 'soft', 'smooth', etc.
  - v. HEAT/LIGHT: 'hot (with a high temperature)', 'bright', etc.
  - vi. TASTE/SMELL: 'sweet', 'tasty', 'stinky', etc.
  - vii. SOUND: 'quiet', 'loud', etc.
  - viii. CLEANLINESS: 'clean', 'dirty', etc.
  - ix. (CORPORAL/MENTAL) CONDITION: 'healthy', 'ill', '(a)live', 'dead', 'awake', 'asleep', 'crazy', 'blind', etc.
  - x. SEX: 'male', 'female', etc.
  - xi. ATTIRE: 'dressed', 'naked', etc.
  - xii. (PHYSICAL) BEHAVIOR: 'lying', 'upright', 'smiley', 'frowny', etc.
- e. COGNITIVE PROPERTY
  - i. PROPENSITY: 'kind', 'wise', 'generous', 'cruel', 'polite', etc.
  - ii. (EMOTIONAL/SENSATIONAL) QUALE: 'angry', '(in a state of feeling) sad', 'surprised', 'hungry', 'in pain', etc.
  - iii. IMPRESSION: 'fun', 'surprising', 'scary', 'painful', 'pleasant', etc.
- f. SPEED: 'fast', 'quick', 'slow', etc.
- g. WEATHER: 'rainy', 'sunny', 'cloudy', etc.
- h. DIFFICULTY: 'easy', 'difficult', etc.
- i. SIMILARITY: 'similar', 'different', 'identical', etc.

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5 Dixon's (2010) original list is as follows:

(i) **Set A** (expressible with adjectives in the most languages): (1) DIMENSION, (2) AGE, (3) VALUE, (4) COLOR
Set B (expressible with adjectives in a large number of languages): (5) PHYSICAL PROPERTY, (6) HUMAN PROPENSITY, (7) SPEED
Set C (expressible with adjectives in a relatively small number of languages): (8) DIFFICULTY, (9) SIMILARITY, (10) QUALIFICATION, (11) QUANTIFICATION, (12) POSITION, (13) CARDINAL NUMBER

My list departs from and elaborates on Dixon's in several ways.

j. NORMALITY: 'normal', 'ordinary', 'special', 'strange', 'common', 'rare', etc.
k. NAME: 'named (X)', 'dubbed (as X)', etc.
l. POSITION
  i. SPATIAL POSITION: 'near', 'far', 'right', 'left', 'third (in terms of position)', etc.
  ii. TEMPORAL POSITION: 'soon', 'current', 'previous', 'third (in terms of time)', etc.
m. QUANTITY: 'all', 'many', 'three', 'enough', 'abundant', 'frequent', etc.
n. MODALITY: 'possible', 'likely', 'necessary', etc.
o. OTHER TYPES
  i. TAXONOMIC CLASS: 'mammalian', 'French', 'organic', etc.
  ii. NON-TAXONOMIC: 'dangerous', 'abstract', 'general', etc.

Concepts such as 'tasty' and 'pleasant', which are placed in TASTE and IMPRESSION respectively, may sensibly be cross-listed in VALUE.

The range of attributes that can be described with an attribute-specificational NPC covers many of the semantic types in (17). Some instances of SIZE, AGE, and COLOR are already given in (12) and (16), and instances of some other types are provided below.[6]

(18) (VALUE; see also [16c])
  a. *This coin is the same **value** as that bill.*
  b. *Kono kooka wa ano shihei to onaji **kachi** da.*
  this coin Th that bill with same value Cop.Prs
  'This coin is the same value as that bill.'

(19) (PHYSICAL PROPERTY)
  a. *This pot is exactly the same **weight** as that box.* (WEIGHT)
  a′. *Kono tsubo wa ano hako to onaji **omosa** da.*
  this pot Th that box with same weight Cop.Prs
  'This pot is the same weight as that box.'
  b. *The building was a very peculiar **shape**.* (SHAPE)
  b′. *Sono tatemono wa dokutoku na **katachi** datta.*
  that building Th peculiar Cop.Attr shape Cop.Pst
  'That building was a peculiar shape.'

6 For some examples to be presented in this section, acceptability judgments are unstable and may vary across speakers. The choice of the subject NP and the modifier on the predicate noun, as well as the TAM features of the predicate (e.g., finite or infinite, present- or past-tensed), seem to affect the acceptability of the use of individual (instances of) nouns as attribute nouns considerably. To systematically inquire what factors may increase or decrease the acceptability to what extent in individual cases, and what patterns may be found in the way speakers' intuitions diverge, is a task that goes beyond the scope of the current work.

c. *That light bulb is the same **{temperature/brightness}** as that one.* (HEAT/LIGHT)
c′. *Kono denkyuu wa ano denkyuu to onaji **{ondo/akarusa}***
this light.bulb Th that light.bulb with same temperature/brightness
da.
Cop.Prs
'This light bulb is the same {temperature/brightness} as that light bulb.'
d. *The two participants must be the same **{sex/gender}**.* (SEX)
d′. *Futari no sankasha wa onaji **{seibetsu/jendaa}** de*
two Cop.Attr participant Th same sex/gender Cop.Inf
nai to ikenai.
NegAux.Prs if go.Neg.Prs
'The two participants have to be the same {sex/gender}.'

(20) (DIFFICULTY)
a. *All the problems are supposed to be about the same {(?)**difficulty/level**}.*
b. *Subete no mondai ga onaji kurai no*
all Cop.Attr problem Nom same approximately Cop.Attr
***{nan'ido/reberu}** no hazu da.*
difficulty/level Cop.Attr ought Cop.Prs
'All the problems should be about the same {difficulty/level}.'

(21) (SPATIAL POSITION)
a. *The hospital is a considerable **distance** from here.*
b. *Byooin wa koko kara kanari no **kyori** da.*
hospital Th here from considerable Cop.Attr distance Cop.Prs
'The hospital is a considerable distance from here.'

(22) (TAXONOMIC CLASS)
a. *This red fish is the same **species** as that black fish. (They are both Cyprinus carpio.)*
a′. *Kono akai sakana wa ano kuroi sakana to onaji **shu***
this red.Prs fish Th that black.Prs fish with same species
da.
Cop.Prs
'This red fish is the same species as that black fish.'
b. *The two art works are totally different **genres**.*
b′. *Futatsu no sakuhin wa mattaku chigau **janru** da.*
two Cop.Attr art.work Th totally differ.Prs genre Cop.Prs
'The two art works are totally different genres.'

Note that an attribute-specificational NPC's "covering" a semantic type does not necessarily mean that every noun of that type can serve as an attribute noun. For

example, the noun *importance* can sensibly be regarded as belonging to the same semantic category as *value* (i.e., the VALUE class), but cannot be naturally used as an attribute noun.

(23) a. *??Luck is (about) the same **importance** as effort.*
(cf. *Luck is (almost) as important as effort.*)
b. *??Kooun wa doryoku to onaji (kurai no)* ***taisetsusa*** *da.*
luck Th effort with same approximately Cop.Attr importance Cop.Prs
(Luck is (almost) as important as effort.)

Some semantic types are systematically incompatible with both English and Japanese attribute-specificational NPCs, and some others are compatible only with the Japanese one. The concepts in CLEANLINESS, IMPRESSION, SIMILARITY, NORMALITY, and MODALITY seem to be generally at best marginal with both English and Japanese attribute-specificational NPCs.

(24) (CLEANLINESS)
a. *??This room is about the same **cleanliness** as that one.*
(cf. *This room is almost as clean as that one.*)
b. *??Kono heya wa ano heya to onaji kurai no*
this room Th that room with same approximately Gen
{kireisa/seiketsusa} *da.*
cleanliness/cleanliness Cop.Prs
(This room is almost as clean as that room.)

(25) (IMPRESSION)
a. *??This movie is about the same **scariness** as* Alien.
(cf. *This movie is about as scary as* Alien.)
b. *??Kono eiga wa* Alien *to onaji kurai no* ***kowasa*** *da.*
this movie Th *A.* with same approximately Cop.Attr scariness Cop.Prs
(This movie is almost as scary as *Alien.*)

(26) (SIMILARITY)
a. *??The two novels are (a) striking **similarity**.*
(cf. *The two novels are strikingly similar.*)
b. *??Futatsu no shoosetsu wa taihen na* ***ruijido*** *da.*
two Cop.Attr novel Th great Cop.Attr resemblance Cop.Prs
(The two novels are greatly similar.)

(27) (NORMALITY)
a. *??This painting is the same **{specialty/strangeness}** as that one.*
(cf. *This painting is as {special/strange} as that one.*)
b. *??Kono e wa ano e to onaji **{tokubetsusa/kimyoosa}***
this paiting Th that paiting with same speciality/strangeness
da.
Cop.Prs
(This painting is as {special/strange} as that painting.)

(28) (MODALITY)
a. *??Snow is the same **{probability/likelihood}** as rain.*
(cf. *Snow is as likely as rain.*)
b. *#Koosetsu wa koou to onaji **{kanoosei/mikomi}** da.*
snowfall Th rainfall with same possiblity/expectation Cop.Prs
(Snowfall is as {probable/likely} as rainfall.)

Some types of concepts are expressible only with a Japanese attribute-specificational NPC but not with an English attribute-specificational NPC.

(29) (SPEED)
a. *Ressha wa sugoi **{sokudo/supiido}** datta.*
train Th enormous.Prs velocity/speed Cop.Pst
'The train was running at a tremendous {velocity/speed}.'
b. *??The train was a tremendous **speed**.*

(30) (WEATHER)
a. *Getsuyoobi ga ichiban hidoi **tenki** datta.*
Monday Nom most terrible.Prs weather Cop.Pst
'The weather was most terrible on Monday.'
b. *#Monday was the most terrible **weather**.*

(31) (TASTE/SMELL)
a. *Soosu ga hen na **{aji/nioi}** datta.*
sauce Nom strange Cop.Attr taste/small Cop.Pst
'The sauce had a strange {taste/smell}.'
b. *??The sauce was a strange **{taste/smell}**.*

(32) (SOUND)
a. *Nibanme no oto wa saisho no oto to onaji*
second Cop.Attr sound Th first Cop.Attr sound with same
***{ookisa/onryoo}** datta.*
size/volume.of.sound Cop.Pst
'The {loudness/volume} of the second sound was the same as that of the first sound.'
b. *??The second sound was the same **loudness** as the first one.*

(33) (CONDITION)

a. *Ken wa (hidoi) **{haien/futsukayoi/ninchishoo}** da.*
K. Th terrible.Prs pneumonia/hangover/dimentia Cop.Prs
'Ken has (terrible) {pneumonia/hangover/dimentia}.'

a′. *Ken {#is/has} (severe) **{pneumonia/hangover/dimentia}**.*

b. *Ken wa (omoi) **byooki** da.*
K. Th serious.Prs illness Cop.Prs
'Ken is (seriously) ill.'

b′. *Ken {#is/has} (serious) **illness**.*

(34) (ATTIRE)

a. *Ken wa (guree no) **suutsu** datta.*
K. Th gray Cop.Attr suit Cop.Pst
'Ken wore a (gray) suit.'

b. *Ken {#is/wore} a (gray) **suit**.*

(35) (BEHAVIOR)

a. *Ken wa {katai / oni no yoo na}*
K. Th stiff.Prs demon Cop.Attr appearance Cop.Attr
***hyoojoo** datta.*
facial.expression Cop.Pst
'Ken had a {stiff/demon-like} facial expression.'

a′. *Ken {#was/had} a {stiff/demon-like} **expression**.*

b. *Ken wa {akarui / sensei no yoo na}*
K. Th cheerful.Prs teacher Cop.Attr appearance Cop.Attr
***kuchoo** datta.*
tone.of.voice Cop.Pst
'Ken was speaking in a {cheerful/teacher-like} tone of voice.'

b′. *Ken {#was/was speaking in} a {cheerful/teacher-like} **tone (of voice)**.*

c. *Ken wa {darashinai / kimyoo na} **shisei** datta.*
K. Th sloppy.Prs strange Cop.Attr posture Cop.Pst
'Ken was in a {sloppy/strange} posture.'

c′. *Ken was #(in) a {sloppy/strange} **posture**.*

(36) (PROPENSITY)

a. *Ken wa {kisaku na / fuugawari na} **seikaku** da.*
K. Th friendly Cop.Attr peculiar Cop.Attr personality Cop.Prs
'Ken has a {friendly/peculiar} personality.'

b. *Ken {#is/has} a {friendly/peculiar} **personality**.*

(37) (QUALE)

a. *Watashi wa {hen na / saitei no} **kibun** datta.*
I Th strange Cop.Attr terrible Cop.Attr mood Cop.Pst
'I was in a {strange/terrible} mood.'

a′. *I was #(in) a {strange/terrible} **mood**.*

b. *Ken wa {kurai / fukuzatsu na} **kimochi** ni natta.*
Ken Th dark.Prs complicated Cop.Attr feeling Cop.Inf become.Pst
'Ken {felt gloomy/had complicated feelings}.'

b′. *Ken {#was/#became/had} {a gloomy **feeling**/complicated **feelings**}.*

(38) (NAME)

a. *Kono ikimono wa hen na **namae** da.*
this creature Th peculiar Cop.Attr name Cop.Prs
'This creature has a strange name.'

a′. *This creature {#is/has} a strange **name**.*

b. *Sono eiga wa omoshiroi **taitoru** da.*
that movie Th interesting.Prs title Cop.Prs
'That movie has an interesting title.'

b′. *The movie {#is/has} an interesting **title**.*

(39) (QUANTITY)

a. *Ishi to kangoshi wa onaji **ninzuu** da.*
doctor and nurse Th same number.of.people Cop.Prs
'The number of doctors and that of nurses are the same.'

a′. *#The doctors and the nurses are the same **number** (**of people**).*

b. *(Teishoku no) gohan ga sugoi **ryoo** datta.*
set.meal Gen steamed.rice Nom enormous.Prs quantity Cop.Pst
'The quantity of the steamed rice (in the set meal) was huge.'

b′. *The steamed rice (in the set meal) was {#a huge **quantity**/was huge in quantity}.*

It was noted above that attribute nouns tend to have to be accompanied by a modifier. With the CONDITION- and ATTIRE-types in Japanese, however, this is not the case, it being possible for common nouns such as *haien* 'pneumonia' and *suutsu* 'suit' to serve as the predicate NP on their own. The central type of nouns that can serve as the attribute noun in the CONDITION-type is those referring to an ailment or illness (either corporal or mental). Ones referring to injuries (wounds, fracture, etc.) can be used in this way only marginally, and physical conditions like tooth decay and hemorrhoids come somewhere between. The acceptability of an attribute-specificational NPC with such a noun, however, may improve when situated in an appropriate discourse context.

(40) a. *#Ken wa (hitai no) **{kizu/sakkashoo}** da.*
K. Th forehead Gen wound/abrasion Cop.Prs
(Ken has a(n) {wound/abrasion} (on his forehead).)
b. *#Ken wa (hiza no) **kega** da.*
K. Th knee Gen injury Cop.Prs
(Ken has an injury (to his knee).)
c. *??Ken wa hidoi **kega** da.*
K. Th terrible.Prs injury Cop.Prs
(Ken is severely injured.)
d. ('Fortunately, there were no fatalities, but …')
*Ken wa hidoi **kega** datta.*
K. Th terrible injury Cop.Pst
'Ken was severely injured.'

(41) a. *??Ken wa **mushiba** da.*
K. Th tooth.decay Cop.Prs
(Ken has tooth decay.)
b. *?Ken wa hidoi **mushiba** da.*
K. Th terrible.Prs decayed.tooth Cop.Prs
(Ken has terrible tooth decay.)
c. ('All the employees received a free dental exam. Most of us were fine, but …')
*Ken wa hidoi **mushiba** datta.*
K. Th terrible.Prs decayed.tooth Cop.Pst
'Ken had terrible tooth decay.'

The ATTIRE-type tends to be more natural with its predicate NP referring to the whole or a "central piece" of the attire (e.g. suit, uniform, jacket, pants). Marginal clothing items or pieces of gear, such as shoes, gloves, and helmets, are not excluded, though, especially with contextualization.

(42) a. *Mari wa **{jiinzu/sukaato}** datta.*
M. Th jeans/skirt Cop.Pst
'Mari wore {a kimono/jeans/a skirt}.'
b. *?Mari wa **{suniikaa/buutsu}** datta.*
M. Th sneaker/boot Cop.Pst
'Mari wore {sneakers/boots}.'
c. *Mari wa **buutsu** datta node, hayaku hashirenakatta.*
M. Th boot Cop.Pst because fast run.Pot.Neg.Pst
'Mari could not run fast, because she wore boots.'

The observation that the semantic types covered by the Japanese attribute-specificational NPC properly subsume those covered by the English one suggests that different concepts are ordered in terms of how easily and commonly they are

expressed with an attribute-specificational NPC, leading to implicational patterns of the form: "If a language allows an attribute-specificational NPC whose predicate NP {denotes concept *α*/is of semantic type A} (say 'disease'/CONDITION), it also allows one whose predicate NP {denotes concept *β*/is of semantic type B} (say 'height'/SIZE)".

One notable pattern that appears to emerge from the observations on the two languages is: the more concrete and/or objectively discernible concepts are, the more amenable they are to expression by means of an attribute-specificational NPC. This likely has to do with the general nature of the noun category, which more often represents concrete and perceivable notions than not (nouns with abstract meaning are often derived from adjectives, as in *kindness* and *intimacy*).

Concepts in such domains as SIZE, WEIGHT, AGE, and COLOR, which are compatible with both English or Japanese attribute-specificational NPCs, are objectively measurable or identifiable. PROPENSITY and QUALE, which are compatible only with the Japanese attribute-specificational NPC, and IMPRESSION and NORMALITY, which are compatible with neither English nor Japanese attribute-specificational NPC, are comparatively less so. Issues like who is more friendly or happier than who, and what movie is the scariest or the most special, are much more prone to subjective dispute than issues like who is taller or heavier than who, who is the oldest, and what the color of a car is. It is worth pointing out here that some polysemous nouns may serve as an attribute noun readily only when a more concrete sense is at issue; (43) illustrates this point.

(43) a. *Futatsu no ranpu wa onaji kurai akarui.*
two Cop.Attr lamp Th same approximately bright.Prs
'The two lamps are approximately equally bright.'

a′. *Futatsu no ranpu wa onaji kurai no* ***akarusa*** *da.*
two Cop.Attr lamp Th same approxmate Cop.Attr brightness Cop.Prs
'The two lamps are about the same brightness.'

b. *Ken to Hiroshi wa onaji kurai akarui.*
K. and H. Th same approximately bright.Prs
'Ken and Hiroshi are approximately equally cheerful.'

b′. *??Ken to Hiroshi wa onaji kurai no* ***akarusa*** *da.*
K. and H. Th same approximately Cop.Attr brightness Cop.Prs
(Ken and Hiroshi are more or less as cheerful as each other.)

The aforementioned contrast between 'value' and 'importance' (see [18] and [23]) can be taken to conform to this pattern, too, the former more often perceived as arithmetically measurable (*Here, the* {*value*/??*importance*} *of a chicken is equal to that of 50 cigarettes*). It is evident, at the same time, that the degree of objectivity/concreteness is not the sole factor determining what kinds of concepts can be

represented with an attribute noun. The unavailability of the ATTIRE- and QUANTITY-types in English, for example, seems hardly attributable to their being subjective/abstract. Whether and how robustly the effect of objectivity/concreteness is observed, and what other factors may be of relevance, across a wider variety of languages are questions I must leave to future research.

3.1.2 Attribute nouns referring to (specific) positions

English and Japanese contrast in an interesting way as to what kinds of POSITION-type attribute-specificational NPC they allow.

In Japanese but not in English, nominals referring to a specific place, including simple common nouns and proper names, can be used as the predicate NP of the SPATIAL-POSITION-type (cf. [21]).[7]

(44) a. *Ken wa ima **{Osaka / (daigaku no) toshokan}** {i. da* /ii.
K. Th now O. university Gen library Cop.Prs
ni iru}.
Dat exist.Prs
'Ken is in {**Osaka**/**the (campus) library**} now.'
b. *Ken is #(in) **{Osaka/the (campus) library}** now.*

Interestingly, TEMPORAL-POSITION-type attribute-specificational NPCs with an attribute noun referring to a specific time is possible both in English and Japanese, though in English the acceptability seems to degrade when the attribute noun refers to a time in a unit smaller than day.[8]

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7 An anonymous reviewer notes that the past-tensed variant of (44a–i) has degraded acceptability.

(i) *Ken wa juu-ji-goro {?**Osaka** / ?**toshokan**} datta.*
K. Th 10-o'clock-around O. library Cop.Pst
*'Ken was in **{Osaka/the library}** around 10 o'clock.'*

In Note 6, it was noted that the acceptability of some types of attribute-specificational NPC is affected by the TAM features of the clause. The "specific position" type discussed here appears to be particularly susceptible to this sort of effect.

8 Attribute-specificational NPCs with an attribute noun referring to a temporal distance, on the other hand, are not allowed in either language.

(i) a. *#Paatii wa kaigi to onaji **{chikasa / toosa / jikanteki kyori}***
party Th conference with same closeness farness temporal distance
da.
Cop.Prs
(The party is temporally as {close/far/distant} as the conference.)
b. *#The party is the same **{soonness/farness/temporal distance}** as the conference.*

(45) a. *Paatii wa kaigi to onaji **shuu** da.*
party Th meeting with same week Cop.Prs
'The party will be on the same week as the meeting.'
a′. *The party will be (on) the same **week** as the meeting.*
b. *Kaigi wa **{go-gatsu tsuitachi / ni-ji / gozen}** da.*
meeting Th 5-month the.first 2-o'clock forenoon Cop.Prs
'The meeting is {on May 1st / at 2 o'clock / in the forenoon}.'
b′. *The meeting is {(on) **May 1st** / ?(at) **2 o'clock** / #(in) **the morning**}.*

3.2 The semantic composition of attribute-specificational NPCs

I will now consider how the meaning of an attribute-specificational NPC can be compositionally derived, and how that compares with the case of the NPC on its unmarked identity/inclusion interpretation.

An issue of dispute about the semantics of the NPC – which is by and large independent from the main concerns of the current work – is how the two unmarked types of relations expressible with it, identity (equation) and inclusion (attribution), are related to each other (Mikkelsen 2011).

Montague (1973) posits the meaning along the lines of (46) for the copula BE,[9] which, with the assumption that an (indefinite or definite) common noun phrase as well as a proper name filling the slot of the predicate NP is a GQ, uniformly accounts for identification statements like (47) and inclusion (property-ascribing) statements like (48).

(46) is $\mapsto \lambda X[\lambda x[X(\lambda y[x = y])]]$

(47) *Cicero is Tully.*
a. Tully: $\lambda P[P(\mathbf{tully})]$
b. is Tully: $\lambda X[\lambda x[X(\lambda y[x = y])]](\lambda P[P(\mathbf{tully})])$
$\rightarrow_\beta$ (twice) $\lambda x[x = \mathbf{tully}]$
c. Cicero: $\lambda Q[Q(\mathbf{cicero})]$
d. Cicero is Tully: $\lambda Q[Q(\mathbf{cicero})](\lambda x[x = \mathbf{tully}])$
$\rightarrow_\beta$ (twice) $\mathbf{cicero} = \mathbf{tully}$

9 Throughout the paper, lexemes are refereed to in small capitals.

(48) *Cicero is an orator.*
  a. an orator: $\lambda P[\exists z(\textbf{orator}(z) \,\&\, P(z))]$
  b. is an orator: $\lambda X[\lambda x[X(\lambda y[x = y])]](\lambda P[\exists z[\textbf{orator}(z) \,\&\, P(z))])$
    $\rightarrow_{\beta}$ (twice) $\lambda x[\exists z(\textbf{orator}(z) \,\&\, x = z)]$
  c. Cicero: $\lambda Q[Q(\textbf{cicero})]$
  d. Cicero is an orator: $\lambda Q[Q(\textbf{cicero})](\lambda x[\exists z[\textbf{orator}(z) \,\&\, x = z]])$
    $\rightarrow_{\beta}$ (twice) $\exists z[\textbf{orator}(z) \,\&\, \textbf{cicero} = z]$
    $\Leftrightarrow$ **orator(cicero)**

I follow here Montague's (1973) uniform approach in assuming that (what may be informally referred to as) the identity-type NPC and the inclusion-type NPC encode the same logical relation between the referents of the subject and predicate NPs, specifically "$\lambda X[\lambda x[X(\lambda y[x = y])]]$". However, departing from Montague (1973), and following the spirit of Ginzburg and Sag (2000: 409), I do not attribute this semantic component to the copula, but instead posit a phrase-modificational rule that is applied to an NP and yields a homophonous NP (i) that has an extended, "predicative" meaning[10] and (ii) selects a subject. The semantic effect of this rule is presented in (49).

(49) **the identity/inclusion predicatization rule**
  $\alpha'_{\langle\langle e,t\rangle,t\rangle} \Rightarrow \lambda X[\lambda x[X(\lambda y[x = y])]](\alpha')$

With this rule held responsible for "predicatization" of an NP, I take copulas to be semantically vacuous, modulo any TAM (tense/aspect/modality) features; compare (53), à la Montague (1973), and (50), my treatment.

(50) *Cicero is Tully.*
  a. Tully (after the identity/inclusion predicatization rule): $\lambda x[x = \textbf{tully}]$
  b. is: $\lambda P[P]$
  c. is Tully: $\lambda P[P](\lambda x[x = \textbf{tully}])$
    $\rightarrow_{\beta} \lambda x[x = \textbf{tully}]$
  d. Cicero: $\lambda Q[Q(\textbf{cicero})]$
  e. Cicero is Tully: $\lambda Q[Q(\textbf{cicero})](\lambda x[x = \textbf{tully}])$
    $\rightarrow_{\beta}$ (twice) **cicero** = **tully**

One merit of positing the predicatization rule at a level distinct from that of individual lexical entries is that it helps simplify the semantic representation of

10 The term "predicative (predicational)" has been used in various ways; here, being predicative specifically means that being of type ⟨e, t⟩, rather than of ⟨⟨e, t⟩, t⟩.

constructions involving nominal predication but not an (explicit) copula, as in (51) and (52).[11]

(51) a. *Ken made Chris a hero.*
b. *Ken wrote a letter to Chris, his hero.*
c. *With the cat a prisoner, the mice will play.*
d. *Leslie the boss.* (African-American Vernacular English)
([c] and [d] from Sag et al. 2003: 460)

(52) *Ano hito (wa) daigakusei (desu ka)?*
that person Th college.student Cop.Plt.Prs DP
'(Is) that person a college student?'

Let us now turn to the semantics of the attribute-specificational NPC. The meanings of attribute-specificational NPCs (53a) (English) and (54a) (Japanese) can be approximated as (53b) and (54b). $\mathbb{A}$ is a free variable to be evaluated as some contextually relevant attribute on the language-specific, closed list. The attributes SIZE and COLOR, for example, are on this list in both English and Japanese; CONDITION and ATTIRE, on the other hand, are on the list only in Japanese.

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11 Like an identity/inclusion NPC, an attribute-specificational NPC may lack a copula and/or involves an inchoative and causative component. The attribute-specificational NPC is, however, not compatible with such marked features as liberally and systematically as the identity/inclusion NPC (cf. Note 6).

(i) a. *My tongue became a strange **color**.*
b. *They {made/painted} the wall a peculiar **color**.*
c. *I drove Ken's car, #(which is) a peculiar **color**.*

(ii) a. *Shita ga hen na **iro** {da / ni natta}.*
tongue Nom strange Cop.Attr color Cop.Prs Cop.Inf become.Pst
'(My/your/his/her/…) tongue {is/became} a strange color.'
b. *Ken wa **haien** {da / ni natta}.*
K. Th pneumonia Cop.Prs Cop.Inf become.Pst
(lit.) 'Ken {is/became} pneumonia.'
c. *Ken wa (guree no) **suutsu** {datta / #ni natta}.*
K. Th gray Cop.Attr suit Cop.Pst Cop.Inf become.Pst
(lit.) 'Ken {is/became} a (gray) suit.'
d. *Ken wa **Osaka** {da / #ni natta}.*
K. Th O. Cop.Prs Cop.Inf become.Pst
(lit.) 'Ken {is/became} Osaka.'

Similar points apply to the two other marked NPCs to be discussed below: the associative NPC (Section 4) and the open-ended-relation NPC (Section 5). I leave thorough investigations on this matter to future research.

(53) a. *The Grand Canyon is an enormous size.*
b. $\exists x[\mathbb{A}(x,\textbf{g.c.}) \,\&\, (\textbf{enormous}(\textbf{size}))(x)]$

(54) a. *Ken wa Osaka da.*
K. Th O. Cop.Prs
'Ken is in Osaka.'
b. $\mathbb{A}(\textbf{osaka},\textbf{ken})$

(55) a. $\mathbb{A}$ ranges over the language-specific list of attributes (a subset of objects of type ⟨e, ⟨e, t⟩⟩).
b. For any context c, world w, and assignment g, $[\![\mathbb{A}]\!]^{c,w,g}$ is defined only if $g(\mathbb{A})$ is an attribute prominent in c; if defined, $[\![\mathbb{A}]\!]^{c,w,g} = g(\mathbb{A})$.

"Attributes" here are taken to be relations between entities. In (53b) and (54b), $\mathbb{A}$ is resolved into the SIZE(-OF) relation and the SPATIAL-LOCATION(-OF) relation, respectively; in both cases, the relevant attribute is practically singled out by the semantic class of the attribute noun (*size*/*Osaka*). The second argument ("value") of an attribute is often, but not always, a degree on a scale in Kennedy's (2007) sense (e.g., 5 km^2, 10 U.S. dollars).[12] An attribute typically connects an entity to at most one value; for example, a single object cannot have two sizes or two ages. This, however, may not hold across the board; it is conceivable that in (64), the referent of the subject is connected with two values of the CONDITION attribute.

(56) *Ken wa **haien** de, shikamo **ien** de mo aru.*
K. Th pneumonia Cop.Inf furthermore gastritis Cop.Inf also Aux.Prs
(lit.) 'Ken is pneumonia, and is gastritis, too.'

Note that SIZE, COLOR, etc., as attributes belong to a different ontological category than the denotations of corresponding attribute nouns like *size* and *color*. I take the denotations of the common nouns *size* and *color* to be of type ⟨e, t⟩ and look like: {1 km^2, 2 km^2, …} and {red, blue, …}, respectively (the unit and/or granularity vary depending on the context). The denotation of the nominal *enormous size* will be something like {3,000 km^2, 3,001 km^2, …}, with 3,000 km^2 exceeding the contextually determined threshold.

One notable feature of the attribute-specificational NPC is that its predicate nominal cannot be a maximally general term for the relevant attribute; (57a) and (58a) cannot be interpreted as attribute-specificational NPCs due to this constraint.

12 That is, some attributes can be regarded as being of type ⟨e, ⟨d, t⟩⟩, with d being the type for degrees, if degrees are to be regarded as ontologically distinct from entities.

(57) a. *#The liquid was a **color**.*
b. *The liquid was a **beautiful color**.*

(58) a. *#Ken wa **fuku** datta.*
K. Th clothes Cop.Pst
b. *Ken wa {**shiroi fuku** / **suutsu**} datta.*
K. Th white.Prs clothes suit Cop.Pst
'Ken wore {white clothes/a suit}.'

The semantic analysis sketched above does not capture this, and wrongly predict that (57a) and (58a) can mean 'The liquid had a color (i.e., was not colorless)' and 'Ken was clothed (i.e., was not naked)', respectively.

I suggest that the meaning of an attribute-specificational NPC involves an existence presupposition to the effect that the relevant attribute of the referent of the subject NP has a non-null value, so that (57a) and (58a) have the meanings given in (59a, b).

(59) a. $\exists x{:}\mathbb{A}(x,$**g.c.**$)[($**enormous**$($**size**$))(x)]$
presupposition: The Grand Canyon has a certain size.
b. $\exists x{:}\mathbb{A}(x,$**ken**$)[x =$ **osaka**$]$
presupposition: Ken is in some place.

The utterer of the sentences in (57)/(58), then, presupposes that the liquid had a color and Ken was clothed, respectively. Accordingly, (57a) and (58a) amount to saying that the liquid's color was a color and that Ken's clothes were clothes – which are pragmatically deviant in being inherently uninformative, proffering (asserting) nothing other than what is presupposed. This can sensibly be regarded as the source of the oddity.

One may question this line of account on the basis that unnaturalness of sentences like (57a) and (58a) is starker in comparison to that of sentences like (60a,b), which should involve a similar kind of inherent triviality.

(60) a. *?The liquid's color was a color.*
b. *?Ken no fuku wa fuku datta.*
K. Gen clothes Th clothes Cop.Pst
'Ken's clothes were clothes.'

The cases of (57a)/(58a) on the one hand and (60a, b) on the other are not entirely parallel, however. Specifically, (57a)/(58a) can be interpreted as identity/inclusion-type NPCs as well, in which case they are not inherently redundant (they are just obviously false). It is plausible that speakers are generally

inclined, whenever possible, to assign to a sentence a reading on which it is not inherently uninformative, so that for (57a)/(58a), the identity/inclusion-type interpretation takes priority and practically blocks the attribute-specificational interpretation.[13]

Semantic rule (61) derives the kind of predicative NPs yielding the attribute-specificational interpretation.

(61) **the attribute-specificational predicatization rule**
$\alpha'_{\langle\langle e,t\rangle,t\rangle} \Rightarrow \lambda X[\lambda x[\exists y{:}\mathbb{A}(y,x)[X(\lambda z[y = z])]]](\alpha')$

I posit that, unlike the identity/inclusion predicatization rule introduced above, this rule is applicable only to NPs headed by a relatively small group of nouns lexically specified to be: [ATTRIBUTE-SPECIFICATIONAL +]; in English, this group includes *size*, *color*, *value*, etc., but not *person*, *importance*, *disease*, etc.

The composition of the meanings of (53a) and (54a) is illustrated below.

(62) *[The Grand Canyon [is [an enormous size]]].*
a. an enormous size (before the attr.-spec. predicatization rule):
$\lambda P[\exists z[(\textbf{enormous}(\textbf{size}))(z) \,\&\, P(z)]]$
b. an enormous size (after the attr.-spec. predicatization rule):
$\lambda x[\exists y{:}\mathbb{A}(y,x)[\exists z[(\textbf{enormous}(\textbf{size}))(z) \,\&\, y = z]]]$
c. is: $\lambda P[P]$
d. is an enormous size: $\lambda x[\exists y{:}\mathbb{A}(y,x)[\exists z[(\textbf{enormous}(\textbf{size}))(z) \,\&\, y = z]]]$
e. the Grand Canyon: $\lambda Q[Q(\textbf{g.c.})]$
f. The Grand Canyon is an enormous size:
$\exists y{:}\mathbb{A}(y,\textbf{g.c.})[\exists z[(\textbf{enormous}(\textbf{size}))(z) \,\&\, y = z]]$

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13 One may alternatively choose to build "the ban on a maximally general attribute NP" directly into the semantics of the attribute-specificational NPC, as a presupposition. The variant of Rule (61) given below is one way to achieve this; it yields, for example, the meaning given in (ii) for (53a).

(i) $\alpha'_{\langle\langle e,t\rangle,t\rangle} \Rightarrow \lambda X[\lambda x[\exists y_1{:}\Diamond\, \exists x_1[\mathbb{A}(y_1,x_1)] \,\&\, \neg X(\lambda z_1[y_1 = z_1])[X(\lambda y[\mathbb{A}(y,x)])]]](\alpha')$

(ii) $\exists y_1{:}\Diamond\, \exists x_1[\mathbb{A}(y_1,x_1)] \,\&\, \neg(\textbf{enormous}(\textbf{size})(y_1))[\exists y[\textbf{enormous}(\textbf{size})(y) \,\&\, \mathbb{A}(y,\textbf{g.c.})]]$
presupposition: There is some entity/degree that could be the size of something but is not an enormous size (1 cm^2, for example, is likely to be such an entity/degree).

With this rule, (57a) would presuppose that there is some entity that could be a color of something but was not a color. Since this cannot be true, the sentence would necessarily fail to have a truth value (due to unavoidable presupposition failure), rather than merely be uninformative. While I find the pragmatic account explained above more appealing, it may be hasty to entirely dismiss this line of alternative account where the attribute NP is specified to be not maximally general at the level of coded meaning.

(63) *[Ken wa [Osaka da]].*
  a. Osaka (before the attr.-spec. predicatization rule):
  $\lambda P[P(\textbf{osaka})]$
  b. Osaka (after the attr.-spec. predicatization rule):
  $\lambda x[\exists y{:}\mathbb{A}(y,x)[y = \textbf{osaka}]]$
  c. da: $\lambda P[P]$
  d. Osaka da: $\lambda x[\mathbb{A}(x) = \textbf{osaka}]$
  e. Ken (wa): $\lambda Q[Q(\textbf{ken})]$
  f. Ken wa Osaka da: $\exists y{:}\mathbb{A}(y,\textbf{ken})[y = \textbf{osaka}]$

4 The associative NPC

Japanese has a marked NPC where (i) the referent of the subject NP, a sentient entity, and that of the predicate NP, an abstract entity, are somehow "associated" (e.g. the former "has" or "is in" the latter), rather than being in the relation identity or inclusion, and (ii) the head of its predicate NP obligatorily selects a complement clause. Some examples are given below:

(64) *Ken wa jinin suru **ikoo** da.*
K. Th resign do.Prs intention Cop.Prs
'Ken intends to resign.'
(lit.) 'Ken$_i$ is an intention [that $\varnothing_i$ will resign].'

(65) *Ken wa kakegoto wa shinai **shugi** da.*
K. Th gambling Th do.Neg.Prs principle Cop.Prs
'Ken adheres to the principle of not engaging in gambling.'
(lit.) 'Ken$_i$ is a principle [that $\varnothing_i$ does not engage in gambling].'

(66) *Ken wa Yumi o shidoo suru **tachiba** da.*
K. Th Y. Acc supervise do.Prs position Cop.Prs
'Ken is in a position to supervise Yumi.'
(lit.) 'Ken$_i$ is a position [that $\varnothing_i$ supervises Yumi].'

(67) *Ken wa damasareta **kibun** datta.*
K. Th deceive.Psv.Pst mood Cop.Pst
'Ken felt like he was deceived.'
(lit.) 'Ken$_i$ was a mood [that $\varnothing_i$ was deceived].'

(68) *Ken wa unmei o ukeireta **hyoojoo** datta.*
K. Th fate Acc accept.Pst facial.expression Cop.Pst
'Ken's facial expression revealed that he had accepted his fate.'
(lit.) 'Ken$_i$ was a facial expression [that $\varnothing_i$ accepted his fate].'

(69) *Ken wa koohii wa karada ni ii toiu* ***iken*** *da.*
K. Th coffee Th body Dat good.Prs LM opinion Cop.Prs
'Ken is of the opinion that coffee is good for health.'
(lit.) 'Ken is the opinion [that coffee is good for health].'

The construction exemplified by (69) contrasts with that exemplified by (64)–(68) in that its complement clause (i) may have an explicit subject not necessarily coreferential with the matrix-level subject, and (ii) obligatorily involves the linking marker *toiu* (or some variant thereof, such as *tte*) at its end. I treat the two constructions as subvarieties of a single construction – the associative NPC.

Some nouns may serve as the head of the predicate NP of either an attribute-specificational NPC or an associative NPC; *kibun* 'mood' and *hyoojoo* 'facial expression' are cases in point. (67) and (68) are superficially similar to attribute-specificational NPCs (37a) and (35a); the key difference is in the latter the predicate NP involves a relative clause, rather than a complement clause.

(70) a. *Ken wa [∅$_i$ saitei no]* ***kibun***$_i$ *datta.* (from [37a]; attr.-spec. NPC)
b. *Ken*$_i$ *wa [∅$_i$ damasareta]* ***kibun*** *datta.* (= [67])

4.1 The structure and subtypes of the associative NPC

Tsunoda (2020a, 2020b) considers that sentences like (64)–(68),[14] as well as sentences like (71a–e), have a mono-clausal structure where the sentence-final nominal predicate forms a compound predicate together with the preceding predicate, as schematized in (72). He labels them together as the "mermaid construction", a term referencing the complex and hybrid nature of what he takes to be its (sole, compound) predicate.

(71) a. *Soto de kaze ga fuite iru* ***moyoo*** *da.*
outside in wind Nom blow.Ger Npfv.Prs appearance Cop.Prs
'It appears that it is windy outside.'
b. *Watashi wa moo gakkoo ni iku* ***jikan*** *da.*
I Th already school Dat go.Prs time Cop.Prs
'It is already time for me to go to school.'
c. *Seifu wa kome no yunyuu o mitomeru* ***mikomi*** *da.*
government Th rice Gen import Acc approve.Prs expectation Cop.Prs
'The government is expected to approve the import of rice.'
d. *Yuki wa yuugata made tsuzuku (toiu)* ***yosoo*** *da.*
snow Th evening until continue.Prs LM forecast Cop.Prs
'The snow is forecasted to continue until evening.'

14 Sentences like (69) are excluded from Tsunoda's considerations.

e. *Gakusei wa maishuu repooto o teishutsu suru (toiu)* ***kimari*** *da.*
student Th every.week report Acc submit do.Prs LM rule Cop.Prs
'By regulations, students are required to turn in a report every week.'
(adapted from Tsunoda 2020b: 75, 76, 78, 80)

(72) $[_{\text{Clause}} \ldots \underbrace{\text{predicate of Clause}]\ \text{Noun}\ \text{Copula}}_{\text{compound predicate}}$

There is evidence, however, that sentences (64)–(68) ("the A-type") on the one hand and (71a–e) ("the B-type") on the other have different internal structures, the sentence-final nominal predicate being predicated over the (explicit) subject only in the former (the A-type). Only the A-type is to be regarded as a variety of the NPC – taken here as a construction where a predicate NP is predicated over a subject NP (Section 1) – and falls under the scope of the taxonomy that this work aims to develop.

To see why, observe (73)/(74). *Shika* is an exclusive focus-alternative quantifier that obligatorily co-occurs with clause-mate negation ("*shika* + Neg" is synonymous to English *only*; Oshima [2023]). As pointed out by Kawashima (2016: 18–19), only in the B-type but not in the A-type, can *shika* occurring on the (explicit) subject concord with negation on the predicate preceding the sentence-final nominal predicate. On the other hand, concordance between *shika* on the subject and negation on the sentence-final copula is downright impossible with the B-type, while it is possible with the A-type, though it tends to sound a little awkward.[15]

(73) (A-type)
a. **Ken shika jinin shinai* ***ikoo*** *da.*
K. *shika* resign do.Neg.Prs intention Cop.Prs
b. *(?)Ken shika jinin suru* ***ikoo*** *ja nai.*
K. *shika* resign do.Prs intention Cop.Inf NegAux.Prs
'Only Ken intends to resign.'

15 Generally, a structure where *shika* concords with negation in a nominal predicate tends to be stylistically awkward.

(i) a. *(?)Ken shika bengoshi ja nai.*
K. *shika* lawyer Cop.Inf NegAux.Prs
'Only Ken is a lawyer.'
b. *Bengoshi wa Ken shika inai.*
lawyer Th K. *shika* exist.Neg.Prs
'There are no lawyers other than Ken.'

(74) (B-type)
a. *Ken shika jinin shinai **moyoo** da.*
K. *shika* resign do.Neg.Prs appearance Cop.Prs
'It appears that only Ken will resign.'
b. **Ken shika jinin suru **moyoo** ja nai.*
K. *shika* resign do.Prs appearance Cop.Inf NegAux.Prs

In addition, only with the A-type can the (explicit) subject be the target of honorification expressed by a subject honorific feature in the sentence-final nominal predicate.

(75) (A-type)
a. *Yamada-san wa koohai o shidoo suru **tachiba** da.*
Y.-HonT Th junior.colleague Acc supervise do.Prs position Cop.Prs
'Ms. Yamada is in a position to supervise her junior colleagues.'
b. *Yamada-san wa koohai o shidoo {suru/sareru}*
Y.-HonT Th junior.colleague Acc supervise do.Prs/do.SHon.Prs
***tachiba** de irassharu.*
position Cop.Inf Aux.SHon.Prs
'Ms. Yamada is in a position to supervise her junior colleagues.'

(76) (B-type)
a. *Moo Yamada-san ga shuppatsu suru **jikan** da.*
already Y.-HonT Nom leave do.Prs time Cop.Prs
'It is already time for Ms. Yamada to leave.'
b. *??Moo Yamada-san ga shuppatsu {suru/sareru} **jikan***
already Y.-HonT Nom leave do.Prs/do.SHon.Prs time
de irassharu.
Cop.Inf Aux.SHon.Prs

I suggest that the label "mermaid construction" be applied exclusively to the B-type construction, for which I posit the structure in (77) (cf. [72]); I also introduce an alternative label "complement-clause/head-noun construction" referring to the same construction (B-type = mermaid construction = complement-clause/head-noun construction).

(77) $\underbrace{[[\text{Complement-Clause Noun}]\ \text{Copula}]}_{\text{avalent nominal predicate}}$

This is a structure similar to that of Japanese sentence (78a) as well as Spanish sentence (78b), in involving an avalent (zero-place) nominal predicate (though different in that the predicate NPs in (78a, b) do not contain a complement clause).

(78) a. *[Hidoi ame] da.*
terrible.Prs rain Cop.Prs
'It is heavily rainy.'
(lit.) 'Is rain that is terrible.'

b. *Es [un día soleado]. (Spanish)*
is a day sunny
'It is a sunny day.'

For the A-type, as well as for sentences like (69), I posit the structure in (79) where a monovalent (one-place) nominal predicate is combined with a subject NP (as is the case in a canonical NPC, such as *Cicero is an orator*).

(79) [Subject $\underbrace{[[\text{Complement-Clause Noun}]\ \text{Copula}]}_{\text{monovalent nominal predicate}}$]

I label this structure as the associative NPC, and also nickname it, for the sake of mnemonic reference, the "merman" construction (A-type = merman construction = associative NPC).

The associative NPC differs from Tsunoda's mermaid construction in, in terms of extension, excluding the complement-clause/head-noun construction (and including the "S-type" to be discussed shortly), and, in terms of analysis, being assigned the structure given in (79) rather than the one given in (72).

Nouns that head the predicate NP of an associative NPC – "merman nouns", for short – can be classified into two major types.[16] In one type, the complement clause is "unsaturated" with respect to its subject, much like the English *to*-infinitive clause selected by a control verb such as *try* and *promise*. I will call this the U-type (for "unsaturated"), and posit five major semantic subclasses given in (80).

(80) **U-type merman nouns**

a. the INTENTION-class: *ikoo* 'intention', *keikaku* 'plan', *yotei* 'plan, schedule', *kakugo* 'preparedness', *tsumori* 'plan', etc.
("*α* wa [$_{\beta}$ *P* N] da" roughly means that *α* has an intention/plan to do *P*.)

b. the INCLINATION-class: *seikaku* 'personality, inclincation', *shugi* 'principle, doctorine', *shuukan* 'habit', *hooshin* 'policy, course of action', *tachi* 'disposition', etc.
("*α* wa [$_{\beta}$ *P* N] da" roughly means that *α* is habitually inclined to do *P*.)

c. the SITUATION-class: *tachiba* 'position', *jootai* 'state', *yaku* 'role', *mibun* 'status', *dankai* 'stage', *kankei* 'relation', etc.
("*α* wa [$_{\beta}$ *P* N] da" roughly means that *α* is in a situation where (s)he is expected, supposed, or able to do *P*.)

d. the FEELING-class: *kimochi* 'feeling', *kibun* 'mood', *omoi* 'sentiment', *shinkyoo* 'mental state', etc.
("*α* wa [$_{\beta}$ *P* N] da" roughly means that *α* feels like (s)he does or did *P*.)

16 Some nouns allow the use as a merman noun only marginally. When this is the case, the acceptability fluctuates depending on the style/register, the TAM features of the predicate, etc. (cf. Note 6).

e. the EXPRESSION-class: *hyoojoo* 'facial expression', *kao* 'face', *yoosu* 'appearance', *kuchiburi* 'way of talking', etc.
("*α* wa [$_{\beta}$ *P* N] da" roughly means that *α*'s doing or having done *P* is revealed by some observable feature.)

Associative NPCs involving these subclasses are exemplified by (64)–(68).

With the other type, exemplified by (69), the complement clause may have an explicit subject not (necessarily) coreferential with the matrix subject, and must be accompanied by the linking marker *toiu* or a colloquial variant thereof, such as *tteiu*, *tte*, or *chuu*.[17] I label this the S-type (for "saturated"). The S-type is semantically homogeneous, consisting of nouns denoting thoughts and beliefs.

(81) **S-type merman nouns** (the OPINION-class)
iken 'opinion', *ninshiki* 'recognition', *mikata* 'view', *rikai* 'understanding', *kangae* 'thought', etc.
("*α* wa [*p* N] da" roughly means that *α* believes that *p*.)

(82) schematically illustrates the structural difference between the U- and S-type associative NPCs. I remain agnostic here as to whether the "open slot" in the complement of a U-type merman noun (represented with "∅" in [82a]) corresponds to a covert syntactic item (PRO).

(82) a. *[$_S$ Ken$_i$ wa [$_S$ ∅$_i$ jinin suru] ikoo da]* (= [64])
b. *[$_S$ Ken wa [$_S$ koohii wa karada ni ii toiu] iken da]* (= [69])

Table 1 recapitulates my taxonomy and terminology around and within the associative NPC.[18]

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17 In the complement clause of a U-type associative NPC, *toiu* is not blocked but tends to incur awkwardness.

(i) (≈ [64])

Ken	*wa*	*jinin*	*suru*	*(?toiu)*	***ikoo***	*da.*
K.	Th	resign	do.Prs	LM	intention	Cop.Prs

'Ken intends to resign.'

18 The "sporadic overlap" between Tsunoda's (2020b) mermaid construction and my attribute-specificational NPC is instantiated by (ia, b).

(i) a. *Ano rikishi wa rippa na taikaku da.*
that sumo.wrestler Th excellent Cop.Attr build Cop.Prs
'That sumo wrestler has a strong build.'

b. *Hanako wa itsumo akarui hyoojoo da.*
H. Th always bright.Prs facial.expression Cop.Prs
'Hanako's face is always bright.'

(adapted from Tsunoda 2020b: 79)

Table 1: The taxonomy around the associative nominal predicate construction.

My classification and labels	Regarded by Tsunoda (2020b) as the mermaid construction?
Attribute-specificational NPC	Sporadic overlap
Associative NPC	
(i) U-type	Yes ("A-type")
(ii) S-type	No
Complement-clause/head-noun construction	Yes ("B-type")

As mentioned above, a fraction of U-type merman nouns, such as *seikaku* 'personality, inclination', *hyoojoo* 'facial expression', and *kibun* 'mood', may also serve as an attribute noun, as illustrated in (83) (see also [35]/[37]/[67]/[68]/[70] above).[19]

(83) a. (U-type associative NPC)
Ken$_i$ wa [∅$_i$ shigoto o teinei ni suru] ***seikaku*** *da.*
K. Th work Acc careful Cop.Inf do.Prs personality Cop.Prs
'Ken is inclined to be conscientious about his work.'

b. (Attribute-specificational NPC)
Ken wa [(haiyuu ni wa) ∅$_i$ mezurashii] ***seikaku$_i$*** *da.*
K. Th actor Dat Th rare.Prs personality Cop.Prs
'Ken has an unusual personality (for an actor).'

19 Nouns that can be used as merman nouns but cannot be used as attribute nouns include *yotei* 'plan', *yaku* 'role', and *iken* 'opinion'. It should be noted, though, the complement clause selected by the head of the predicate NP of an associative NPC can be replaced with a modifier with anaphoric or interrogative meaning, resulting in structures similar to those of attribute-specificational NPCs, as in (i).

(i) a. *Ken wa raishuu Osaka ni iku. Watashi mo* ***sono yotei*** *da.*
K. Th next.week O. Dat go.Prs I too that plan Cop.Prs
'Ken will go to Osaka next week. I am planning to do so, too.'

b. *Ken wa maiasa jogingu o suru. Mari mo* ***onaji shuukan*** *da.*
K. Th every.morning jogging Acc do.Prs M. too same habit Cop.Prs
'Ken goes jogging every morning. Mari has the same habit, too.'

c. *Ken wa* ***donna yaku*** *(desu ka)?*
K. Th what.kind.of role Cop.Plt.Prs DP
'What kind of role does Ken have?'

d. *Ken wa [(Mari to wa)* ***chigau]*** ***iken*** *da.*
K. Th M. with Th differ.Prs opinion Cop.Prs
'Ken is {of a different opinion/of an opinion different from Mari's}.'

Also, nouns like *yotei* 'plan, schedule' and *yoosu* 'appearance' can be used either as a merman noun or a mermaid noun, i.e., the head of the predicate NP in the complement-clause/head-noun construction (see Kawashima 2017: 58–59, 68–69 for relevant remarks).

(84) (U-type associative NPC)
a. *Shachoo$_i$ wa [∅$_i$ (go)shusseki sareru] (go)**yotei** de*
president Th attend(.Hon) do.SHon.Prs plan(.Hon) Cop.Inf
irassharu.
Aux.SHon.Prs
'The president intends to attend (it).'
b. *Shachoo$_i$ wa [∅$_i$ (go)shimpai sarete iru] (go)**yoosu***
president Th worry(.Hon) do.SHon.Ger Npfv.Prs appearance(.Hon)
de irassharu.
Cop.Inf Aux.SHon.Prs
'The president looks like he is worried.'

(85) (complement-clause/head-noun construction)
a. *[Shachoo shika (go)shusseki sarenai] **yotei** da.*
president *shika* attend(.Hon) do.SHon.Neg.Prs plan Cop.Prs
'It is planned that only the president will attend (it).'
b. *[Shachoo shika (go)shimpasi sarete inai] **yoosu***
president *shika* worry(.Hon) do.SHon.Ger Npfv.Neg.Prs appearance
da.
Cop.Prs
'It looks like only the president is worried.'

4.2 (Non-)modifiability of merman nouns

Generally, merman nouns may be combined with a nominal modifier in addition to a complement clause.

(86) a. *Ken wa [unmei o ukeireta] sawayaka na **hyoojoo***
K. Th fate Acc accept.Pst serene Cop.Attr facial.expression
datta.
Cop.Pst
'Ken's serene facial expression revealed that he had accepted his fate.'
(lit.) 'Ken$_i$ was a serene facial expression [that ∅$_i$ accepted his fate].'

b. *Ken wa [zettai ni uso o tsukanai] {kooketsu/rippa}*
K. Th absolute Cop.Inf lie Acc tell.Neg.Prs honorable/respectable
na ***seikaku*** *da.*
Cop.Attr personality Cop.Prs
'Ken has an {honorable/respectable} personality and never tells a lie.'
(lit.) 'Ken$_i$ is an {honorable/respectable} personality [that $\varnothing_i$ never tells a lie].'

c. *Ken wa [kokuminnenkin wa fuyoo da toiu] {kyokutan*
K. Th national.pension Th unnecessary Cop.Prs LM extreme
na / mezurashii} ***iken*** *da.*
Cop.Attr rare.Prs opinion Cop.Prs
'Ken is of the {extreme/rare} opinion that the national pension is unnecessary.'
(lit.) 'Ken is the {extreme/rare} opinion [that the national pension is unnecessary].'

Interestingly, however, some nouns, including *keikaku* 'plan', *shuukan* 'habit', and *hooshin* 'policy, course of action', cannot be accompanied by a nominal modifier when they are used as merman nouns, as in (87a), (88a), and (89a).

(87) a. *Shachoo wa [go-nen de koojoo o baizoo saseru]*
president Th 5-year in factory Acc double do.Caus.Prs
(#higenjitsuteki na) **keikaku** da.
unrealistic Cop.Attr plan Cop.Prs
'The president has (lit., is) an (unrealistic) plan to double the number of factories within five years.'

b. *Shachoo wa [go-nen de koojoo o baizoo saseru]*
president Th 5-year in factory Acc double do.Caus.Prs
(higenjitsuteki na) ***keikaku*** *o teian shita.*
unrealistic Cop.Attr plan Acc propose do.Pst
'The president proposed an (unrealistic) plan to double the number of factories within five years.'

(88) a. *Ken wa [juu-ji ni nete shichi-ji ni okiru] (#kenkooteki*
K. Th 10-o'clock Dat sleep.Ger 7-o'clock Dat wake.Prs healthy
na) ***shuukan*** *datta.*
Cop.Attr habit Cop.Pst
'Ken had (lit., was) a (healthy) habit of going to bed at 10 o'clock and waking up at 7 o'clock.'

b. *Ken wa [juu-ji ni nete shichi-ji ni okiru] (kenkooteki*
K. Th 10-o'clock Dat sleep.Ger 7-o'clock Dat wake.Prs healthy
na) ***shuukan*** *o san-nen tsuzukete iru.*
Cop.Attr habit Acc 3-year continue.Ger Npfv.Prs
'Ken has kept his (healthy) habit of going to bed at 10 o'clock and waking up at 7 o'clock for three years.'

(89) a. *Shushoo wa [ichijisangyoo o yuuguu suru]*
prime.minister Th primary.industry Acc treat.preferentially do.Prs
(#goorisei no nai) ***hooshin*** *da.*
rationality Gen not.exist.Prs principle Cop.Prs
'The prime minister adopts an (irrational) policy to give preferential treatment to the primary industry.'

b. *(Shushoo no) [ichijisangyoo o yuuguu suru]*
prime.minister Gen primary.industry Acc treat.preferentially do.Prs
(goorisei no nai) ***hooshin*** *ga keizaikiki o maneita.*
rationality Gen not.exist.Prs principle Nom economic.crisis Acc invite.Pst
'The (prime minister's) (irrational) policy to give preferential treatment to the primary industry caused the economic crisis.'

This feature exhibited by some merman nouns – their "non-modifiability" – has a significant bearing on the formal analysis of the associative NPC.

4.3 The semantic composition of the associative NPC

I take the meaning of an associative NPC to involve a logical predicate standing for a rather general associative relation **ASSOCIATED.WITH** (often roughly paraphrasable with "have" or "be in" in their metaphorically extended sense).

(90) a. *Ken wa [jinin suru] ikoo da.*
K. Th resign do.Prs intention Cop.Prs
'Ken intends to resign.'

b. $\exists x$[**intention-to**(x,**resign**) & **ASSOCIATED.WITH**(**ken**,x)]

(91) a. *Ken wa [Mari wa yuunoo da toiu] iken da.*
K. Th M. Th competent Cop.Prs LM opinion Cop.Prs
'Ken is of the opinion that Mari is competent.'

b. $\exists x$[**opinion-that**(x,^**competent**(**mari**)) & **ASSOCIATED.WITH**(**ken**,x)]

4.3.1 Associative NPCs with a modifiable merman noun

For associative NPCs with modifiable merman nouns, I posit semantic rule (92), which is analogous to (49)/(61).

(92) **the associative predicatization rule**
$\alpha'_{\langle\langle e,t\rangle,t\rangle} \Rightarrow \lambda X[\lambda x[X(\lambda y[\textbf{ASSOCIATED.WITH}(x,y)])]](\alpha')$

Nouns that have a potential to be used as an S-type or U-type merman noun are combined with a complement clause only optionally in other environments.

(93) a. *Ken no {i. ∅ / ii. shigoto o teinei ni suru} seikaku ga suki da.*
K. Gen work Acc careful Cop.Inf do.Prs personality Nom fond Cop.Prs
i. '(I) like Ken's personality.'
ii. '(I) like Ken's inclination to be conscientious about his work.'

b. *Shachoo ni watashi no (jigyookakudai wa kiken da toiu) iken o tsutaeta.*
president Dat I Gen business.expansion Th dangerous Cop.Prs LM opinion Acc communicate.Pst
'(I) told the president my opinion (that it is risky to expand the business).'

I consider that these nouns come in two varieties: (i) a relational one that obligatorily selects a complement clause and (ii) a sortal one that never does so.

(94) a. SEIKAKU$_{sort.}$: λx[**personality**(x)]
b. SEIKAKU$_{rel.}$: $\lambda P[\lambda x$[**inclination-to**(x,P)]]

(95) a. IKEN$_{sort.}$: λx[**opinion**(x)]
b. IKEN$_{rel.}$: $\lambda p[\lambda x$[**opinion-that**(x,p)]]

Japanese nouns in general can be classified into "complete" (or "free") ones and "incomplete" (or "bound") ones. Complete nouns, which account for a large majority, are those nouns that can be used without being accompanied by a modifier or a complement clause. Incomplete nouns, also called *keishiki meishi* 'formal noun' (Masuoka and Takubo 1992: 36–37), are those nouns that cannot be used on their own but have to be accompanied by an (explicit) modifier or complement. The relational versions of nouns like *seikaku* and *iken* can sensibly be regarded as incomplete nouns that have homophonous complete nouns.

I furthermore posit (i) that nouns including SEIKAKU$_{rel.}$ and IKEN$_{rel.}$ are lexically specified to have feature: [ASSOCIATIVE $+_{reg}$] (the rationale for subscript *reg*, standing

for "regular noun", will become clear shortly), and (ii) that rule (92) is applicable only to NPs headed by a noun with this feature.

4.3.2 Associative NPCs with a non-modifiable merman noun

For associative NPCs with a non-modifiable merman noun, I suggest positing a lexical, rather than phrasal, modificational rule that derives a (predicational) noun that (i) obligatorily selects a complement clause but (ii) resists modification. The latter feature – the non-modifiability – is shared by a class of "noun-like" words in the language, commonly called "adjectival nouns" (or "nominal adjectives"), and thus need not be stipulated ad hoc.

Adjectival nouns come in two major varieties: the *na*- and *no*-types, which select the attributive copula form *na* and *no* respectively when occurring in a relative clause (Oshima et al. 2019). *Kooka* 'expensive' exemplifies the former, and *muryoo* 'free (of charge)' exemplifies the latter. Adjectival nouns are like regular nouns, and contrast with (narrowly understood) adjectives (e.g., TAKAI 'high, expensive'), in lacking inflection and being able to occur in a pre-copular position. They differ from regular nouns, on the other hand, in that they lack a potential (i) to head a nominal complement (subject, object, etc.) or (ii) to be modified by a nominal modifier (e.g. relative clause).

(96) a. *Sono e wa (#Ken ga kaita)* ***kooka da***.
that painting Th K. Nom draw.Pst expensive Cop.Prs
'That painting is (one drawn by Ken that is) expensive.'

b. ***Kooka na*** *e o mita.*
expensive Cop.Attr painting Acc see.Pst
'(I) saw {an/the} expensive painting.'

c. *#**Kooka** o mita.*
expensive Acc see.Pst
(I saw something expensive.)

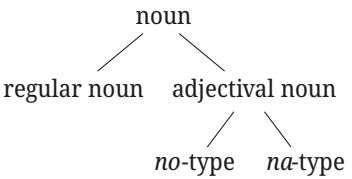
(97) a. *Sono e wa (#Ken ga kaita)* ***muryoo da***.
that painting Th K. Nom draw.Pst free Cop.Prs
'That painting is (one drawn by Ken that is) free of charge.'

b. ***Muryoo no*** *e o mita.*
free Cop.Attr painting Acc see.Pst
'(I) saw {a/the} free painting.'

c. *#**Muryoo** o mita.*
free Acc see.Pst
(I saw something that is free of charge.)

I take here the regular noun and the adjectival noun to be sister categories under the wider category of noun; I also assume that an adjectival noun, unlike a regular noun, inherently (i.e., without going through a predicatization rule) selects a subject.

(98)



(99) Olympia *wa* *[kooka* *da].*
O. Th expensive Cop.Prs
'*Olympia* is expensive.'
a. kooka (da): λx[**expensive**(x)]
b. *Olympia* (wa): λQ[Q(**olympia**)]
c. *Olympia* wa kooka da: **expensive**(**olympia**)

I propose that merman nouns in sentences like (87a)/(88a)/(89a) are adjectival nouns derived from regular nouns by the derivational (i.e., lexeme-to-lexeme) rule along the lines of (114).[20]

(100) **the associative adjectival noun rule**

$$\left[\begin{array}{ll} \text{INPUT} & \left[\begin{array}{ll} \text{PHONOLOGY} & \pi \\ \text{SYNTAX} & \text{regular noun, [ASSOCIATIVE } +_{adj}] \\ \text{SEMANTICS} & \alpha\text{'} \end{array}\right] \\ \text{OUTPUT} & \left[\begin{array}{ll} \text{PHONOLOGY} & \pi \\ \text{SYNTAX} & \textit{no}\text{-type adj. noun} \\ \text{SEMANTICS} & \lambda\mathcal{P}[\lambda P[\lambda x[\exists y[\mathcal{P}(y,P)\ \&\ \\ & \textbf{ASSOCIATED.WITH}(x,y)]]]](\alpha\text{'}) \end{array}\right] \end{array}\right]$$

This rule is applicable only to a small class of regular nouns lexically specified to have feature: [ASSOCIATIVE $+_{adj}$], including KEIKAKU 'plan', SHUUKAN 'habit', and HOOSHIN 'policy' in their relational version (i.e., KEIKAKU$_{rel.}$, SHUUKAN$_{rel.}$, and HOOSHIN$_{rel.}$). The input of the rule accepts, but the output resists, nominal modification, because the rule turns a regular noun into a homophonous adjectival noun. Both input and output are incomplete nouns in the aforementioned sense, obligatorily selecting a complement clause.

20 While (100) is designed for the U-type associative NPC with a non-modifiable merman noun, it can easily be adapted to its S-type counterpart.

Applied to the regular noun KEIKAKU$_{rel}$, represented in (101a), rule (100) yields the *no*-type adjectival noun represented in (101b).[21]

(101) a.
$$\begin{bmatrix} \text{PHONOLOGY} & \text{/keikaku/} \\ \text{SYNTAX} & \text{regular noun, [ASSOCIATIVE } +_{adj}\text{]} \\ \text{SEMANTICS} & \lambda P[\lambda x[\textbf{plan-to}(x,P)]] \end{bmatrix}$$

b.
$$\begin{bmatrix} \text{PHONOLOGY} & \text{/keikaku/} \\ \text{SYNTAX} & \textit{no}\text{-type adj. noun} \\ \text{SEMANTICS} & \lambda P[\lambda x[\exists y[\textbf{ASSOCIATED.WITH}(x,y)\ \&\ \textbf{plan-to}(y,P)]]] \end{bmatrix}$$

A small number of lexical items, including *tsumori* 'intention' and *tachi* 'disposition', (i) may serve as the head of the predicate NP of an associative NPC but not as the head of a nominal complement, and (ii) are non-modifiable.[22] (The non-modifiability of *ikoo* in [102a] is to be attributed to its being an adjectival noun derived with rule [100].)

(102) a. *Ken wa [Mari o koonin ni shimei suru] (*yosoogai no) **{ikoo/tsumori}** da.*
K. Th M. Acc successor Cop.Inf appoint do.Prs unexpected Cop.Attr intention/intention Cop.Prs
'Ken (unexpectedly) intends to appoint Mari as his successor.'

b. *Ken wa [Mari o koonin ni shimei suru] (yosoogai no) **{ikoo/*tsumori}** o mina ni tsutaeta.*
K. Th M. Acc successor Cop.Inf appoint do.Prs unexpected Cop.Attr intention/intention Acc everyone Dat communicate.Pst
'Ken informed everyone of his (unexpected) intention to appoint Mari as his successor.'

(103) a. *Ken wa [hitori de sagyoo suru no o konomu] {(kono shigoto ni pittari na) **seikaku** / (*kono shigoto ni pittari na) **tachi}** da.*
K. Th alone Cop.Inf work do.Prs Comp Acc like.Prs this job Dat suitable Cop.Attr personality this job Dat suitable Cop.Attr personality Cop.Prs
'Ken is disposed to like working alone (which makes him suitable for this job).'

---

21 The phonological representation assumes the inventory of phonemes and phonemic symbols posited by Vance (2008).

22 *Tsumori* used to have a use as a regular, independent noun (Toki 2010), but in the contemporary language, it only retains its use as a merman noun. The same may hold for *tachi*.

b. *Buchoo wa Ken no [hitori de sagyoo suru no o*
director Th K. Gen alone Cop.Inf work do.Prs Comp Acc
*konomu] (kono shigoto ni pittari na) **{seikaku/*tachi}***
like.Prs this job Dat suitable Cop.Attr personality/disposition
o yoku rikai shite iru.
Acc well understand do.Ger Npfv.Prs
'The director understands well Ken's disposition to like working alone (which makes him suitable for this job).'

I consider them to be inherent adjectival nouns selecting an (unsaturated) complement clause and a subject; i.e., I consider that lexical entries like (104a, b) are stored in the lexicon.[23]

(104) a. **the lexical entry for TSUMORI**

PHONOLOGY	/cumori/
SYNTAX	*no*-type adj. noun
SEMANTICS	$\lambda P[\lambda x[\exists y[$**intention-to**$(y,P)$ & **ASSOCIATED.WITH**$(x,y)]]]$

b. **the lexical entry for TACHI**

PHONOLOGY	/tači/
SYNTAX	*no*-type adj. noun
SEMANTICS	$\lambda P[\lambda x[\exists y[$**disposition-to**$(y,P)$ & **ASSOCIATED.WITH**$(x,y)]]]$

In sum, there are three sources of associative NPCs. First, an *NP* headed by a noun with feature [ASSOCIATIVE $+_{reg}$] may be turned into an NP with associative meaning with rule (92). Second, a *noun* (lexeme) with feature [ASSOCIATIVE $+_{adj}$] may be turned into an adjectival noun with associative meaning by means of lexical rule (100). Third, words like *tsumori* and *tachi* are inherently merman nouns with associative meaning.

23 While *tsumori, tachi,* etc. can be characterized as inherent merman nouns, items like *hazu* 'expectation' and *yoo* 'appearance' can be characterized as inherent mermaid nouns, selecting a saturated complement clause and not a subject (cf. [74]).

(i) *Ken shika jinin shinai **{hazu/yoo}** da.*
K. *shika* resign do.Neg.Prs reason/appearance Cop.Prs
'It {is expected/appears} that only Ken will resign.'

5 The open-ended-relation NPC

This section addresses the English and Japanese NPCs on their "non-default" interpretation, which have been referred to as "the deferred equative" and "the eel construction (eel sentence)" in the literature, respectively. The relation between this type of NPC, which requires a specific supporting context, and the identity/inclusion, attribute-specificational, and associative NPCs, which do not, can be likened to that between the non-default, open-ended-relation interpretation and the four default, specific-relation interpretations of the English genitive construction (Section 2). I will refer to the English deferred equative and the Japanese eel construction as open-ended-relation NPCs.

I will argue (i) that in both languages, the availability of an open-ended-relation NPC is contingent not only on the presence of a contextually identifiable two-place relation but also on additional discourse conditions, and (ii) that the English open-ended-relation NPC is subject to stricter discourse conditions than its Japanese counterpart.

5.1 The English open-ended-relation NPC (the deferred equative)

5.1.1 Ward (2004) on deferred equatives

Ward (2004) argues that English NPCs like (105) and (106B) instantiate a special construction that he terms "the deferred equative".

(105) (a restaurant customer to a waitperson who brought several dishes to the table)
I'm the ham sandwich.

(106) A: *I remember that one student each is writing an M.A. thesis on* Alien, Rocky, *and* Platoon, *but I cannot recall who is working on which movie.*
B: *Ken is* Alien, *Joe is* Rocky, *and Chris is* Platoon.

Prima facie, it may be tempting to reduce the peculiarity of English sentences like (105)/(106B) to metonymic transfer at the level of nominals (Copestake and Briscoe 1995; Nunberg 1995), which is observed in sentences like (107a, b).

(107) (uttered by a restaurant employee)
a. *The ham sandwich is at Table 7.*
b. *That french fries is getting impatient.*
(adapted from Nunberg 1995: 115)

Given that in English it is customarily possible for an NP to stand for an entity (e.g. a person) metonymically associated with its referent (e.g. a dish), it may seem reasonable to treat (120)/(121B) as regular NPCs whose predicate NP happens to have undergone this kind of metonymic transfer.

Ward (2004), however, convincingly argues that NPCs like (105)/(106B) cannot be accounted for in terms of metonymic transfer at the level of nominals. One piece of evidence that the subject and predicate NPs of a deferred equative (typically) retain their literal meaning is that a predicate NP or subject NP literally denoting a non-human but equated with a human, such as *the pad thai* in (108b)/(109b), still accepts a modifier selecting a non-human-denoting modifiee.[24]

(108) a. *#John is the pad thai, who drives a Rolls Royce.*
b. *John is the pad thai, which looks delicious.*
c. *John is talking to the pad thai, who drives a Rolls Royce.*
(Ward 2004: 281)

(109) a. *#The pad thai, who drives a Rolls Royce, is John.*
b. *The pad thai, which looks delicious, is John.*
c. *The pad thai, who drives a Rolls Royce, is talking to John.*
(Ward 2004: 281)

Observing the unnaturalness of utterances like (110Bb) and (111Bb), Ward (2004) proposes that the deferred equative construction (i.e., the English open-ended-relation NPC) (i) presupposes the presence of a contextually salient (surjective) pragmatic mapping between two (non-empty/non-singleton) sets of relevant discourse referents, and (ii) asserts that on this mapping the referent of the subject corresponds to that of the predicate NP.

(110) A: *How was your meal?*
B: *Good. I {a. had/b. #was} the pad thai.*
(adapted from Ward 2004: 280)

(111) A: *Sorry you had to have lunch all by yourself. What did you have?*
B: *I {a. had/b. #was} the pad thai.*
(adapted from Ward 2004: 280)

He formulates pragmatic mappings in the form of an open proposition (OP), defined as "a proposition with one or more variables or underspecified elements,

24 (108a)/(109a) are acceptable on an interpretation where the subject or predicate NP happens to have undergone metonymic transfer, as in:

(i) *Quite a few celebrities come to our restaurant regularly. The ham sandwich at table 5 is James Gordon. The pad thai, who always leaves a big tip, is Bruce Wayne.*

corresponding to that aspect of information structure that constitutes backgrounded or presupposed information". In the case of (112a), the relevant OP looks like (112b).

(112) a. (a restaurant customer to a waitperson who brought several dishes to the table)
I'm the pad thai.
b. OP: X *maps onto* Y, where X is a member of the set {*x* | *x* is a customer} and Y is a member of the set {*y* | *y* is an order}.
c. FOCI: I, the pad thai

(adapted from Ward 2004: 279)

One problem with Ward's formulation is that, given that a mapping is by definition a relation that is potentially many-to-one but never one-to-many, it wrongly predicts that an utterance like (113) is infelicitous, a member of {*x* | *x* is a customer} corresponding to two members of {*y* | *y* is an order}.

(113) (a restaurant customer to a waitperson who brought five dishes to a table of three)
I'm the ham sandwich and fried chicken.

Note that here the speaker need not assume that the waitperson is aware that the ham sandwich and fried chicken were ordered by the same customer, so that in a way the two dishes constitute a "single order".

5.1.2 Proposal

I propose that the felicitous use of an English open-ended-relation NPC requires (i) that there be (a) a contextually prominent set of entities *P* that contains the referent of the subject NP and at least one other member, (b) a contextually prominent set of entities *Q* that contains the referent of the predicate NP and at least one other member, and (c) a contextually prominent binary relation *R*, and (ii) that it is common ground that *R* is a *serial and surjective correspondence* from *P* to *Q* (i.e., each member of *P* is in *R* with at least one member of *Q*, and vice versa).

(114) does not meet this condition, there being no established set of dishes each of which is known to have been eaten by somebody among the people under discussion; it is not even common ground that somebody ate a ham sandwich.

(114) (in reply to: "What did you have for your lunch? I had a hamburger.")
#I'm a ham sandwich.

(115B) does not meet this condition, either (cf. [106]). Here, that somebody among the people under discussion saw *Rocky* is part of the interlocutors' shared knowledge, but the condition that each of the contextually salient movies was seen by someone (among the people under discussion) is not satisfied.

(115) (It is common ground that Ken, Joe, and Chris each saw one of *Rocky*, *Alien*, and *Platoon*, and two or all of them may have seen the same movie.)
A: *Ken saw* Rocky, *right? What about Joe and Chris? Which movie did they see?*
B: *??Joe and Chris are* Rocky, *too.*

The constraint that the subject and predicate NPs must refer to members of contextually salient sets makes it the case that they are generally definite. This, however, is not strictly required, as seen in (116).

(116) (The hearer has come back from a burger shop with a variety of hamburgers requested by her colleagues. The speaker comes to pick up his order.)
I'm a cheeseburger.
(adapted from Kuno 1978: 92)

The English open-ended-relation NPC furthermore conveys what may be called *the exhaustivity implication*, as a non-presuppositional not-at-issue content,[25] as illustrated in (117b).

(117) (a restaurant customer to a waitperson who brought five dishes to a table of three)
a. *I'm the ham sandwich and fried chicken.*
b. *I'm the ham sandwich. #I'm the fried chicken, too.*
c. *I ordered the ham sandwich. I ordered the fried chicken, too.*

The exhaustivity implication is concerned only with the referent of the predicate NP but not with the referent of the subject NP. The felicity of (118) evidences this point.

(118) (at a national press conference where a number of reporters from every major newspaper are present)
John is the Washington Post. *Mary is the* Washington Post*, too.*
'John is a reporter for the *Washington Post*. Mary is a reporter for the *Washington Post*, too.'
(adapted from Ward 2004: 282)

That the exhaustivity implication is not part of the at-issue content can be illustrated with the oddity of discourses like (119a, b):

25 Here, the term "not-at-issue content" is understood broadly and taken to subsume presupposition (= presuppositional not-at-issue content) as its subtype. "Presupposition(al not-at-issue content)s" in the current work correspond to Tonhauser et al.'s (2013) "[+SCF (Strong Contextual Felicity)] projective contents", and non-presuppositional not-at-issue contents correspond to their "[–SCF] projective contents".

(119) (It is common ground that three critics, including Ken, wrote reviews of five movies in total, each critic wrote on one or two movies, and no movie was reviewed by more than one critic.)
a. *Ken is not* Alien*. #He wrote a review of* Rocky*, too.*
b. *Probably Ken is* Alien*. #But he may have written a review of* Rocky*, too.*

That the exhaustivity implication is non-presuppositional, on the other hand, can be shown with an example like (120), which is felicitous despite it being contextually plausible (i.e., consistent with the common ground) that Ken wrote reviews of three or more movies.

(120) (It is common ground that three critics, including Ken, wrote reviews of 10 movies in total, each critic wrote on two to five movies, and no movie was reviewed by more than one critic.)
Ken is Alien *and* Rocky.

It is interesting to note here that the cleft construction, which can be seen as involving a nominal predicate in a broad sense, too conveys an exhaustivity implication (Oshima 2023; Velleman et al. 2012).[26]

(121) *It is the ham sandwich that I ordered. #I ordered the fried chicken, too.*

The meaning of an English open-ended-relation NPC will look like (122), with the first clause of (106B) ("Ken is *Alien*") as an example. Materials between curly braces ({·}) represent presupposition(al not-at-issue content)s, and ones between vertical bars (|·|) represent non-presuppositional not-at-issue contents. $\mathbb{R}$ is a context-dependent variable ranging over relations between two entities, and $\mathbb{P}$ and $\mathbb{Q}$ are context-dependent variables ranging over sets consisting of two or more entities. Recall that "$\sqsubseteq$" stands for the (individual or material) parthood relation.

(122) $\{\mathbb{P} \leftrightarrows_{\mathbb{R}} \mathbb{Q}$ & **ken** $\in \mathbb{P}$ & **alien** $\in \mathbb{Q}\}[|\forall z \in \mathbb{Q}[\mathbb{R}(\textbf{ken},z) \rightarrow z \sqsubseteq \textbf{alien}]|$ $[\mathbb{R}(\textbf{ken},\textbf{alien})]]$

26 It is not the case that nominal predication in general codes exhaustivity.

(i) a. *Ken is the leader of this research project. He is the department head, too.*
b. *Mari is a chef. She is a conservationist, too.*

However, it seems that a nominal predicate of the form "X is Y" typically implies or at least strongly implicates that X is not Y′, Y″, …, where Y′, Y″, …are items contrasted with Y.

(ii) a. *The whale is a mammal.*
implies: 'The whale is not a fish, or a reptile, or …'
b. *Ken is a taxi driver.*
implicates: 'Ken is not an accountant, or a teacher, or …'

Is seems plausible that this feature of nominal predication makes it the case that marked constructions with a nominal predicate (such as the open-ended-relation NPC) tend to be conventionally tied with exhaustivity.

(123) For any context c, world w, and assignment g,
a. $[\![\{\phi\}[\psi]]\!]^{c,w,g}$ is defined only if $[\![\phi]\!]^{c,w,g} \in$ CG(c) (i.e., it is common ground in c that "ϕ"); if defined, $[\![\{\phi\}[\psi]]\!]^{c,w,g} = [\![\psi]\!]^{c,w,g}$;
b. $[\![|\phi|[\psi]]\!]^{c,w,g}$ is defined only if $[\![\phi]\!]^{c,w,g} = 1$; if defined, $[\![|\phi|[\psi]]\!]^{c,w,g} = [\![\psi]\!]^{c,w,g}$.

(124) a. $\mathbb{R}$ ranges over relations between two entities ($\mathbb{R}$ denotes an obejct of type ⟨e, ⟨e, t⟩⟩).
b. For any context c, world w, and assignment g, $[\![\mathbb{R}]\!]^{c,w,g}$ is defined only if g($\mathbb{R}$) is a relation between two entities that is prominent in c; if defined, $[\![\mathbb{R}]\!]^{c,w,g}$ = g($\mathbb{R}$).

(125) a. $\mathbb{P}$ ranges over non-empty, non-singleton sets of entities ($\mathbb{P}$ denotes an object of type ⟨e, t⟩). Likewise for $\mathbb{Q}$.
b. For any context c, world w, and assignment g, $[\![\mathbb{P}]\!]^{c,w,g}$ is defined only if g($\mathbb{P}$) is a set of entities that is prominent in c; if defined, $[\![\mathbb{P}]\!]^{c,w,g}$ = g($\mathbb{P}$). Likewise for $\mathbb{Q}$.

(126) $P \leftrightarrows_R Q =_{def} \forall x_1 \in P, \forall y_1 \in Q[\exists x_2 \in P, \exists y_2 \in Q[R(x_1,y_2) \,\&\, R(x_2,y_1)]]$

In prose, (122) amounts to saying that (i) there is some serial and surjective correspondence *R* between two sets: {Ken, …} and {*Alien*, …} (presupposition), (ii) Ken stands in *R* with *Alien* (at-issue content), and (iii) Ken does not stand in *R* with any movie other than *Alien* (exhaustivity implication).

I posit phrase-modificational rule (127) to generate English open-ended-relation NPCs.

(127) **the open-ended-relation predicatization rule (English)**
$\alpha'_{\langle\langle e,t\rangle,t\rangle} \Rightarrow \lambda X[\lambda x[X(\lambda y[\{\mathbb{P} \leftrightarrows_{\mathbb{R}} \mathbb{Q} \,\&\, x \in \mathbb{P} \,\&\, y \in \mathbb{Q}\}[|\, \forall z \in \mathbb{Q}[\mathbb{R}(x,z) \rightarrow z \sqsubseteq y]|[\mathbb{R}(x,y)]]])]](\alpha')$

5.2 The Japanese open-ended-relation NPC (the eel construction)

The Japanese open-ended-relation NPC (the eel construction)[27] is associated with a strictly weaker presupposition than the English one, and consequently has a wider discourse-configurational distribution.

27 In the Japanese-linguistic literature, there has not been a clear consensus as to the relation between (i) attribute-specificational and associative NPCs, both of which are marked in not encoding the relation of identity/inclusion, and (ii) eel constructions. Here I assume that the label "eel construction" specifically refers to the open-ended-relation NPC and does not cover the attribute-specificational and associative NPCs. (i) illustrates a sentence that by default receives the attribute-

(128) (in reply to: 'What did you have for your lunch? I ate fish and chips.')
a. *Boku wa hamusandoitchi da.*
I Th ham.sandwich Cop.Prs
(lit.) 'I am {a/the} ham sandwich.'
b. *??I'm a ham sandwich.*

The Japanese open-ended-relation NPC, however, is pragmatically more constrained than acknowledged in the previous literature (Tokizaki [2003] and references therein). In addition to there being a contextually identifiable two-place relation *R*, the construction presupposes (i) that there is some *x* such that ⟨the subject NP's referent, *x*⟩ ∈ *R* (*existence presupposition*), and (ii) that there is at least one pair of entities ⟨*y*, *z*⟩ such that (a) ⟨*y*, *z*⟩ ∈ *R* and (b) *y* is distinct from the subject NP's referent (*multiple-pair presupposition*). Furthermore, like the English one, the Japanese open-ended-relation NPC conveys the exhaustivity implication (with respect to the predicate NP's referent).

(129) and (130) illustrate the effect of the existence presupposition. In both exchanges, the relation '*x* studies the life of *y* (as a marine biologist)' is made prominent by the first utterance of interlocutor B, but follow-up utterance ($130B_2'$) is much less natural than ($129B_2'$). This contrast can be attributed to the fact that the existence presupposition – that B's husband studies the life of some marine creature – is satisfied only in (129) but not in (130), so as that ($130B_2'$) imposes pragmatic accommodation on the hearer.

(129) A: 'I heard that you and your husband are marine biologists. Do you work on a particular creature, like whales?'
B_1: *Watashi wa kuromaguro no seitai o kenkyuu shite imasu.*
I Th bluefin.tuna Gen life Acc study do.Ger Npfv.Plt.Prs
'I study the life of bluefin tuna.'

---

specificational interpretation but is situated in a context that supports an open-ended-relation interpretation. Likewise, (ii) would receive the associative interpretation in isolation, but the context makes the open-ended-relation interpretation available and plausible.

(i) ('Is Ken the medical scholar working on polio?' – 'Nope, …')
Ken wa ***hashika*** *da.*
K. Th measles Cop.Prs
(i) 'Ken has measles.' (the default, attr.-spec. interpretation)
(ii) 'Ken is the medical scholar working on measles.'

(ii) ('Every athlete here aspires to develop some mental quality that they currently lack. …')
Ken wa saigo made akiramenai ***seikaku*** *da.*
K. Th end until give.up.Neg.Prs personality Cop.Prs
(i) 'Ken is inclined not to give up until the end.' (the default, associative interpretation)
(ii) 'The quality that Ken wants to develop is the inclination not to give up until the end.'

B_2: *Otto wa unagi no seitai o kenkyuu shite imasu.*
husband Th eel Gen life Acc study do.Ger Npfv.Plt.Prs
'(My) husband studies the life of eel.'
B_2': *Otto wa unagi desu.*
husband Th eel Cop.Plt.Prs
(lit.) '(My) husband is eel.'

(130) (The interlocutors have just met for the first time. A does not know anything about B's husband.)
A: 'So you are a marine biologist? Do you work on a particular creature, like whales?'
B_1: *Watashi wa kuromaguro no seitai o kennkyuu shite imasu.*
I Th bluefin.tuna Gen life Acc study do.Ger Npfv.Plt.Prs
'I study the life of bluefin tuna.'
B_2: *{Chinamini / ?∅} otto wa unagi no seitai o kenkyuu shite imasu.*
incidentally husband Th eel Gen life Acc study do.Ger Npfv.Plt.Prs
'(Incidentally) (my) husband studies the life of eel.'
B_2': *{??Chinamini / #∅} otto wa unagi desu.*
incidentally husband Th eel Cop.Plt.Prs
(lit.) ((Incidentally) (my) husband is eel.)

(131) and (132) illustrate the effect of the multiple-pair presupposition. (132B′) sounds odd, there being no contextually identifiable pair of a person and a movie distinct from ⟨Ken, *Alien*⟩.

(131) (It is common ground that Mari and Ken saw a possibly different movie.)
A: 'Mari saw *Rocky*, right? What about Ken? What movie did he see?'
B: *Ken wa* Alien *o mimashita. / Ken mo* Rocky *o mimashita.*
K. Th *A.* Acc see.Plt.Pst K. also *R.* Acc see.Plt.Pst
'Ken saw *Alien*. / Ken saw *Rocky*, too.'
B′: *Ken wa* Alien *desu.*
K. Th *A.* Cop.Plt.Prs
(lit.) 'Ken is *Alien*.'
B″: *Ken mo* Rocky *desu.*
K. also *R.* Cop.Plt.Prs
(lit.) 'Ken is *Rocky*, too.'

(132) (It is common ground that Ken is the only person who saw a movie.)
A: 'What movie did Ken see?'
B: *Ken wa* Alien *o mimashita.*
K. Th *A.* Acc see.Plt.Pst
'Ken saw *Alien*.'
B′: *#Ken wa* Alien *desu.*
K. Th *A.* Cop.Plt.Prs
(lit.) (Ken is *Alien*.)

(133), finally, illustrates the effect of the exhaustivity implication.

(133) (in reply to: 'What did you have for your lunch? I had a hamburger.')
a. *Watashi wa hamusandoitchi o tabemashita. (Ato) furaidochikin mo tabemashita.*
I Th ham.sandwich Acc eat.Plt.Pst and fried.chicken also eat.Plt.Pst
'I ate a ham sandwich. (And) (I) ate fried chicken, too.'
b. *Watashi wa hamusandoitchi desu. #{Ato / ∅} furaidochikin de mo arimasu.*
I Th ham.sandwich Cop.Plt.Prs and fried.chicken Cop.Inf also Aux.Plt.Prs
(lit.) 'I am a ham sandwich. (And) (I) am fried chicken, too.'
cf. *Watashi wa gaka desu. (Ato) toogeika de mo arimasu.*
I Th painter Cop.Plt.Prs and potter Cop.Inf also Aux.Plt.Prs
'I am a painter. (And) I am a potter, too.'

With (131B′) as an example, the meaning of a Japanese open-ended-relation NPC can be illustrated as in (134).

(134) *Ken wa* Alien *desu.* '(lit.) Ken is *Alien*.' ↦
$\{\exists y_1,x_2,y_2[\mathbb{R}(\mathbf{ken},y_1) \,\&\, \mathbb{R}(x_2,y_2) \,\&\, x_2 \neq \mathbf{ken}]\}[|\forall z[\mathbb{R}(\mathbf{ken},z) \rightarrow z \sqsubseteq \mathbf{alien}]|[\mathbb{R}(\mathbf{ken},\mathbf{alien})]]$

In prose, this amounts to saying that (i) Ken and at least one other person stand in some contextually prominent relation *R* with some movie (possibly the same one) (presupposition), (ii) Ken stands in *R* with *Alien* (at-issue-content), and (iii) he does not stand in *R* with any movie other than *Alien* (exhaustivity implication).

Rule (127) posited for the English open-ended-relation NPC can be easily adapted to handle its Japanese counterpart with the weaker presupposition.

(135) **the open-ended-relation predicatization rule (Japanese)**
$\alpha'_{\langle\langle e,t\rangle,t\rangle} \Rightarrow \lambda X[\lambda x[X(\lambda y[\{\exists y_1,x_2,y_2[\mathbb{R}(x,y_1) \,\&\, \mathbb{R}(x_2,y_2) \,\&\, x_2 \neq x]\}[|\forall z[\mathbb{R}(x,z) \rightarrow z \sqsubseteq y]|[\mathbb{R}(x,y)]]])]](\alpha')$

6 Conclusion

This article discussed the varieties of nominal predicate constructions found in English and Japanese, listed in Table 2.

Table 2: The four major varieties of nominal predicate constructions.

	Eng.	Jpn.	Alternative labels
Specific-relation NPCs			
Identity/inclusion type	√	√	Unmarked NPC
Attribute-specificational type	√	√	(None)
Associative type	–	√	Merman construction
Open-ended-relation NPC	√	√	Deferred equative, eel construction

English has two, and Japanese has three, major types of the NPC that represent a relatively specific relation between the subject and predicate NPs. Both English and Japanese NPCs have an unmarked variety representing the relation of identity or inclusion (the identity/inclusion NPC), and a marked variety specifying the value of a certain attribute of the subject NP's referent, such as size, age, and color (the attribute-specificational NPC). The Japanese attribute-specificational NPC is compatible with a wider range of attributes than the English one.

The Japanese NPC, but not the English one, has a variety termed the associative NPC. In an associative NPC, the subject NP's referent is understood to be associated with an abstract entity represented by the predicate NP. The associative NPC comes in two varieties: the U(nsaturated)-type, where the predicate NP involves a complement clause whose subject is necessarily null and co-referential with the matrix-level subject NP, and the S(aturated)-type, where the predicate NP involves a "full" complement clause.

English and Japanese additionally have a variety, termed the open-ended-relation NPC, where the relation between the subject and predicate NPs is hardly constrained and can be identified only based on contextual cues. The Japanese open-ended-relation NPC imposes a weaker presupposition, and accordingly has a wider discourse-configurational distribution, than the English one.

The acknowledgment of the three marked NPCs adds an extra layer to the taxonomy of nominal-predicate and copular constructions previously assumed in the literature. They superficially look similar to the unmarked identity/inclusion type, which corresponds to Higgins's (1979) equative and identificational copular constructions, but exhibit rather distinct semantic profiles.

In many cases, a marked NPC serves a function that is more canonically assumed by some alternative construction. (136)–(139) illustrate how more or less the same idea may be expressed in different constructions, including an NPC, in English and Japanese.

(136) a. (attribute-specificational NPC)
This camera is the weight of a chick.
b. (possessive construction)
This camera has the weight of a chick.
c. (adjectival construction)
This camera is as light as a chick.
d. (non-possessive/non-locative verbal construction)
This camera weighs as little as a chick.

(137) a. (attribute-specificational NPC)
i. *The two art works are totally different genres.*
ii. *The meeting is May 1st.*
b. (locative(-like) construction)
i. *The two art works are in totally different genres.*
ii. *The meeting is on May 1st.*

(138) a. (attribute-specificational NPC)
Ken wa katai hyoojoo datta. (≈ [35a])
K. Th stiff.Prs facial.expression Cop.Pst
'Ken had a stiff facial expression.'
b. (light-verb construction)
Ken wa katai hyoojoo o shite ita.
K. Th stiff.Prs facial.expression Acc do.Ger Npfv.Pst
'Ken had a stiff facial expression.'

(139) a. (associative NPC)
Ken wa jinin suru ikoo da. (= [64])
K. Th resign do.Prs intention Cop.Prs
'Ken intends to resign.'
b. (possessive construction)
Ken ni wa jinin suru ikoo ga aru.
K. Dat Th resign do.Prs intention Nom exist.Prs
'Ken has an intention to resign.'

Japanese, where marked NPCs are used more liberally than in English, can be seen as a language where nominal predicates hold a fairly strong position in the realm of predication. Remarks to a similar effect are made by Shinya (2014), under the rubric

of "noun orientation (*meishi shikoosei*)" of the language. On the other hand, English too can be seen as having a relatively rich inventory of nominal predicates, in comparison to languages that do not have analogs of the attribute-specificational NPC or the open-ended-relation NPC.

It will be worth investigating, in future studies, how a wider variety of languages contrast with each other in terms of what types of marked NPCs they possess and how frequently/liberally they are used. In the case of English and Japanese, it seems to be generally the case that situations that can be coded with an NPC in the former can be coded with an NPC in the latter, but not vice versa. It is yet to be determined, however, whether such implicational patterns can be systematically found across languages. Another open question is whether there is any correlation between the breadth of the niche of the NPC and other grammatical features of the language, such as the head-directionality and the features and size of its adjective class (Dixon 2010: 62–108). Interestingly, English and Japanese seem to be more liberal than other well-studied languages, including ones that exhibit similar grammatical features (e.g. German for English, Korean for Japanese), as to the range of situations that could be described with a NPC. It is worth inquiring to what extent the two languages are "special", and what factors might have made them that way. The discussion developed in the present work hopefully makes a good vantage point for such general-linguistic and typological discussions.

Acknowledgments: I am grateful for valuable comments to the anonymous reviewers and the editor Volker Gast. Some materials in this article were presented at the 29th International Conference on Head-Driven Phrase Structure Grammar and published in Oshima (2022); thanks also to the audience there for helpful feedback.
Research funding: This work was supported by JSPS KAKENHI Grant Number 22K00505.

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