

Annotation manual for the NPCMJ

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1 Introduction

This manual details an annotation scheme for parsing contemporary Japanese. Syntactic structure is represented with labelled parentheses adapting the format of the Penn Treebank (Bies, Ferguson, Katz, and MacIntyre 1995), and more particularly the CorpusSearch format of the Penn Historical family of parsed corpora, exemplified by the *Annotation manual for the Penn Historical Corpora and the Parsed Corpus of Early English Correspondence (PCEEC)* (Santorini 2010). Besides the basic annotation format (see section 2), other notable decisions of the PCEEC scheme that we have adopted include:

- having tags that are familiar to generative linguists,
- not having any explicit VP structure (although VP structure is implicitly present when there are interpretive consequences),
- having phrasal nodes (NP, PP, ADVP, etc.) that immediately dominate the phrase head (N, P, ADV, etc.), and
- marking for function all clausal nodes and all clause level constituents.

We were also heavily inspired by the SUSANNE scheme (Sampson 1995) regarding adoption of construction analysis, and most in particular for the methods of representing complex expressions with subordination and/or coordination.

The annotation also contains plenty that is innovative, including annotation to explicitly mark exceptional scope information, and information to resolve both inter and intra sentential anaphoric dependencies from a discourse perspective.

Annotation is carried out with a general text editor (in practice, vi(m) or emacs) on text files.

Annotation practice strives first for observational adequacy. The aim is to present a consistent linguistic analysis for each attestation of an identifiable linguistic relation or process. Relations and processes are treated uniformly as much as possible, and their treatments are detailed in this documentation. Setting aside the issue of whether the system of description is theoretically correct, the practice is to render lexical and functional items, parts of speech, constituents of various categories and functions, and constructions defined by combinations

of properties, in such ways as to be unambiguously identifiable. This documentation sets out basic principles both for the annotator (assigning segmentations, tags, and structural positions) and for the user (searching for classes of items, categories, and relationships between these). Searches combine terminal strings, tag names and extensions, and structural relations between these. Examples of suitable tools for searching the parsed data without requiring any modification to the data include CorpusSearch (Randall 2009),¹ and Tregex (Levy and Andrew 2006).² The project also provides transformations to other formats, notably to Alpino XML format (Noord, Bouma, Eynde, de Kok, van der Linde, Schuurman, Sang, and Vandeghinste 2013). Alpino XML is the data format used in the NPCMJ online ‘Explorer’ and ‘Search’ interfaces, with underlying XPath and TRegrep-lite search methods.

The current annotation also aims to offer syntactic analysis that can serve as a base for the subsequent generation of predicate logic based meaning representations using the methods of Treebank Semantics (Butler 2015).³ To this latter end, extra disambiguation information is added to feed the calculation of semantic analyses from the syntactic annotation. One example of this is seen in different specifications of clause linkage (i.e., different types of non-final clauses). The annotation has the -SCON tag extension to identify clauses integrated with subordinate conjunction. Subordinate clause status influences the distribution of empty subject positions within such clauses and the antecedence relationships these positions have with respect to upstairs arguments (according to an antecedent calculation called “control”). These cases are contrasted with coordinate clause linkage, also identified with a tag extension: -CONJ (coordinating conjunction). Status as a coordinate clause influences the distribution of arguments shared between that clause and one or more other clauses (according to an antecedent calculation called “Across the Board extraction” (ATB)).

With these calculations in place, most antecedent relations in Japanese can be accurately determined without resorting to annotation with overt indexing, provided that the distinction between subordination and coordination is properly annotated. The practice provides a robust basis for calculating semantics, a simplified annotation scheme that is descriptively adequate, and a set of constraints on the distribution of null positions which have interesting consequences with respect to, for example, the placement of zero pronouns.

2 Format of the parsed data

All files of the NPCMJ are formatted to be compatible with the CorpusSearch program (Randall 2009; <http://corpussearch.sourceforge.net/CS-manual/YourCorpus.html>). Under CorpusSearch format, every tree has a “wrapper”. A wrapper is a pair of unlabelled parentheses surrounding the tree content together with an ID node. The ID node must contain a string that begins with a number corresponding to the number of the tree in the file which is followed by an underscore (‘_’) and in turn followed by the name of the file (minus the ‘.psd’ extension). Any other string material may then follow the filename, provided there is an intervening semicolon (‘;’). For example, the following is correctly formatted when contained in a file named ‘textbook_kisonihongo.psd’.

```
( (IP-MAT (PP-SBJ (NP (N 輪))
                    (P-ROLE が))
  (VB 回る)
  (PU 。))
(ID 1_textbook_kisonihongo;page_13;JP))
```

¹See: <http://corpussearch.sourceforge.net/>

²See: <http://nlp.stanford.edu/software/tregex.shtml>

³See: <http://www.compling.jp/ts>

```

( (IP-MAT (NP-SBJ;{MAN_2} *pro*)
  (PP-OB1 (NP (N 輪))
    (P-ROLE を))
  (VB 回す)
  (PU 。))
(ID 2_textbook_kisonihongo;page_13;JP))

( (IP-MAT (PP-SBJ (NP (N 人))
  (P-ROLE が))
  (VB 集まる)
  (PU 。))
(ID 3_textbook_kisonihongo;page_13;JP))

( (IP-MAT (NP-SBJ;{MAN_4} *pro*)
  (PP-OB1 (NP (N 人))
    (P-ROLE を))
  (VB 集める)
  (PU 。))
(ID 4_textbook_kisonihongo;page_13;JP))

```

To (re-)number, indent, and add line spacing, you can pipe the contents of an existing file through the ‘csearch_fix_numbering’ tool.

Note the presence of ‘;JP’ in the ID string. This is used to signal the language type for subsequent automatic processing of the tree, notably by the *Treebank Semantics* tools used to create meaning representations from the parsed trees.

Note that, if the ID and the name of the containing file are failing to match, this problematic circumstance will not be picked up by a run of the ‘csearch_fix_numbering’ tool. To see if the naming is a problem, you can run the ‘csearch_check_naming’ command (no flags) from a working directory that contains the files you wish to check. Executing this command will return nothing if the naming is okay. If errors are found, information about their location is given. There is also a ‘csearch_check_numbering’ program to check the numbering, which will return nothing if the numbering is okay, and otherwise report the location of errors.

3 Tags

3.1 General principles

Labels are either word level part-of-speech tags (e.g., N=noun, P=particle, ADV=adverb), or phrase level categories with minimally a basic label to indicate the form of the constituent (e.g., NP=noun phrase, PP=particle phrase, ADVP=adverb phrase). Frequently, label extensions (separated by a hyphen) are added to labels to indicate function (e.g., P-ROLE=role particle, NP-SBJ=subject noun phrase, IP-REL=relative clause, IP-SMC=small clause). In most cases there is one label extension, but more is possible (e.g., IP-ADV-SCON-CND=conditional clause).

All tag labels used in this schema are listed below.

3.2 Part-of-speech tags

ADJI	イ-adjective
ADJI-MD	modal イ-adjective
ADJN	ナ-adjective
ADJN-MD	modal ナ-adjective
ADV	adverb
AX	auxiliary verb (including copula)
AXD	auxiliary verb, past tense
CL	classifier
CONJ	coordinating conjunction
D	determiner
FN	formal noun
FW	foreign word
INTJ	interjection
MD	modal element
N	noun
N-MENTION	mentioned expression
NEG	negation
NPR	proper noun
NUM	numeral
P-COMP	complementizer particle
P-CONN	conjunctive particle
P-FINAL	final particle
P-INTJ	interjectional particle
P-OPTR	particle
P-ROLE	role particle
PASS	direct passive
PASS2	indirect passive
PNL	prepositional
PRO	pronoun
PU	punctuation
PUL	left bracket
PUR	right bracket
Q	quantifier
QUOT	quote
SYM	symbol
VB	verb (or verb stem)
VB0	light verb
VB2	secondary verb
WADV	indeterminate adverb
WD	indeterminate determiner
WNUM	indeterminate numeral
WPRO	indeterminate pronoun

3.3 Syntactic tags

ADVP	adverb phrase
ADVP-CMPL	complement adverb phrase
ADVP-MSR	measurement adverb phrase
ADVP-PRD	predicate adverb phrase
ADVP-TMP	temporal adverb phrase
CONJP	conjunction phrase
CP-EXL	exclamative
CP-IMP	imperative
CP-FINAL	projection for sentence final particle
CP-QUE	question (direct or indirect)
CP-QUE-ADV	question used adverbially
CP-QUE-OB1	question used as object
CP-QUE-PRD	question used as a nominal predicate
CP-QUE-SBJ	question used as subject
CP-THT	complementizer clause
CP-THT-ADV	complementizer clause used adverbially
CP-THT-OB1	complementizer clause used as object
CP-THT-PRD	complementizer clause used as predicate
CP-THT-PRP	purposive complementizer clause
CP-THT-SBJ	complementizer clause used as subject
FRAG	fragment
FS	false start
INTJP	interjection phrase
IP-ADV	adverbial clause
IP-ADV-CONJ	coordinated clause
IP-ADV-PRD	adverbial clause used as predicate
IP-ADV-SCON	subordinate clause
IP-ADV-SCON-CND	conditional clause
IP-EMB	gapless noun-modifying clause
IP-IMP	imperative clause
IP-MAT	matrix clause
IP-NMZ	nominalized clause
IP-NMZ-PRD	nominalized clause used as predicate
IP-REL	relative clause
IP-SMC	small clause
IP-SMC-CNT	small clause in continuative form
IP-SMC-OB1	small clause used as object
IP-SMC-SBJ	small clause used as subject
IP-SUB	clause under CP* layer
multi-sentence	multiple sentence
NML	intermediate nominal layer
NP	noun phrase
NP-ADV	adverbial noun phrase
NP-CZZ	causee noun phrase
NP-DOB1	derived primary object noun phrase
NP-DSBJ	derived subject noun phrase
NP-LGS	logical subject noun phrase
NP-LOC	locational noun phrase
NP-MSR	measure noun phrase
NP-OB1	primary object noun phrase
NP-OB2	secondary object noun phrase

NP-POS	possessive noun phrase
NP-PRD	predicate noun phrase
NP-SBJ	subject noun phrase
NP-SBJ2	secondary subject noun phrase
NP-TMP	temporal noun phrase
NP-TPC	topic noun phrase
NP-VOC	vocative noun phrase
NUMCLP	numeral-classifier phrase
PNLP	prenominal phrase
PP	particle phrase
PP-ADV	adverbial particle phrase
PP-CMPL	complement particle phrase
PP-CONJ	coordination particle phrase
PP-CZZ	causee particle phrase
PP-DOB1	derived primary object particle phrase
PP-DSBJ	derived subject particle phrase
PP-LGS	logical subject particle phrase
PP-LOC	locational particle phrase
PP-MSR	measure particle phrase
PP-OB1	primary object particle phrase
PP-OB2	secondary object particle phrase
PP-PRD	predicate particle phrase
PP-PRP	purposive particle phrase
PP-SBJ	subject particle phrase
PP-SBJ2	secondary subject particle phrase
PP-SCON	subordination particle phrase
PP-SCON-CND	conditional particle phrase
PP-TMP	temporal particle phrase
PP-TPC	topic particle phrase
PP-VOC	vocative particle phrase
PRN	parenthetical

3.4 Other tags

CLEAN	send element to discourse context
LS	list item
LST	list
META	metadata

4 General parsing principles

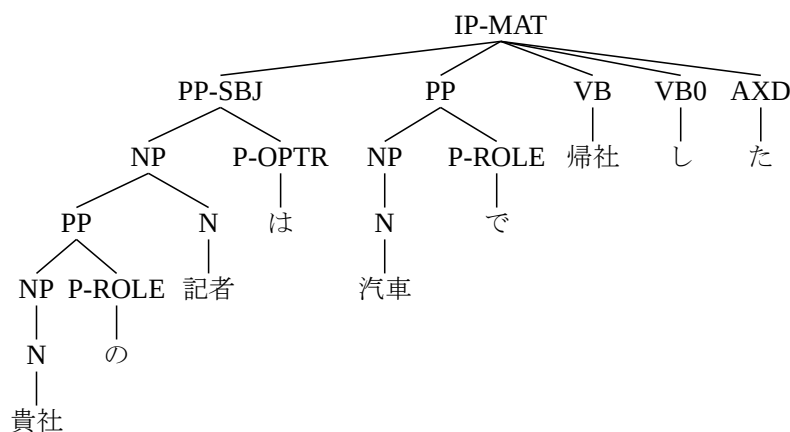
4.1 Overview

The annotation scheme represents syntactic structure with labelled parentheses. All open parentheses have an associated label, representing non-terminal nodes in a tree.

There is no specified VP level, so clause structure is generally flat with multiply branching nodes, with IP layers immediately dominating all clause level constituents. Furthermore, verbs (VB, VB0, VB2), verbal auxiliaries and copulas (AXD, AX), and modal elements (MD) are separately labelled and dominated by the IP layer. Strings of one or more particles (P-ROLE or P-OPTR) can attach to noun phrases or clauses to create particle phrases (PP).

- (1) 貴社の記者は汽車で帰社した

The parse in tree form looks like:



In bracketed notation this is:

```

( ( IP-MAT ( PP-SBJ ( NP ( PP ( NP ( N 貴社 )
                               ( P-ROLE の ) )
                           ( N 記者 ) )
                       ( P-OPTR は ) )
                    ( PP ( NP ( N 汽車 ) )
                      ( P-ROLE で ) )
                  ( VB 帰社 )
                ( VB0 し )
              ( AXD た ) )
  ( ID 34_misc_BUFFALO ) )

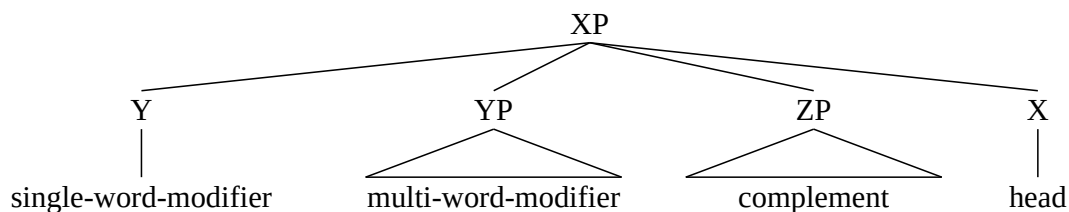
```

4.2 Terminal nodes

Every word has a word level part-of-speech label. Null elements (null pronouns, traces, etc.) that aren't in the text itself but are introduced to describe structure have terminal nodes that begin and end with “*”. Null elements are typically placed directly under phrase-level nodes, and so have no part-of-speech node projection. See section 8 for details about null elements.

4.3 The schema of phrase constituents

Phrase structure is roughly describable as below:



In bracketed notation this is:

```

( XP ( Y single-word-modifier )
      ( YP multi-word-modifier )
      ( ZP complement )
      ( X head ) )

```

4.4 Flat phrase-structure

Words that project phrases are phrase heads (e.g., N, P, ADV, etc.). Phrase heads are immediately dominated by phrase nodes (e.g., NP, PP, ADVP, etc.) so modifiers or complements of the phrase head generally appear as phrases sister to the head. Intermediate levels of structure in the sense of X' theory (N', ADV', etc.) are not represented explicitly in general. To complement this flat phrase structure, label extensions marking function allow modifiers and complements to be distinguished.

4.5 Endocentric structure and exceptions thereto

In general the head (N, P, ADV, etc.) is overt and matches the category of the immediately dominating phrase level (NP, PP, ADVP, etc.).

(PP (NP (N 街))
 (P-ROLE で))
(ADVP (ADV とても))

There are cases in which the head is not overt or does not match the category of phrase level. There are various scenarios in which the category of the word level constituent does not match the category of the phrase that it projects.

- The head has a more specific label than its general category label (as can be seen in the way that the pronoun (PRO), as a subclass of nouns (N), heads an NP below).

(NP (PRO 彼)) ← more specific label for head

- More specific heads of NP include proper noun (NPR), quantifier (Q), pronoun (PRO), indeterminate pronoun (WPRO), foreign word (FW), mentioned expression (N-MENTION), and intermediate nominal (NML). As an exceptional case, NUMCLP (itself a phrasal category) always projects an NP.
- As inflecting elements, predicates regularly head IPs, but predicates can have core elements of various types: VB; ADJI; ADJN + AX; NP-PRD + AX; all project a clause (IP*).
- In numeral-classifier phrases (NUMCLP) the numeral (NUM) and the classifier (CL) are mutually dependent, and while the rightmost element (normally a CL) is the head, both words are directly dominated by a syncretic category NUMCLP.
- ADVPs are frequently headed by ADJN + AX in the infinitive inflection, and sometimes by ADJI in the infinitive inflection.
- A prenominal phrase (PNLP) is allowed to dominate any variety of category, in any arity.
- The category CONJP can be headed by either a P (typically P-CONN), a CONJ, or a “bare” phrasal category.

There are cases where the head of the phrase has been elided (as can be seen in the lack of a predicate in the IP-ADV-CONJ below—a right-node raising construction);

- (2) 仙台フィルハーモニー管弦楽団の第279回定期演奏会は、指揮にヘンリック・シェーファー、ピアノに萩原麻未を迎えます。

```
( (IP-MAT (NP-SBJ *pro*)
  (PP-TPC (NP (PP (NP;{ORG} (NPR 仙台フィルハーモニー管弦楽団))
    (P-ROLE の))
    (NUMCLP (NUM 第279)
      (CL 回))
    (N 定期演奏会))
    (P-OPTR は))
  (PU 、)
  (IP-ADV-CONJ (PP (NP (N 指揮))
    (P-ROLE に))
    (NP-OB1;{PERSON} (NPR ヘンリック・シェーファー)))
  (PU 、)
  (PP (NP (N ピアノ))
    (P-ROLE に))
  (PP-OB1 (NP;{PERSON} (NPR 萩原麻未))
    (P-ROLE を))
  (VB 迎え)
  (AX ます)
  (PU 。))
(ID 99_news_KAHOKU_40))
```

5 Segmentation and part-of-speech annotation

The policy for segmentation and part-of-speech labelling follows the principle of using terminal nodes that are as large as possible, but not so large as to incorporate into purely lexical elements other elements with functional roles. Such a policy corresponds closely with the LUW (Long Unit Word) standard of the Corpus of Spontaneous Japanese (CSJ; [Maekawa 2003](#)) and the Balanced Corpus of Contemporary Written Japanese (BCCWJ; [Maekawa, Yamazaki, Ogiso, Maruyama, Ogura, Kashino, Koiso, Yamaguchi, Tanaka, and Den 2014](#)). A LUW (Long Unit Word) is composed of at least one SUW (single-morpheme Short Unit Word), which corresponds to an entry in the UniDic dictionary ([Den, Nakamura, Ogiso, and Ogura 2008](#)), but complex LUWs containing more than one SUW are common.

The chunking obtained with LUW analysis is not limited to complex nominal expressions or complex predicates: Heterogeneous strings that appear to have undergone grammaticalisation (e.g., some formal noun/particle pairs, some complex modal expressions, etc.) are chunked as well. Complex LUWs are usually incorporated just as single segments. For example, numerals are analysed digit-by-digit into component SUWs, but the parsed annotation chunks these into a single segment according to the LUW containing them.

While the LUW chunking of the BCCWJ and CSJ is intended to identify units with significance in syntax, the information is not always rich enough to generate immediate constituency trees approaching descriptive adequacy for syntax. Depending on the circumstances, SUW analysis may not be sufficiently fine grained, making it necessary to split the SUW into more than one segment. For example, the volitional form of a verb may be analysed into a combining stem and a volitional morpheme: (VB 結ぼ) (AX う). Conversely, a series of LUWs may need to be concatenated under one terminal node label (an instance of further chunking). For example, a series of LUWs that together form a complex proper noun may be chunked into one segment. Furthermore, some finer distinctions in morphological analysis that have

no consequence for syntax (e.g., the distinction between personal names and place names) are sometimes ignored, while other distinctions deemed important (e.g., sorting instances of items that share the same phonological form into more than one part of speech according to their grammatical function) are introduced. This is a consequence of aiming to expose the basic functional structure of the language, while keeping the structure fairly flat and easily searchable.

The policy is to chunk as large as possible in the automatic parse, and this is the form of segments that annotators initially see. But when there is clearly some constituency in a string that must be expressed by structure, or when there is a need to indicate the semantic effects of structure, chunking may have to be undone. To exemplify the former situation, consider the morpheme 中 (chuu). Following a “verbal noun” like 旅行, 中 is analysed as a nominalising suffix by UniDic and grouped together with a preceding string to form a LUW. This analysis is appropriate for a situation in which 旅行 takes a noun modifier:

(3) 彼は旅行中にして、病に倒れた。

‘While he was on a trip, he was stricken with an illness.’

```
( (IP-MAT (PP-SBJ (NP (PRO 彼))
                    (P-OPTR は))
  (PP (NP (N 旅行中))
      (P-ROLE にして))
  (PU 、)
  (PP (NP (N 病))
      (P-ROLE に))
  (VB 倒れ)
  (AXD た)
  (PU 。))
(ID 696_textbook_particles))
```

But in a different context 旅行 may appear with arguments or adverbial elements, and 中 is better analysed as a noun:

(4) 佐藤さんは海外を旅行中だ。

```
( (IP-MAT (PP-SBJ (NP (NPR 佐藤さん))
                    (P-OPTR は))
  (NP-PRD (IP-EMB (NP-SBJ *pro*)
                  (PP-OB1 (NP (N 海外))
                           (P-ROLE を))
                  (VB 旅行))
          (N 中))
  (AX だ)
  (PU 。))
(ID 16_misc_EXAMPLE2))
```

Another scenario where chunking may have to be undone involves complex particles. UniDic chunks many verb-particle combinations into complex particles. Note how in the string にしたがって in (5) the part corresponding to the verb 従う has been bleached of its semantics.

(5) 「地は生き物を種類にしたがっていたせ。

```
( (CP-IMP (PUL 「)
  (IP-SUB (PP-SBJ (NP (N 地))
               (P-OPTR は))
```

```

      (PP-OB1 (NP (N 生き物))
        (P-ROLE を))
      (PP (NP (N 種類))
        (P-ROLE にしたがって))
      (VB いだせ))
    (PU 。))
  (ID 49_bible_ot))

```

While the UniDic analysis is frequently correct, there still appear instances where the part corresponding to the verb 従う should be treated as a full-fledged verb:

(6) モーセは主の命にしたがって、パランの荒野から彼らをつかわした。

```

( (IP-MAT (PP-SBJ (NP (NPR モーセ))
  (P-OPTR は))
  (IP-ADV-CONJ (PP (NP (PP (NP (N 主))
    (P-ROLE の))
    (N 命))
    (P-ROLE に))
    (VB したがっ)
    (P-CONN て))
  (PU 、)
  (PP (NP (PP (NP (NPR パラン))
    (P-ROLE の))
    (N 荒野))
    (P-ROLE から))
  (PP-OB1 (NP;{LEADERS} (PRO 彼ら))
    (P-ROLE を))
  (VB つかわし)
  (AXD た)
  (PU 。))
  (ID 418_bible_ot))

```

In a scenario such as (6), the annotator must split the segment and relabel its parts as necessary.

6 Basic clause structure

A matrix clause is labelled IP-MAT. The pairing of a subject (either overtly expressed in the annotation or not) and a predicate together projects a clause (IP, or “inflectional phrase”). Typically, a clause has one main predicate such as verb (VB), イ-adjective (ADJI), ナ-adjective (ADJN) with copula (AX), or nominal predicate (NP-PRD) with copula (AX). The annotation does not invoke a VP level, and so IP structure is typically flat, with clause level constituents represented at the same level as main predicate material.

- Verb as main predicate:

```

(7) 花子が泣いた。
( (IP-MAT (PP-SBJ (NP;{PERSON} (NPR 花子))
  (P-ROLE が))
  (VB 泣い)
  (AXD た)
  (PU 。))
  (ID 1823_misc_JSeM_beta_150530))

```


- イ-adjective as main predicate:

(8) この料理はおいしい。

```
( (IP-MAT (PP-SBJ (NP (D この)
                      (N 料理))
                (P-OPTR は))
  (ADJI おいしい)
  (PU 。))
(ID 1358_misc_JSeM_beta_150530))
```

- ナ-adjective together with copula as main predicate:

(9) キムは有能だ。
'Kim is clever.'

```
( (IP-MAT (PP-SBJ (NP (NPR キム))
                (P-OPTR は))
  (ADJN 有能)
  (AX だ)
  (PU 。))
(ID 1442_misc_JSeM_beta_150530))
```

- NP-PRD together with copula as main predicate:

(10) メアリーは女性である。
'Mary is female.'

```
( (IP-MAT (PP-SBJ (NP (NPR メアリー))
                (P-OPTR は))
  (NP-PRD (N 女性))
  (AX で)
  (VB2 ある)
  (PU 。))
(ID 1053_misc_JSeM_beta_150530))
```

In principle phrases (rather than words) combine with predicates under IPs to compose clauses with complex meanings. In addition to core predicative material (verb, イ-adjective, ナ-adjective + copula, nominal predicate + copula), a small number of other word level constituents can be immediately dominated by IP. These are: coordinating conjunctions (CONJ), single-word interjections (INTJ), auxiliary verbal morphology (VB0, VB2, PASS, AX, etc.), sentential negation (NEG), modals (MD), some formal nouns (FN), and particles (P).

(11) 電話番号を聞き違えたか、またはもうこの電話は使われていないのだろう。
'I guess that either I misunderstood the phone number or this number is no longer in use.'

```
( (IP-MAT (PP (IP-ADV (NP-SBJ *speaker*)
                    (PP-OB1 (NP (N 電話番号))
                          (P-ROLE を))
                    (VB 聞き)
                    (VB2 違い)
                    (AXD た))
  (P-CONN か))
  (PU 、))
```

```

(NP-LGS *pro*)
(CONJ または)
(ADVP (ADV もう))
(PP-SBJ (NP (D この)
              (N 電話))
         (P-OPTR は))
(VB 使わ)
(PASS れ)
(P-CONN て)
(VB2 い)
(NEG ない)
(FN の)
(MD だろう)
(PU 。))
(ID 165_textbook_djg_intermediate))

```

7 Fragments (FRAG)

When there is a series of one or more phrases which does not form an IP, the construction is a fragment and the member phrase(s) can be placed under FRAG.

- (12) まったく。
 ((FRAG (ADVP (ADV まったく))
 (PU 。))
 (ID 229_aozora_Harada-1960))
- (13) = 2 0 1 1 年 4 月、遠野市
 ((FRAG (SYM =)
 (NP-TMP (NUMCLP (NUM 2 0 1 1)
 (CL 年))
 (NUMCLP (NUM 4)
 (CL 月)))
 (PU 、)
 (NP;{LOC} (NPR 遠野市)))
 (ID 52_news_KAHOKU_65))
- (14) おそらく、ある観念も。
 ((FRAG (ADVP (ADV おそらく))
 (PU 、)
 (PP-SBJ (NP (D ある)
 (N 観念))
 (P-OPTR も))
 (PU 。))
 (ID 184_aozora_Hayashida-2015))

Single NPs or PPs used as exclamative utterances fall into this scenario.

- (15) 泥棒！

```
( (FRAG (NP (N 泥棒))
      (PU !))
  (ID 28_aozora_Kunieda-1925))
```

This policy applies to imperative utterances formed on こと as well:

(16) この第6作については『仮面ライダー（スカイライダー）』を参照のこと。

```
( (CP-IMP (FRAG (NP (PP (IP-NMZ (NP-SBJ *hearer*)
                                (PP (NP;{SKYRIDER_SERIES} (D この)
                                                           (NUMCLP (NUM 第6)
                                                           (CL 作))))
                                (P-ROLE について)
                                (P-OPTR は))
                                (PP-OB1 (NP (PUL 『)
                                             (NPR 仮面ライダー)
                                             (PRN (PUL (
                                                         (NP (NPR スカイライダー))
                                                         (PUR ))))
                                             (PUR 』))
                                             (P-ROLE を))
                                (VB 参照))
                                (P-ROLE の))
                                (N こと)))
      (PU 。))
  (ID 11_wikipedia_Kamen_Rider))
```

Note that FRAG can appear under CP-THT and CP-QUE:

(17) 糞坊主めとはがみをした。

```
( (IP-MAT (NP-SBJ *speaker*)
      (CP-THT-ADV (FRAG (NP (N 糞坊主め))
                     (P-COMP と))
      (PP-OB1 (NP (N はがみ))
              (P-ROLE を))
      (VB し)
      (AXD た)
      (PU 。))
  (ID 116_aozora_Natsume-1908))
```

(18) 何の？

```
( (CP-QUE (FRAG (PP (NP (WPRO 何))
                   (P-ROLE の))
      (PU ？))
  (ID 30_spoken_JF6))
```

8 Null elements

This section describes the null elements which are assigned nodes in the annotation scheme. Note that gaps for controlled subject positions (controlees —see section 12), and gaps formed by Across the Board extraction (ATB — see section 13) are not assigned nodes in the annotation.

8.1 Null elements without indexing

Null elements include trace markers of relative clauses, null expletives, and zero pronouns of various kinds. None of these carry indexing information. A list of unindexed null elements used is shown in Table 1 along with specifications for their use.

null element	meaning
*	zero element
T	relative clause trace
exp	null expletive
arb	zero pronoun with generic impersonal reference
pro	zero pronoun with discourse reference (small pro)
hearer	zero pronoun with hearer referent
hearer+pro	zero pronoun with hearer and discourse referent
speaker	zero pronoun with speaker referent
speaker+hearer	zero pronoun with speaker and hearer referent
speaker+pro	zero pronoun with speaker and discourse referent

Table 1: List of null elements without indexing

8.1.1 Zero element

A zero element is used when no claims are wished to be made about content but still material is required to support the projection of a constituent. The notable case where this may be required is with the logical subject of a passive clause with (NP-LGS *). This makes no claim about the content of the logical subject besides its need to be present to satisfy the requirements of the passive construction.

(19) 財政は借金まみれで不利益の分配を迫られる。

```
( (IP-MAT (PP-SBJ (NP (N 財政))
  (P-OPTR は))
  (IP-ADV-CONJ (NP-PRD (N 借金まみれ))
    (AX で))
  (NP-LGS *)
  (PP-OB1 (NP (PP (NP (N 不利益))
    (P-ROLE の))
    (N 分配))
    (P-ROLE を))
  (VB 迫ら)
  (PASS れる)
  (PU 。))
  (ID 31_news_KAHOKU_706))
```

8.1.2 Null expletive

Sentences that appear not to have subjects are supplied with null element subject (NP-SBJ *exp*). This includes:

- *weather* predicates:

- (20) 明日は寒くないだろう、
 ‘I suppose tomorrow will not be cold.’

```
( (IP-MAT (NP-SBJ *exp*)
  (PP-TMP (NP (N 明日))
    (P-OPTR は))
  (ADJI 寒く)
  (NEG ない)
  (MD だろう)
  (PU 、))
(ID 450_textbook_purple_intermediate))
```

- and special types of clauses formed entirely on nominal predicates.

- (21) 非常に落胆した石森だったが、50枚以上のデザイン画を描いた。

```
( (IP-MAT (PP-CONJ (IP-ADV (NP-SBJ *exp*)
  (NP-PRD (IP-REL (NP-SBJ *T*)
    (ADVP (ADJN 非常)
      (AX に))
    (VB 落胆)
    (VB0 し)
    (AXD た))
    (NPR 石森))
    (AX だっ)
    (AXD た))
    (P-CONN が))
  (PU 、)
  (NP-SBJ; {ISHINOMORI} *pro*)
  (PP-OB1 (NP (IP-REL; * (NP-SBJ *T*)
    (NP-PRD (NUMCLP (NUM 50)
      (CL 枚))
      (N 以上))
    (AX の))
    (N デザイン画))
    (P-ROLE を))
    (VB 描い)
    (AXD た)
    (PU 。))
  (ID 56_wikipedia_Kamen_Rider))
```

- If an utterance can be construed as a complete assertion about a state of affairs in the world, a clausal analysis is favored and an expletive subject is supplied where an interpretable subject is not retrievable from context:

- (22) 「火事だ！」

```
( (IP-MAT (PUL 「)
  (NP-SBJ *exp*)
  (NP-PRD (N 火事))
  (AX だ)
  (PU !))
  (PUR 」))
(ID 631_aozora_Doyle-1905))
```

8.1.3 Zero pronoun with generic impersonal reference

As shown in the following example, *arb* is used for generic impersonal reference.

- (23) 論文を書くのはとてもたいへんです。
'It's very tough to write a research paper.'

```
( (IP-MAT (PP-SBJ (NP (IP-EMB (NP-SBJ *arb*)
                               (PP-OB1 (NP (N 論文))
                                           (P-ROLE を))
                               (VB 書く))
                        (N の))
      (P-OPTR は))
  (ADVP (ADV とても))
  (ADJN たいへん)
  (AX です)
  (PU 。))
(ID 2_misc_EXAMPLE))
```

8.1.4 Other zero pronouns

Like an overt pronoun, *pro* may refer to an entity in the discourse context, or may take as an antecedent an element in the same sentence. *hearer*, *hearer+pro*, *speaker*, *speaker+hearer* and *speaker+pro* are more specified versions of *pro*, and are preferred over *pro* when appropriate.

- (24) 何を買ってあげようか。
'What shall I buy for you?'

```
( (CP-QUE (IP-SUB (NP-SBJ *speaker*)
                  (NP-OB2 *hearer*)
                  (PP-OB1 (NP (WPRO 何))
                          (P-ROLE を))
                  (VB 買っ)
                  (P-CONN て)
                  (VB2 あげ)
                  (AX よう))
      (P-FINAL か)
      (PU 。))
(ID 694_textbook_purple_basic))
```

- (25) 「先生、もうお忘れですか？」

```
( (CP-QUE (PUL 「)
      (IP-SUB (NP-VOC;{ADDRESSEE} (N 先生))
              (CLEAN *VOC*)
              (NP-SBJ;{ADDRESSEE} *hearer*)
              (PU 、)
              (NP-OB1 *pro*)
              (ADVP (ADV もう))
              (VB お忘れ)
              (AX です))
      (P-FINAL か)
```

```

(PU ?)
(PUR 』))
(ID 92_aozora_Hayashida-2015))

```

In examples (24) and (25), zero pronouns mark non-controlled covertly expressed core grammatical roles (NP-SBJ, NP-OB1, NP-OB2), i.e., arguments that are obligatory for interpreting the clausal predicate, but which have null expression and which cannot be reconstructed from either control relations (see section 12) or antecedent relations arising from coordination structures, specifically ATB extraction (see section 13).

8.1.5 Traces in relative clauses

A trace *T* indicates the existence of an empty position in a relative clause modifying a head noun that corresponds to that position. For more details, see section 16.5.1. Example (26) includes a trace for a subject (NP-SBJ *T*) to link the head (N 人) with that core grammatical role in the relative clause.

```

(26) わかった人は手をあげてごらんなさい。」
( (CP-IMP (IP-SUB (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                                   (VB わかつ)
                                   (AXD た))
                                   (N 人))
                                   (P-OPTR は))
  (PP-OB1 (NP (N 手))
           (P-ROLE を))
  (VB あげ)
  (P-CONN て)
  (VB2 ごらん)
  (VB2 なさい))
  (PU 。)
  (PUR 』))
(ID 140_aozora_Miyazawa-1934))

```

Note that traces are not limited to core grammatical roles: Traces can indicate the presence of “gaps” in adjunct positions as well as in argument position. In this sense traces contrast with zero pronouns like (NP-SBJ *pro*), which correspond only to arguments. For details, see section 9.2.3.

For an IP-REL that doesn’t contain a coordinated clause, when it modifies a given N, there can only be one local trace corresponding to N. For an IP-REL that does contain a coordinated clause, there can be at most one trace per conjunct, although there is no constraint on the grammatical functions of these traces, and no requirement that all the conjuncts contain a trace. Note how in (27) the first conjunct in the coordinated IP-REL has a trace in object position, while the second conjunct has a trace in subject position:

```

(27) 彼女は皆が愛しそして皆を愛する人です。
( (IP-MAT (PP-SBJ (NP; {WOMAN_28} (PRO 彼女))
            (P-OPTR は))
  (NP-PRD (IP-REL (IP-ADV-CONJ (NP-OB1 *T*)
                                (PP-SBJ (NP (Q 皆))
                                (P-ROLE が))
                                (VB 愛し))
          (CONJ そして)

```

```

(NP-SBJ *T*)
(PP-OB1 (NP (Q 皆))
        (P-ROLE を))
(VB 愛する))
(N 人))
(AX です)
(PU 。))
(ID 28_misc_EXAMPLE))

```

The second trace in (27) is placed to the right of the first conjunct. Otherwise, Across the Board extraction would require co-referential positions with identical grammatical roles in both conjuncts.

One more thing to note about traces: If an overt pronoun or **pro** in a relative clause is co-referent with the trace **T**, this relationship must be indicated by adding sort information (see section ?? for details) not on the trace, but on the NP that the modified N projects:

```

(28) 有間皇子がどうしてもそこから逃れることのできなかった悲運
( (FRAG (NP; {MISFORTUNE} (IP-REL (PP-SBJ (NP (NPR 有間皇子))
                                           (P-ROLE が))
                                           (PP-SCON-CND (IP-ADV (ADVP-CMPL (WADV ど
う))
                                                           (VB し)
                                                           (P-CONN て))
                                                           (P-OPTR も))
                                                           (PP-OB1 (NP (IP-EMB (PP (NP *T*)
                                                           (P-ROLE **))
                                                           (PP (NP; {MISFORTUNE}
(PRO そこ))
                                                           (P-ROLE から))
                                                           (VB 逃れる))
                                                           (N こと))
                                                           (P-ROLE の))
                                                           (VB でき)
                                                           (NEG なかつ)
                                                           (AXD た))
(N 悲運))))
(ID 7_misc_EXAMPLE2))

```

8.2 Null elements that are always indexed

While the null elements of the previous section have no indexing, there is one further null element that must be indexed:

null element	meaning
ICH	abbreviation mnemonic for “interpret constituent here”

Table 2: Null element with indexing

ICH (abbreviating “Interpret Constituent Here”) is used as a trace marking discontinuous structures, e.g., rightmost “afterthought” (see section 23.4), long-distance scrambling, or other remote relationships that cross phrase levels but are neither calculated (by control, ATB, relative clause extraction), nor specified by sort information (see section 8.3 for discussion).

Indexing works by adding an index number to the label of the remote (overt) constituent, creating a dummy constituent of the same category in the place where the remote constituent should be interpreted, and adding as its child an *ICH* which shares the same index number. For example, in the following example, a post-posed particle phrase corresponds to an indexed *ICH*. Note that extensions indicating grammatical function (e.g., -SBJ) are marked on the node label dominating *ICH* and not on the node label of the remote constituent.

- (29) 美しい街ですよ、神戸は。
 ‘Kobe is a beautiful town.’

```
( (CP-FINAL (IP-SUB (PP-SBJ *ICH*-1)
                    (NP-PRD (IP-REL (NP-SBJ *T*)
                                    (ADJI 美しい))
                            (N 街))
                    (AX です))
  (P-FINAL よ)
  (PU 、)
  (PP-1 (NP (NPR 神戸))
        (P-OPTR は))
  (PU 。))
(ID 989_textbook_kisonihongo))
```

It is possible for a single element to be coindexed with multiple instances of *ICH*, as in examples (30) and (31):

- (30) 2012年末の男性平均寿命80.18歳、女性平均寿命84.67歳、戸籍人口平均寿命82.41歳。

```
( (IP-MAT (PP-1 (NP (NUMCLP (NUM 2012)
                           (CL 年))
                   (N 末))
            (P-ROLE の))
  (IP-ADV-CONJ (IP-ADV-CONJ (NP-SBJ (PP *ICH*-1)
                                     (N 男性平均寿命))
                              (NP-PRD (NUMCLP (NUM 80.18)
                                               (CL 歳)))
                              (AX *)))
  (PU 、)
  (NP-SBJ (PP *ICH*-1)
          (N 女性平均寿命))
  (NP-PRD (NUMCLP (NUM 84.67)
                  (CL 歳)))
  (AX *))
  (PU 、)
  (NP-SBJ (PP *ICH*-1)
          (N 戸籍人口平均寿命))
  (NP-PRD (NUMCLP (NUM 82.41)
                  (CL 歳)))
  (AX *)
  (PU 。))
(ID 53_wikipedia_Shanghai))
```

- (31) 訪問診療の患者は月20人程度おり、定期的な巡回診療は町外の仮設住宅で月3回、離島の出島で月2回、江島で月1回をそれぞれこなす。

((IP-MAT (IP-ADV-CONJ (PP-SBJ (NP (PP (NP (N 訪問診療))
(P-ROLE の))
(N 患者))
(P-OPTR は))
(NP-ADV (N 月)
(NUMCLP (NUM 20)
(CL 人))
(N 程度))
(VB おり))
(PU 、)
(NP-SBJ *pro*)
(PP-TPC (NP (IP-REL (NP-SBJ *T*)
(ADJN 定期的)
(AX な))
(N 巡回診療))
(P-OPTR は))
(IP-ADV-CONJ (PP (NP (PP (NP (N 町外))
(P-ROLE の))
(N 仮設住宅))
(P-ROLE で))
(NP-OB1 (N 月)
(NUMCLP (NUM 3)
(CL 回))))))
(PU 、)
(IP-REL-1 (NP-SBJ *T*)
(NP-PRD (N 離島))
(AX の))
(IP-ADV-CONJ (PP (NP;{LOC} (IP-REL *ICH*-1)
(NPR 出島))
(P-ROLE で))
(NP-OB1 (N 月)
(NUMCLP (NUM 2)
(CL 回))))))
(PU 、)
(PP (NP;{LOC} (IP-REL *ICH*-1)
(NPR 江島))
(P-ROLE で))
(PP-OB1 (NP (N 月)
(NUMCLP (NUM 1)
(CL 回))))
(P-ROLE を))
(NP;*で* (Q それぞれ))
(VB こなす)
(PU 。))
(ID 46_news_KAHOKU_93))

Note that cases in which constituents may have been reordered leftward but remain at the same clause level (e.g., topicalisation, short-distance scrambling, etc.) are not indicated.

- (32) この服は太った人でも着られます。
‘Even a fat person can wear these clothes.’

```

( (IP-MAT (PP-OB1 (NP;{CLOTHES_859} (D この)
                                         (N 服))
                (P-OPTR は))
  (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                      (VB 太っ)
                      (AX た))
            (N 人))
    (P-OPTR でも))
  (VB 着)
  (VB2 られ)
  (AX ます)
  (PU 。))
(ID 859_textbook_kisonihongo))

```

By contrast a rightmost “afterthought” (see section 23.4) is placed at a different level from the clause which should contain a coindexed *ICH*, thereby ensuring the main predicate has rightmost placement:

(33) 「見よ、神の小羊」。

```

( (CP-IMP (PUL 「)
  (IP-SUB (NP-SBJ *hearer*)
          (NP-OB1 *ICH*-1)
          (VB 見よ)
          (PU 、))
  (NP-1 (PP (NP (N 神))
            (P-ROLE の))
        (N 小羊))
  (PUR 」)
  (PU 。))
(ID 64_bible_nt))

```

Floating noun-complement clauses adjoining to upper ones also falls under the *ICH*-treatment. The caveat is that these floating clauses are covered by a PRN projection, which it is that undergoes indexicalization. (See also sections 19, 24.17.3 and 24.16.2)

(34) 先生はまた玄関の前に戻って、「前へならえ。」と号令をかけました。

```

( (IP-MAT (PP-SBJ (NP (N 先生))
                  (P-OPTR は))
  (IP-ADV-CONJ (ADVP (ADV また))
               (PP (NP (PP (NP (N 玄関))
                             (P-ROLE の))
                       (N 前))
                   (P-ROLE に))
               (VB 戻っ)
               (P-CONN て))
  (PU 、)
  (PRN-1 (CP-THT (CP-IMP (IP-SUB (PUL 「)
                                (NP-SBJ *hearer*)
                                (PP (NP (N 前))
                                    (P-ROLE へ))
                                (VB なら)
                                (VB2 え)

```

```

(PU 。)
(PUR 』))
(P-COMP と)))
(PP-OB1 (NP (N 号令)
(PRN *ICH*-1))
(P-ROLE を))
(VB かけ)
(AX まし)
(AXD た)
(PU 。))
(ID 100_aozora_Miyazawa-1934))

```

8.3 The position of null elements

With null elements not being visible, string placement for a null element is often not obvious. Position is therefore determined as follows:

- Almost all relative clause traces (*T*) appear in constituent-initial position (but observe remarks on trace placement given later in this section).
- An expletive (*exp*) is IP-initial, with the exception that a trace is placed before an expletive.
- In general, zero pronouns (*arb*, *exp*, *pro*, *speaker*, *hearer*, *speaker+hearer*, etc.) are placed IP-initial, so before conjunctions, and left-dislocated elements, but after traces (*T*), expletives (*exp*), and dummy elements for imperatives (*VOC*) (see section 11.3 for imperative sentences). Note that antecedent calculation has an influence on the placement of these zero pronouns, as is discussed in the remainder of this section.

(35) よそから、もらったお酒が二升あった。

```

( (IP-MAT (PP-SBJ (NP;{DAZAI_LIQUOR_2_SHO} (IP-REL (NP-OB1 *T*)
(NP-SBJ;{DAZAI} *speaker*)
(PP-OB2 (NP (N よそ))
(P-ROLE から))
(PU 、)
(VB もらっ)
(AXD た))
(N お酒))
(P-ROLE が))
(NP;*SBJ* (NUMCLP (NUM 二)
(CL 升)))
(VB あっ)
(AXD た)
(PU 。))
(ID 66_aozora_Dazai-1-1940))

```

(36) このビルは、現在の耐震基準に照らし合わせると、強度が不足している。

```

( (IP-MAT (PP-SBJ (NP;{BUILDING_1818} (D この)
(N ビル))
(P-OPTR は))

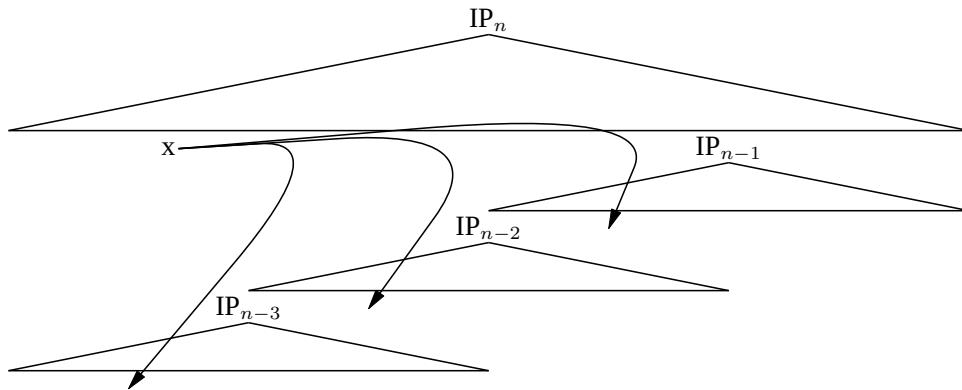
```

```

(PU 、 )
(PP-SCON (IP-ADV (NP-SBJ *exp*)
                  (NP-OB1; {BUILDING_1818} *pro*)
                  (PP (NP (PP (NP (N 現在))
                              (P-ROLE の))
                        (N 耐震基準))
                    (P-ROLE に))
                  (VB 照らし合わせる))
  (P-CONN と))
(PU 、 )
(PP-SBJ2 (NP (N 強度))
         (P-ROLE が))
(VB 不足)
(VB0 し)
(P-CONN て)
(VB2 いる)
(PU . ))
(ID 1818_dict_vv-lexicon))

```

The calculation of antecedents for empty positions can affect the placement of zero pronouns. For example, the calculation observes a rule for co-reference into coordinate clauses called “Across the Board” extraction (ATB). Specifically, any overt category x in IP_n must be an antecedent to one empty position (preserving its grammatical role) in each of coordinate clauses $IP_{1,2,\dots,n-1}$ disambiguated with CONJ provided that x is sister to and precedes IP_{n-1} , and provided that IP_{n-2} is the first element in IP_{n-1} , and provided that IP_{n-3} is the first element in IP_{n-2} , and so on. This requires that each of $IP_{1,2,\dots,n-1}$ “inherit” the antecedent relation from the category in IP_n (see the figure below). Placement of a zero pronoun in IP_n may be decided by whether that zero pronoun is an antecedent for all non-final conjuncts (in which case the zero pronoun is leftmost):



- (37) 「和国の教主」として尊敬し、観音菩薩の化身として崇拝した。
 ‘Shinran revered Prince Shotoku as “Wakoku-no-kyoshu” (the founder of Japanese Buddhism) and worshiped him as an incarnation of Kannon Bosatsu (Bodhisattva).’

```

( (IP-MAT (NP-SBJ *pro*)
        (NP-OB1 *pro*)
        (IP-ADV-CONJ (PP (NP (PUL 「)
                          (PP (NP (NPR 和国))
                            (P-ROLE の))
                          (N 教主)

```

```

(PUR 』))
(P-ROLE として))
(VB 尊敬)
(VB0 し))
(PU 、)
(PP (NP (PP (NP (NPR 観音菩薩))
(P-ROLE の))
(N 化身))
(P-ROLE として))
(VB 崇拜)
(VB0 し)
(AXD た)
(PU 。))
(ID 15_wikipedia_KYOTO_7))

```

In the example below, the zero pronoun subject of the final clause (the matrix clause) is the antecedent of an empty position in the non-final clause (the precedence of the coordinated clauses). In the non-final clause a null pronoun for a primary object is placed in initial position, while the final clause contain a different overt primary object.

(38) 火鉢にかざして、文字をあぶり出した。

```

( (IP-MAT (NP-SBJ *pro*)
(IP-ADV-CONJ (NP-OB1 *pro*)
(PP (NP (N 火鉢))
(P-ROLE に))
(VB かざし)
(P-CONN て))
(PU 、)
(PP-OB1 (NP (N 文字))
(P-ROLE を))
(VB あぶり出し)
(AXD た)
(PU . ))
(ID 34_dict_vv-lexicon))

```

In the example below as well, the zero pronoun subject of the final clause (the main clause) is the antecedent of an empty position in the non-final clause (the precedent of the coordinated clauses), but the zero-pronoun primary object is not. The non-final clause has its own overt primary object. In this case, the zero-pronoun primary object of the final clause must be placed in non-initial position, in violation of the default, after the non-final clause.

(39) 「私たちの話を聞いて、監視しているのよ」

```

( (CP-FINAL (PUL 「)
(IP-SUB (NP-SBJ *pro*)
(IP-ADV-CONJ (PP-OB1 (NP (PP (NP (PRO 私たち))
(P-ROLE の))
(N 話))
(P-ROLE を))
(VB 聞い)
(P-CONN て))
(PU 、)
(NP-OB1 *speaker+hearer*))

```

```

(VB 監視)
(VB0 し)
(P-CONN て)
(VB2 いる)
(FN の))
(P-FINAL よ)
(PUR じ))
(ID 360_fiction_DICK-1952))

```

Following the default practice of placing zero pronouns in clause-initial position could establish an undesired control relation (see section 12 for details). Such a situation is caused by the antecedent accessibility hierarchy, a part of the calculation of antecedents for co-reference relations which stipulates that controlled positions are more accessible by object-antecedents than by subject-antecedents. Given the antecedent accessibility hierarchy, subject-antecedent control into a subordinate clause requires that no object appear to the left of that clause. See an example of this scenario below. A clause IP₂ headed by a transitive verb but not containing an overt NP-OB1 argument, shares a subject with a subordinate clause IP₁, but does not share an object. The more accessible NP-OB1 argument cannot appear to the left of IP₁, lest it bind into IP₁ (i.e., the former be interpreted as the subject of the latter), so it is placed after IP₁.

- (40) 急いで食べないで。
 ‘Don’t eat in a rush.’

```

( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
  (IP-ADV-SCON (VB 急い)
    (P-CONN で))
    (NP-OB1 *pro*)
    (VB 食べ)
    (NEG ない)
    (P-CONN で))
  (PU 。)))
(ID 568_textbook_purple_basic))

```

For other configurations, there are fewer conditions on drawing co-reference relations. The clause marked with a conjunctive particle *たら* in (41) contains an overt object PP that co-refers to the null subject of the main clause. Precedence is a sufficient condition for inferring the possibility of co-reference here, and this motivates the non-initial placement of **pro**. Placing the zero pronoun (NP-SBJ **pro**) of the matrix to the right of the IP-ADV conditional clause allows the PP-OB1 argument of the preceding IP-ADV to be taken as antecedent for that zero pronoun, although without some extra information, co-reference is only left open as a possibility, rather than being completely determined. In example (41), the PP-OB1 *それを* of predicate *あげ(る)* in the subordinate clause and the null pronoun subject of *なくなった* in the matrix clause (NP-SBJ **pro**) uniquely share “sort information”.

- (41) それを三つ彼にあげたらなくなった。
 ‘When I gave him three (of them) they were all gone.’

```

( (IP-MAT (IP-ADV-SCON-CND (NP-SBJ; {SPEAKER_35} *speaker*)
  (PP-OB1 (NP; {MIKAN} (PRO それ))
    (P-ROLE を))
    (NP; *OB1* (NUMCLP (NUM 三)
      (CL つ)))
    (PP-OB2 (NP; {MAN_35} (PRO 彼))
      (P-ROLE に))

```

```

(VB あげ)
(P-CONN たら))
(NP-SBJ;{MIKAN} *pro*)
(VB なくなっ)
(AXD た)
(PU 。))
(ID 35_misc_EXAMPLE))

```

In example (42) below, a subordinate clause and a main clause share both a null subject and a null object. In such a scenario, a null pronoun object cannot be placed at the beginning of the main clause, lest it control into the subject position of the subordinate clause. Accordingly, null pronouns sharing “sort information” are introduced into both clauses, with the object of the main clause being placed after the subordinate clause.

(42) ダウンロードして印刷すれば、学校や家庭で手軽に取り組める。

```

( (IP-MAT (NP-SBJ *pro*)
  (IP-ADV-SCON-CND (NP-OB1;{FILE} *pro*)
    (IP-ADV-CONJ (VB ダウンロード)
      (VB0 し)
      (P-CONN て))
    (VB 印刷)
    (VB0 すれ)
    (P-CONN ば))
  (PU 、)
  (NP-OB1;{FILE} *pro*)
  (PP (NP (CONJP (NP (N 学校))
    (P-CONN や))
    (NP (N 家庭)))
    (P-ROLE で))
  (ADVP (ADJN 手軽)
    (AX に))
  (VB 取り組める)
  (PU 。))
(ID 55_news_KAHOKU_97))

```

9 Annotation of grammatical roles

This section explains how the relationships between grammatical roles and marking particles are annotated in different environments. Core grammatical roles and peripheral grammatical roles are illustrated in turn.

9.1 Core grammatical roles

First, we address overt NPs with core grammatical roles in the simple clause. Core grammatical roles are the roles that nominal arguments take with respect to the predicates that select them. An argument is, in principle, a constituent without which the predicate cannot be fully interpreted. However, there are many instances where it is hard to judge whether a constituent that co-occurs with a given predicate is obligatory or optional. For example, it is difficult to judge the status of path denoting elements co-occurring with predicates of motion. As another example, the status of quotational phrases with regard to verbs of cognition and communication may be ambiguous. At present our policy with regard to the first scenario is to mark

paths as primary objects when they appear overtly, but to not require null element paths to be annotated for verbs of motion otherwise. Our policy with regard to the second scenario is to treat quotational phrases as having the same status (CP-THT-OB1) with respect to a verb like 言う as to a verb like 話す, but to indicate their adverbial status (CP-THT-ADV) when appearing with verbs that don't involve propositional content at all (see 24.17.5).

Core grammatical roles are identified by node label extension SBJ (subject), SBJ2 (secondary subject), LGS (logical subject), OB1 (primary object), OB2 (secondary object), CMPL (complement), and CZZ (causee). They are typically marked by particles (P-ROLE) が, に, を, の (see section 14.2 for details), etc. However, they may also be marked by *toritate* particles (P-OPTR) like は and も. They can also appear unaccompanied by particles. This means that the grammatical role of a constituent cannot be reliably predicted solely on the basis of the form of the attaching particle.

9.1.1 Explicitly marked arguments

When a constituent has a core grammatical role, an extension indicating that role is added to the node label. In the example below, the particle phrase arguments (PP 漁夫が), (PP その女房に), (PP 金を) are marked SBJ (subject), OB2 (secondary object), and OB1 (primary object), respectively.

(43) 漁夫がその女房に金を渡しているところだった。

```
( (IP-MAT (PP-SBJ (NP (N 漁夫))
                     (P-ROLE が))
  (PP-OB2 (NP (D その)
              (N 女房))
          (P-ROLE に))
  (PP-OB1 (NP (N 金))
          (P-ROLE を))
  (VB 渡し)
  (P-CONN て)
  (VB2 いる)
  (FN ところ)
  (AX だっ)
  (AXD た)
  (PU 。))
(ID 88_aozora_Kobayashi-1929))
```

We assume that the realisation of a constituent with the grammatical role of subject is obligatory for virtually every predicate that heads an IP, so that 1-place predicates have only the subject as argument. Subjects are generally able to serve as antecedents to reflexive 自分 and are able to license honorification morphology on the predicate. Semantically subjects are typically Agents of transitive and unergative predicates, Patients of unaccusative predicates, and Experiencer or Possessor or Attribute-holder of stative predicates.

As a general principle (noted in section 6), every IP has a subject, and every subject/predicate pair projects an IP. Sentences that appear not to have subjects are supplied with null element subject (NP-SBJ *exp*) (see section 8.1). The principle that all IPs have subjects (either expressed by phrasal categories or determined by control) is not intended to be a claim about Japanese clause structure in general. Requiring fully saturated argument structures simplifies the model and serves as one way to check accuracy of annotation. Using (NP-SBJ *exp*) involves the judgments of native speaking annotators, rendering “subject-less sentences” easily searchable and accessible for evaluation, given that (NP-SBJ *exp*)

distinguishes them from controllees. Accordingly, an IP that is not a potential control environment (viz. IP-MAT, IP-SUB, IP-REL) always contains a subject. An IP that is potential control environment (viz. IP-ADV, IP-SMC, IP-EMB) does not contain an NP-SBJ if an immediate upstairs argument controls into that IP. See sections 12 and 13 for examples of the implementation.

For arguments other than subjects, we refrain from associating their grammatical roles with traditional semantic descriptions. Note that a non-subject argument in a 2-place predicate is formally an OB1, i.e., the primary object in the sentence. Thus for example a non-subject に-marked argument that might not be regarded as ‘direct object’ in traditional grammar will nevertheless be assigned the label extension -OB1.

- (44) この宝石は猫の目に似ているところから「猫目石」と名付けられている。
 ‘This gem is called “cat’s-eye” because it resembles a cat’s eye.’

```
( (IP-MAT (NP-LGS *pro*)
  (PP-SBJ (NP (D この)
    (N 宝石))
    (P-OPTR は))
  (PP (NP (IP-EMB (NP-SBJ *pro*)
    (PP-OB1 (NP (PP (NP (N 猫))
      (P-ROLE の))
      (N 目))
      (P-ROLE に))
    (VB 似)
    (P-CONN て)
    (VB2 いる))
    (N ところ))
    (P-ROLE から))
  (PP-CMPL (NP (PUL 「)
    (N 猫目石)
    (PUR 」))
    (P-COMP と))
  (VB 名付け)
  (PASS られ)
  (P-CONN て)
  (VB2 いる)
  (PU 。))
  (ID 565_textbook_djg_advanced))
```

If an argument appearing with a 3-place predicate is (or can be) marked by the particle を, we regularly mark that argument as OB1. The に-marked beneficiary NP of donative verbs is assigned the grammatical role OB2.

- (45) 叔父は花子に小遣いを与えた。
 ‘Her uncle gave Hanako some pocket money.’

```
( (IP-MAT (PP-SBJ (NP (N 叔父))
  (P-OPTR は))
  (PP-OB2 (NP; {HANAKO_204} (NPR 花子))
    (P-ROLE に))
  (PP-OB1 (NP (N 小遣い))
    (P-ROLE を))
  (VB 与え)
```

```

      (AXD た)
      (PU 。))
(ID 204_textbook_kisonihongo))

```

In the “double subject construction”, the second subject (viz. the one closest to the predicate) is frequently marked by が. The constituent gets the extension -SBJ2 on its node label.

```

(46) 太郎は背が高い。
( (IP-MAT (PP-SBJ (NP;{PERSON} (NPR 太郎))
              (P-OPTR は))
  (PP-SBJ2 (NP (N 背))
            (P-ROLE が))
  (ADJI 高い)
  (PU 。))
(ID 1609_misc_JSeM_beta_150530))

```

Note: It is not the case that every element marked as SBJ is actually a subject of the local predicate. In a context where SBJ precedes and is sister to SBJ2, in fact SBJ2 is interpreted as the subject of the predicate that heads the containing clause. An exhaustive search of subjects expressed with nodes would thus require excluding SBJ when it is sister to SBJ2, and including SBJ2 in its place.

In a passive sentence, に and some other particles mark the semantic Agent of the action denoted by the core predicate, i.e., the “logical subject”. In this case, the grammatical role is indicated by the label LGS.

```

(47) ジョンは先生にしかられた。
( (IP-MAT (PP-SBJ (NP (NPR ジョン))
              (P-OPTR は))
  (PP-LGS (NP (N 先生))
           (P-ROLE に))
  (VB しから)
  (PASS れ)
  (AXD た)
  (PU 。))
(ID 22_misc_BUFFALO))

```

9.1.2 Implicitly marked arguments

NPs which perform a core grammatical role may not be necessarily marked by a particle associating that role with a predicate. To begin with, they may occur with *toritate* particles like は and も. In these cases as well, an extension is added to indicate the core grammatical role. In the example below the PP headed by は receives the extension -SBJ.

```

(48) 花子はまだ学生に見える。
      ‘Hanako still looks like a student.’
( (IP-MAT (PP-SBJ (NP;{HANAKO_374} (NPR 花子))
              (P-OPTR は))
  (ADVP (ADV まだ))
  (PP-OB1 (NP (N 学生))
           (P-ROLE に))
  (VB 見える)

```

(PU 。))
 (ID 374_textbook_kisonihongo))

When a particle is omitted, there is no reference to the omitted particle and the NP is linked directly under a label specifying the grammatical role, e.g., NP-SBJ, NP-OB1, etc.

- (49) 君、あの本読んだ。
 ‘Did you read that book?’

((CP-QUE (IP-SUB (NP-SBJ; {HEARER_952} (PRO 君))
 (PU 、)
 (NP-OB1; {BOOK_952} (D あの)
 (N 本))
 (VB 読ん)
 (AXD だ))
 (PU 。))
 (ID 952_textbook_kisonihongo))

9.1.3 Arguments other than NP or PP

There exist predicates selecting arguments which don’t have the phrasal category NP or PP, most importantly CP-THT and IP-SMC. They are distinguished from adjuncts (see section 9.2 on adjuncts) by extension tags (-OB1, -SBJ etc.). For details, see section 24.17 on CP-THT and sections 10.3, 15.5, 24.9 and 24.11 on IP-SMC.

Furthermore, in constructions with verbs *する* and *なる* preceded by onomatopoeic or demonstrative adverbs, the entire adverbial phrases serving as complements are marked up as ADVP-CMPL.

- (50) ナシャがイライラして言った。

((IP-MAT (NP-OB1 *pro*)
 (PP-SBJ (NP (NPR ナシャ))
 (P-ROLE が))
 (IP-ADV-CONJ (ADVP-CMPL (ADV イライラ))
 (VB し)
 (P-CONN て))
 (VB 言っ)
 (AXD た)
 (PU 。))
 (ID 449_fiction_DICK-1952))

- (51) こうなった以上、もうどうしようもない。
 ‘Since things have become like this, nothing can be done anymore.’

((IP-MAT (NP-ADV (IP-EMB (NP-SBJ; {SITUATION_1190} *pro*)
 (ADVP-CMPL (ADV こう))
 (VB なっ)
 (AXD た))
 (N 以上))
 (PU 、)
 (ADVP (ADV もう))
 (PP-SBJ (NP (IP-EMB (NP-SBJ; {MAN_1190} *pro*)
 (ADVP-CMPL (WADV どう))
 (VB し))

```

(N よう))
(P-OPTR も))
(ADJI ない)
(PU 。))
(ID 1190_textbook_kisonihongo))

```

9.1.4 Omitted arguments

When an argument with a core grammatical role does not appear explicitly in the sentence, it may be a controllee controlled by an NP in a higher clause, or a gap corresponding to an ATB extracted element. In these cases the “gap” is left empty, without any node. In the case of a relative clause, the “gap” is marked up with a trace as a terminal node: *T*. All other unexpressed arguments are treated as zero pronouns, with terminal nodes in the tree chosen from a closed set: e.g., *pro*, *exp*, *arb*, *hearer*, *speaker*, *hearer+speaker*. These are put directly below a phrasal node with a label showing the grammatical role like NP-SBJ, NP-OB1, NP-OB2, NP-SBJ2, NP-LGS. For details, see section 8.

```

(52) けれども、いつ来るか、わからない。
( (IP-MAT (NP-SBJ; {DAZAI} *speaker*)
  (CONJ けれども)
  (PU 、)
  (CP-QUE-OB1 (IP-SUB (NP-SBJ; {DAZAI_FRIENDS_DRINKING} *pro*)
    (NP-TMP (WPRO いつ))
    (VB 来る))
  (P-FINAL か))
  (PU 、)
  (VB わから)
  (NEG ない)
  (PU 。))
(ID 80_aozora_Dazai-1-1940))

```

When a subject NP is omitted in a subordinate clause, its reference may be determined by a controller in the matrix clause. In such cases, no corresponding node is added to our annotation. In (53), the reference of the subject of the verb embedded by で is provided by the controller, i.e., the subject of the matrix clause わたし.

```

(53) 急いでわたしは出かけました。
( (IP-MAT (IP-ADV-SCON (VB 急い)
  (P-CONN で))
  (PP-SBJ (NP; {SPEAKER_25} (PRO わたし))
  (P-OPTR は))
  (VB 出かけ)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 25_misc_EXAMPLE))

```

9.2 Peripheral grammatical roles

Peripheral grammatical roles are performed by adjuncts (adverbial clauses, adverbial phrases, and various PPs). Adjuncts are not essential to the interpretation of the predicate: They are optional constituents.

9.2.1 Explicitly marked adjuncts

Nominal adjuncts marked by particles に, へ, で, から, まで, と, etc. form PP adjuncts. For PP adjuncts, the node labels are desired to have the extensions depending on their semantics such as LOC (spatial location), TMP (temporal location), MSR (temporal extension or frequency), or ADV (other adverbial function), as the following examples show.

- (54) あそこのベンチで食べましょう。
'Let's eat on that bench over there.'

```
( (CP-IMP (IP-SUB (NP-SBJ *speaker+hearer*)
                  (NP-OB1 *pro*)
                  (PP-LOC (NP (PP (NP (PRO あそこ))
                                   (P-ROLE の))
                             (N ベンチ))
                         (P-ROLE で))
                  (VB 食べ)
                  (AX ましょ)
                  (AX う))
    (PU 。))
  (ID 172_textbook_purple_basic))
```

- (55) つぎの汽車は七時に出る。

```
( (IP-MAT (PP-SBJ (NP (PP (NP (N つぎ))
                             (P-ROLE の))
                         (N 汽車))
          (P-OPTR は))
  (PP-TMP (NP (NUMCLP (NUM 七)
                      (CL 時)))
    (P-ROLE に))
  (VB 出る)
  (PU 。))
  (ID 59_aozora_Harada-1960))
```

- (56) この手の話は何回も聞きました

```
( (IP-MAT (NP-SBJ *speaker*)
  (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
                     (NP-PRD (D この)
                              (N 手))
                     (AX の))
          (N 話))
  (P-OPTR は))
  (PP-MSR (NP (NUMCLP (WNUM 何)
                      (CL 回)))
    (P-OPTR も))
  (VB 聞き)
  (AX まし)
  (AXD た))
  (ID 36_ted_talk_8))
```

- (57) 太郎は500メートルも泳げた。
'Taro was able to swim as far as 100 meters.'

```
( (IP-MAT (PP-SBJ (NP;{TARO_445} (NPR 太郎))
              (P-OPTR は))
  (PP-ADV (NP (NUMCLP (NUM 500)
                      (CL メートル)))
          (P-OPTR も))
  (VB 泳げ)
  (AXD た)
  (PU 。))
(ID 445_textbook_kisonihongo))
```

However, unlike PP arguments with core grammatical roles, PP adjuncts do not always have node label extension in the current annotation. There are many PPs without extension like PPs projected by the particle *で* and *に* in the following example.

- (58) ビルは列車でパリに行った。
 ‘Bill went to Paris by train.’

```
( (IP-MAT (PP-SBJ (NP (NPR ビル))
              (P-OPTR は))
  (PP (NP (N 列車))
      (P-ROLE で))
  (PP (NP (NPR パリ))
      (P-ROLE に))
  (VB 行っ)
  (AXD た)
  (PU 。))
(ID 1181_misc_JSeM_beta_150530))
```

There are also particles like *に* that can mark either an argument or an adjunct. With regard to the obligatory usage of *に*, see 9.1.1.

9.2.2 Implicitly marked adjuncts

When NPs or PPs formed without *role* particles function as adjuncts, depending on their semantics, their node labels can receive the extensions LOC (spatial location), TMP (temporal location), MSR (temporal extension or frequency), or ADV (other adverbial function).

In the examples below, the expressions *あちこち* and *この町は* denote a spatial *location*.

- (59) 両親は子供をあちこち連れ回した。

```
( (IP-MAT (PP-SBJ (NP (Q 両親))
              (P-OPTR は))
  (PP-OB1 (NP (N 子供))
           (P-ROLE を))
  (NP-LOC (PRO あちこち))
  (VB 連れ回し)
  (AXD た)
  (PU . ))
(ID 1801_dict_vv-lexicon))
```

- (60) この町はいいレストランが少ないです。
 ‘In this town good restaurants are few.’

```
( (IP-MAT (PP-LOC (NP (D この)
                      (N 町))
                    (P-OPTR は))
  (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                      (ADJI いい))
              (N レストラン))
          (P-ROLE が))
  (ADJI 少ない)
  (AX です)
  (PU 。))
(ID 285_textbook_djg_basic))
```

In the examples below, the expression 先週の土曜日 and きのうは indicate a point in time at which an event occurred.

- (61) 先週の土曜日、街で昔の友人に会った。
 ‘I met an old friend of mine in town last Saturday.’

```
( (IP-MAT (NP-SBJ; {MAN_270} *pro*)
  (NP-TMP (PP (NP (N 先週))
              (P-ROLE の))
          (N 土曜日))
  (PU 、)
  (PP (NP (N 街))
      (P-ROLE で))
  (PP (NP (PP (NP (N 昔))
                (P-ROLE の))
          (N 友人))
      (P-ROLE に))
  (VB 会っ)
  (AXD た)
  (PU 。))
(ID 270_textbook_kisonihongo))
```

- (62) きのうはかぜをひきました。
 ‘I had a cold yesterday.’

```
( (IP-MAT (NP-SBJ *speaker*)
  (PP-TMP (NP (N きのう))
          (P-OPTR は))
  (PP-OB1 (NP (N かぜ))
          (P-ROLE を))
  (VB ひき)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 268_textbook_djg_basic))
```

In the examples below, the expressions 5年間 and 食事中は denote the duration (extension) of an event or state. In the following example, the expression 一度 denotes the frequency (distribution) of an event.

- (63) また5年間使い続けるぞい！


```
( (CP-FINAL (IP-SUB (NP-SBJ *speaker*)
                    (NP-OB1 *pro*)
                    (ADVP (ADV また))
                    (NP-MSR (NUMCLP (NUM 5)
                                   (CL 年間)))
                    (VB 使い)
                    (VB2 続ける))
  (P-FINAL ぞい)
  (PU !))
(ID 100_misc_KNB))
```

(64) 食事中はテレビを見ません。
'I don't watch TV during meals.'

```
( (IP-MAT (NP-SBJ *speaker*)
        (PP-MSR (NP (N 食事中))
                (P-OPTR は))
        (PP-OB1 (NP (N テレビ))
                (P-ROLE を))
        (VB 見)
        (AX ませ)
        (NEG ん)
        (PU 。))
(ID 351_textbook_purple_basic))
```

(65) 私は、途中で一度、悪い夢を見た。

```
( (IP-MAT (PP-SBJ (NP (PRO 私))
                  (P-OPTR は))
        (PU 、)
        (PP (NP (N 途中))
            (P-ROLE で))
        (NP-MSR (NUMCLP (NUM 一)
                        (CL 度)))
        (PU 、)
        (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
                            (ADJI 悪い))
                (N 夢))
                (P-ROLE を))
        (VB 見)
        (AXD た)
        (PU 。))
(ID 423_aozora_Dazai-2-1940))
```

For negations and other stative predicates, disambiguation between TMP and MSR may seem more difficult at times, but it is useful to remember that the end of the duration denoted by MSR implies a change of state or end of event, whereas this usually is not the case with TMP.

(66) 今日は、誰にも会わない。
'I am not going to see anyone today.'

```
( (IP-MAT (NP-SBJ; {MAN_95} *pro*)
        (PP-TMP (NP (N 今日))
                (P-OPTR は))
```

```

(PU 、)
(PP (NP (WPRO 誰))
  (P-ROLE に)
  (P-OPTR も))
(VB 会わ)
(NEG ない)
(PU 。))
(ID 95_textbook_kisonihongo))

```

If a combination of expressions “measure out” an event, the expressions are treated as NP-MSRs:

- 息を(NP-MSR 2分間) 止めてから、さらに(NP-MSR 30秒) 粘ってみせた.

In the examples below, the expression 予定通り and 本当は have an adverbial function which does not correspond to any of the more specific categories.

- (67) 会議は、予定通り3時に始まった。
 ‘The meeting started at three as scheduled.’

```

( (IP-MAT (PP-SBJ (NP (N 会議))
  (P-OPTR は))
  (PU 、)
  (NP-ADV (N 予定通り))
  (PP-TMP (NP (NUMCLP (NUM 3)
    (CL 時)))
    (P-ROLE に))
  (VB 始まっ)
  (AXD た)
  (PU 。))
  (ID 788_textbook_kisonihongo))

```

- (68) 本当は叔母のアイリーンですが

```

( (FRAG (PP (IP-ADV (NP-SBJ *pro*)
  (PP-ADV (NP (N 本当))
    (P-OPTR は))
  (NP-PRD (IP-REL (NP-SBJ *T*)
    (NP-PRD (N 叔母))
    (AX の))
    (NPR アイリーン))
    (AX です))
  (P-CONN が)))
  (ID 161_ted_talk_10))

```

If a particle is omitted from an NP adjunct, a PP projection is created and the expected particle is inserted as a terminal node that is placed between instances of ‘*’.

- (69) それ、おれ行くんだけどさー

```

( (CP-FINAL (FRAG (PP (IP-ADV (PP (NP (PRO それ))
  (P-ROLE *に*))
  (PU 、)
  (NP-SBJ (PRO おれ))

```

```

(VB 行く)
(FN ん)
(AX だ)
(P-CONN けど))
(P-FINAL さー))
(ID 93_spoken_JM1))

```

See also section 14.13.

9.2.3 Adjunct traces

Aside from an ATB environment a “gap” in a relative clause is the only place where an unindexed null element can be associated with an adjunct role. If the adjunct role is temporal or locative, this information can be added as an extension of the label. For example, (70) has trace: (NP-LOC *T*).

(70) ここが高津さんが講演したところだ。
 ‘This is where Mr. Takatsu gave a lecture.’

```

( (IP-MAT (PP-SBJ (NP; {CURRENT_PLACE_1198} (PRO ここ))
(P-ROLE が))
(NP-PRD (IP-REL (NP-LOC *T*)
(PP-SBJ (NP; {TAKATSU_1198} (NPR 高津さん))
(P-ROLE が))
(VB 講演)
(VB0 し)
(AXD た))
(N ところ))
(AX だ)
(PU 。))
(ID 1198_textbook_kisonihongo))

```

If the adjunct role associated with the modified head N is neither temporal nor locative and usually indicated by a particle, the trace can be located in an NP under a PP with the missing particle specified in a terminal beginning and ending with ‘*’. For example, (71) has trace: (PP (NP *T*) (P *に*)).

(71) 早朝、彼は住み慣れた町を出で立った。

```

( (IP-MAT (NP-TMP (N 早朝))
(PU 、)
(PP-SBJ (NP (PRO 彼))
(P-OPTR は))
(PP-OB1 (NP (IP-REL (PP (NP *T*)
(P-ROLE *に*))
(NP-SBJ *pro*)
(VB 住み)
(VB2 慣れ)
(AXD た))
(N 町))
(P-ROLE を))
(VB 出で立つ)
(AXD た)
(PU . ))
(ID 163_dict_vv-lexicon))

```

10 Inflectional phrases (IP)

IP clauses are the immediate projections brought about by those predicates defined in sections 6 and 15. This section is dedicated to their subcategorization.

IPs are obligatorily and unambiguously subcategorized, which is indicated by some tag extension. Below is the list:

Syntactic tag	Clause environment
IP-MAT	matrix clause
IP-SUB	clause under CP layer
IP-REL	relative clause
IP-EMB(2)	gapless adnominal clause
IP-ADV-CONJ	coordinating conjunctive
IP-ADV(2)-SCON(-CND)	subordinate conjunctive / conditional
IP-NMZ(2)	nominalized clause
IP-SMC	small clause

Table 3: Subcategories of IP

10.1 Matrix (IP-MAT) and quasi-matrix (IP-SUB) clauses

IP-MATs are matrix clauses which lie on the topmost layers of sentences. Basically, they are not embedded into other IP- or CP-clauses.

In principle, there is no case of IP-MAT coordinations since IP-MATs are meant to represent independent utterances, which should each be stored as a different tree record in the corpus. In the case where multiple utterances are juxtaposed under a quotation, in which the utterances (IP-MATs in most cases) are all placed directly under a *multi-sentence* phrase which is dominated by a CP-THT (sections 11 and 24.17). FRAGs and INTJPs, when forming distinct utterances, can also be placed directly under *multi-sentence*. See section 24.5 for discussion.

- (72) さつき町内会長の亀卦川正一さん（79）は「3月なら釧路の最低気温はマイナス20度前後、昼でもプラスになるかどうか。屋外では凍死してしまう」などと話した。

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
  (NP-PRD (NPR さつき町内会長))
  (AX の))
  (NPR 亀卦川正一さん)
  (PRN (PUL (
    (NP (NUMCLP (NUM 79)))
    (PUR ) ) ) )
  (P-OPTR は))
  (CP-THT-OB1 (multi-sentence (PUL 「
    (IP-MAT (PP (NP (NUMCLP (NUM 3)
      (CL 月)))
      (P-OPTR なら))
    (PP-SBJ (NP (PP (NP (NPR 釧
      路))
      (P-ROLE の))
      (N 最低気温))
```

(P-OPTR は))
 (NP-PRD (N マイナス)
 (NUMCLP (NUM 20)
 (CL 度))
 (N 前後))
 (AX *))
 (PU 、)
 (CP-QUE (IP-SUB (NP-SBJ; {DAYTIME_TEMPERATURE}
 pro))
 (PP (NP (N 昼))
 (P-OPTR でも))
 (IP-SMC-OB1 (NP-PRD
 (N プラス))
 (AX に))
 (VB なる))
 (P-FINAL かどうか)
 (PU 。))
 (IP-MAT (NP-SBJ *pro*))
 (PP (NP (N 屋外))
 (P-ROLE で)
 (P-OPTR は))
 (VB 凍死)
 (VB0 し)
 (P-CONN て)
 (VB2 しまう))
 (PUR 」))
 (P-OPTR など)
 (P-COMP と))
 (VB 話し)
 (AXD た)
 (PU 。))
 (ID 10_news_KAHOKU_95))
 (73) 谷藤裕明市長は2月27日の定例記者会見で「予定していた事業がなかなか進
 まない。何とか工夫を凝らし打開しなければならない」と懸念した。
 ((IP-MAT (NP-OB1 *pro*))
 (PP-SBJ (NP (NPR 谷藤裕明市長))
 (P-OPTR は))
 (PP (NP (PP (NP (NUMCLP (NUM 2)
 (CL 月))
 (NUMCLP (NUM 27)
 (CL 日)))
 (P-ROLE の))
 (N 定例記者会見))
 (P-ROLE で))
 (CP-THT-ADV (multi-sentence (PUL 「)
 (IP-MAT (PP-SBJ (NP (IP-REL (NP-OB1
 T))
 (NP-SBJ
 speaker+pro))

定) (VB 予
(VB0 し)
(P-CONN
て) (VB2 い)
(AXD た))
(N 事業))
(P-ROLE が))
(ADVP (ADV なかなか))
(VB 進ま)
(NEG ない)
(PU 。))
(IP-MAT (NP-SBJ *speaker+pro*)
(ADVP (ADV 何とか))
(IP-ADV-CONJ (PP-OB1 (NP (N
工夫)) (P-ROLE
を)) (VB 凝らし))
(NP-OB1 *pro*)
(VB 打開)
(VB0 し)
(NEG なけれ)
(P-CONN ば)
(VB2 なら)
(NEG ない))
(PUR 」))
(P-COMP と))
(VB 懸念)
(VB0 し)
(AXD た)
(PU 。))
(ID 66_news_KAHOKU_51))

(74) 気迫が通じたものか、「よろしい。わかりました」と相手側の代表者が意外な柔軟さをみせていった。

((IP-MAT (CP-QUE-ADV (IP-SUB (NP-PRD (IP-EMB (PP-SBJ (NP (N 気迫))
(P-ROLE が))
(VB 通じ)
(AXD た))
(N もの))
(AX *))
(P-FINAL か))
(PU 、)
(CP-THT-OB1 (multi-sentence (PUL 「)
(IP-MAT (NP-SBJ;{RED0} *pro*)
(ADJI よろしい)
(PU 。))
(IP-MAT (NP-SBJ *speaker*))

```

(NP-OB1;{RED0} *pro*)
(VB わかり)
(AX まし)
(AXD た))
(PUR 』))
(P-COMP と))
(PP-SBJ (NP;{PARTNER_COMPANY_DELEGATE} (PP (NP;{PARTNER_COMPANY}
(N 相手側))
(P-ROLE の))
(N 代表者))
(P-ROLE が))
(IP-ADV-CONJ (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
(ADJN 意外)
(AX な))
(N 柔軟さ))
(P-ROLE を))
(VB みせ)
(P-CONN て))
(VB いっ)
(AXD た)
(PU 。))
(ID 24_misc_1709kytext2))

```

Quasi-matrix clauses (IP-SUBs) are the topmost IP clauses under CP layers. They are embedded in various CPs (see section 11), but never under other IPs.

Neither IP-MATs or IP-SUBs involve control (section 12) or ATB-extraction (section 13).

10.1.1 Relative clauses (IP-REL) and gapless adnominal clauses (IP-EMB)

Gapped adnominal clauses are tagged IP-REL and placed next to the nouns they modify. At least one trace *T* must be present within each IP-REL.

Multiple IP-RELs modifying the same noun are simply juxtaposed under the NP.

- (75) イギリス人の偉大なテノール歌手がいる。
 ‘There are great tenors who are British.’

```

( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
(NP-PRD (N イギリス人))
(AX の))
(IP-REL (NP-SBJ *T*)
(ADJN 偉大)
(AX な))
(N テノール歌手))
(P-ROLE が))
(VB いる)
(PU 。))
(ID 162_misc_JSeM_beta_150530))

```

- (76) とはいっても、壁はぎざぎざやとがったところがたくさんある念入りに彫刻された家具でさえぎられていた。

```

( (IP-MAT (CONJ とはいっても)
(PU 、)

```

```

      (PP-SBJ (NP (N 壁))
        (P-OPTR は))
      (PP-LGS (NP (IP-REL (NP-SBJ *T*)
        (PP-OB1 (NP (CONJP (NP (N ぎざぎざ))
          (P-CONN や))
          (NP (IP-REL (NP-SBJ *T*)
            (VB とがっ)
            (AX た))
            (N ところ)))
          (P-ROLE が))
          (NP;*OB1* (Q たくさん))
          (VB ある))
        (IP-REL (NP-SBJ *T*)
          (NP-LGS *pro*)
          (ADVP (ADJN 念入り)
            (AX に))
          (VB 彫刻)
          (VB0 さ)
          (PASS れ)
          (AX た))
          (N 家具))
        (P-ROLE で))
      (VB さえぎら)
      (PASS れ)
      (P-CONN て)
      (VB2 い)
      (AXD た)
      (PU 。))
      (ID 819_aozora_Harada-1960))

```

IP-RELs do nothing with control (section 12) or ATB-extraction (section 13).

Adnominal clauses lacking gaps that correspond to the target of modification, are labelled IP-EMB. They typically denote the propositional content of picture nouns (走る姿), content nouns (新病棟のベッドを減らす計画), event nouns (長男を失った経験; 持ち直す可能性), relative nouns (食べたあと; 回復するはず), and function nouns (チーターの走る速度), etc.

As with IP-RELs, mutiple IP-EMBs modifying the same noun are simply juxtaposed under the NP.

- (77) いかにも立派な邸ではあるが、なんとなく様式離れのした、趣味の無い、そして陰気な構造のように感ぜられる。

```

( (IP-MAT (NP-SBJ *pro*)
  (PP-CONJ (IP-ADV (ADVP (WADV いかにも)
    (P-OPTR も))
    (NP-PRD;{MANSION} (IP-REL (NP-SBJ *T*)
      (ADJN 立派)
      (AX な))
      (N 邸))
    (AX で)
    (P-OPTR は)
    (VB2 ある))
    (P-CONN が))

```



```

(PU 、 )
(NP-DOB1;{MANSION} *pro*)
(IP-SMC-OB1 (NP-PRD (PP (NP (IP-EMB (ADVP (ADV なんとなく))
                                     (PP-SBJ (NP (N 様式離れ))
                                     (P-ROLE の))
                                     (VB し)
                                     (AX た))
(PU 、 )
(IP-EMB (PP-SBJ (NP (N 趣味))
            (P-ROLE の))
            (ADJI 無い))
(PU 、 )
(IP-REL (NP-SBJ *T*)
        (CONJ そして)
        (ADJN 陰気)
        (AX な))
        (N 構造))
        (P-ROLE の))
        (N よう))
        (AX に))
(VB 感ぜ)
(VB2 られる)
(PU 。 ))
(ID 25_aozora_Mori-1912))

```

In contrast to IP-RELs, an IP-EMB forms a control environment (section 12).

For details of IP-RELs and IP-EMBs as noun modifiers, refer to sections 16.5.1 and 16.5.2.

10.2 Nominalized IPs (IP-NMZ)

There are some exceptional IPs which appear in a nominal environment without any accompanying nouns or nominalizers. Such IPs are annotated as IP-NMZ.

(78) 弟子たちは食物を買いに町に行っていたのである。

```

( (IP-MAT (PP-SBJ (NP (N 弟子たち))
                  (P-OPTR は))
  (PP-PRP (IP-NMZ (PP-OB1 (NP (N 食物))
                          (P-ROLE を))
            (VB 買い))
          (P-ROLE に))
  (PP (NP (N 町))
      (P-ROLE に))
  (VB 行っ)
  (P-CONN て)
  (VB2 い)
  (AXD た)
  (FN の)
  (AX で)
  (VB2 ある)
  (PU 。 ))
(ID 217_bible_nt))

```

(79) しかし幹細胞治療を臨床応用するには長い道のりがあります

```
( (IP-MAT (CONJ しかし)
  (PP (IP-NMZ (NP-SBJ *speaker+pro*)
    (PP-OB1 (NP (N 幹細胞治療))
      (P-ROLE を))
    (VB 臨床応用)
    (VB0 する))
    (P-ROLE に)
    (P-OPTR は))
  (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
    (ADJI 長い))
    (N 道のり))
    (P-ROLE が))
  (VB あり)
  (AX ます))
(ID 24_ted_talk_9))
```

Note that IP-NMZs are generally cases of event nominalizations in which they denote the events described by their internal predicates. This semantic property will distinguish them from targetless relative clauses (exemplified below):

(80) 残るは勾坂甚内だけ。

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
  (VB 残る)))
  (P-OPTR は))
  (PP-PRD (NP; {KOSAKA_JINNAI} (NPR 勾坂甚内))
    (P-OPTR だけ))
  (AX *)
  (PU 。))
(ID 280_aozora_Kunieda-1925))
```

(81) 性格が明るいか、あるいは暗いかによって、人生は非常に変わってくる。
 ‘Depending on whether someone’s personality is cheerful or gloomy, his or her life will change dramatically.’

```
( (IP-MAT (NP-SBJ *arb*)
  (PP (CP-QUE (CONJP (CP-QUE (IP-SUB (PP-SBJ2 (NP (N 性格))
    (P-ROLE が))
    (ADJI 明るい))
    (P-CONN か)
    (PU 、)
    (CONJ あるいは)))
    (CP-QUE (IP-SUB (NP-SBJ2 *pro*)
    (ADJI 暗い)))
    (P-CONN か))
    (P-ROLE によって))
  (PU 、)
  (PP-SBJ2 (NP (N 人生))
    (P-OPTR は))
  (ADVP (ADJN 非常)
    (AX に))
```

```

(VB 変わっ)
(P-CONN て)
(VB2 くる)
(PU 。))
(ID 14_textbook_djg_advanced))
IP-NMZs provoke control environments (section 12).

```

10.3 Small clauses (IP-SMC)

In this corpus, small clauses, tagged IP-SMC, have a sense broader than the mainstream terminology, referring to clauses which are arguments of matrix predicates (which tells them from IP-ADV) but are with no nominal case markings (which makes them different from IP-NMZs) and are deficient in terms of arguments or tenses (which differentiate them from IP-SUBs). IP-SMCs are always selected by particular predicates specified in sections 9.1.3, 15.5, 15.7, 24.18, 24.19, 25.1.2, 25.1.3 and 25.3.

Complementizers such as と and という occasionally accompany IP-SMCs. IP-SMCs will be immediately under CP-THTs in such cases.

```

(82) 温度を一定だとする
( (IP-MAT (NP-SBJ; {SPEAKER_30} *speaker*)
  (PP-DOB1 (NP (N 温度))
    (P-ROLE を))
  (CP-THT-OB1 (IP-SMC (ADJN 一定)
    (AX だ))
    (P-COMP と))
  (VB する))
(ID 30_misc_EXAMPLE))

```

Tag extensions for grammatical roles are added to IP-SMCs when they are directly dominated by IPs (15.5, 24.9, 24.11, and 9.1.3).

Coordinations of IP-SMCs, if any, are treated as right node raising of matrix clauses (section 24.3). IP-SMCs provoke control environments.

10.4 IP-ADV

10.4.1 Clause linkage

Setting aside abovelisted IP-clauses, we can still find a particular kind of clauses₁ that is apparently followed by another clause₂, in which clause₁ ends with either a non-finite inflection, a conjunctive particle, or a conjunctive adverb,

We call this kind of sentential configuration a “clause linkage”. In this corpus, such a clause linkage is so structured that clause₁ is dominated by another clause₂, regardless of the functional linkage therebetween.

Dominated clauses (clause₁) are dichotomized into subordinate and coordinate ones. In both cases, the dominated clause₁ is tagged IP-ADV. Furthermore, it is placed either directly under clause₂ or under a PP projected by a conjunctive particle. IP-ADV (or covering PPs if any) must have extension tags. The -SCON tag is for subordinate clauses, -SCON-CND is for conditional ones and -CONJ is for coordinate ones.

IP-ADV-SCON(-CND)s (or PP-SCON(-CND)s) are control environments (section 12). IP-ADV-CONJs (or PP-CONJs) allow ATB-extraction (section 13).

Whether multiple IP-ADV-SCON(-CND)s (or PP-SCON(-CND)s) are juxtaposed depends on whether or not they are each in a clause linkage with the dominating clause₂.

Below is a non-juxtaposition example:

(83) 鶏が鳴いても女が来なければ、自分は逢わずに殺されてしまう。

```
( (IP-MAT (IP-ADV-SCON-CND (PP-SCON-CND (IP-ADV (PP-SBJ (NP (N 鶏))
(P-ROLE が))
(VB 鳴い)
(P-CONN て))
(P-OPTR も))
(PP-SBJ (NP (N 女))
(P-ROLE が))
(VB 来)
(NEG なけれ)
(P-CONN ば))
(PU 、)
(PP-SBJ (NP (PRO 自分))
(P-OPTR は))
(IP-ADV-SCON (NP-OB1 *pro*)
(VB 逢わ)
(NEG ずに))
(NP-LGS *pro*)
(VB 殺さ)
(PASS れ)
(P-CONN て)
(VB2 しまう)
(PU 。))
(ID 316_aozora_Natsume-1908))
```

A juxtaposition example:

(84) 盗んだ金だけに糸目をつけず惜し気なくパッパッと使うのでどこへ行ってもモテルのであった。

```
( (IP-MAT (NP-SBJ;{KOSAKA_JINNAI} *pro*)
(PP-SCON (IP-ADV (PP-SCON (IP-ADV (NP-SBJ;{GOLD} *pro*)
(NP-PRD (IP-REL (NP-OB1 *T*))
(NP-SBJ;{KOSAKA_JINNAI}
*pro*)
(VB 盗ん)
(AXD だ))
(N 金))
(AX *))
(P-CONN だけに))
(IP-ADV2-SCON (PP-OB1 (NP (N 糸目))
(P-ROLE を))
(VB つけ)
(NEG ず))
(IP-ADV2-SCON (NP-SBJ (N 惜し気))
(ADJI なく))
(ADVP (ADV パッパッ)
(AX と))
(VB 使う))
(P-CONN ので))
```

```

      (PP-SCON-CND (IP-ADV (PP (NP (WPRO どこ))
                                (P-ROLE へ))
                        (VB 行っ)
                        (P-CONN て))
      (P-OPTR も))
(VB モデル)
(FN の)
(AX で)
(VB2 あっ)
(AXD た)
(PU 。))
(ID 198_aozora_Kunieda-1925))

```

On the other hand, IP-ADV-CONJs (or PP-CONJs), as the name explains itself, are dedicated to coordination with dominating clauses₂. The next section will explain the way of their appropriate annotation.

10.4.2 Expressing coordination while maintaining flat clausal structure

For the purpose of calculating semantics and by common conventions for capturing structure, “clause coordination” should mean “sisterhood of categories $X_{1,2...n-1}$ all and only dominated by category X_n ”, where X might be a full clause unit or an intermediate clause layer such as VP. But common conventions notwithstanding, the addition of an X_n layer creates a constituent for which (i) the grammatical function of material adjoining to X_n (viz. the coordinated elements $X_{1,2...n-1}$) is not clear, and (ii) the function X_n has with respect to the category to which X_n adjoins (viz. the superordinate IP) is also not clear. The treebank model strives to explicitly specify a grammatical function for every constituent, so that grammatical phenomena can always be minimally defined by structures, and thereby searched without necessitating ad-hoc navigations of unpredictable tree structure. Accordingly, a different strategy is followed that captures clause coordination as clause adjunction plus CONJ.

In practice, coordination between a clause₁ and a following clause₂ is annotated so that clause₁ is dominated by clause₂, with the crucial addition of a -CONJ extension on clause₁. Concretely, clause₁ is either a bare IP-ADV-CONJ or an IP-ADV dominated by a PP-CONJ projected by a conjunctive particle, i.e., (PP-CONJ (IP-ADV ...) (P ...)). See section 14.5.3 for discussion of the particles. When there are multiple conjuncts, this arrangement gives a stacked list effect, so that, for example, clause₁ is dominated by clause₂ which is dominated by clause₃. Consult section 13.2 for detailed explanations.

10.4.3 Distinguishing between subordination and coordination

Distinguishing IP-ADV-SCON(-CND)s and IP-ADV-CONJs will end up in vain if no criterion underlies it.

Here are our tentative criteria: For clauses ending either with predicates in the adverbial inflection (ren-you-kee, 連用形) or with the particle て, either CONJ or SCON(-CND) is assigned to each use listed on pp. 282–287 of [Nihongo Kizyutu Bunpô Kenkyûkai 2008](#). The conjunctive (並列), contrastive (対比) and continuative (継起) uses are IP-ADV-CONJs, the conditional (順接条件) use is translated into IP-ADV-SCON-CND, and the other uses are IP-ADV-SCONs.

The nature of clauses ending with a conjunctive particle or adverb is determined by the very particle or the adverb. Below is a selective list:

- IP-ADV-SCON: つつ, とも-なく

- PP-SCON: から (reason), とともに, と同時に, やいなや, ので, けど, けれど, けれども, のに, ものの, にもかかわらず, からといって, だけに, (せず)に, (する)に(は) (purpose), ほど, より(は), につれて, というより, どころか, からには, (て)から, まで
- IP-ADV-SCON-CND: たら (assumptive), れば, (た)って, て-は, ちゃ
- PP-SCON-CND: なら, ならば, ものなら, と (conditional), (て)も (concessive), であれ, にしても, (て)は (unexpectedness), (て)こそ
- IP-ADV2-SCON: がてら, ながら
- IP-ADV-CONJ: たり, でも (minimizer), のみ-なら-ず
- PP-CONJ: が (relevance / contradiction), やら, とか, し (juxtaposition), にして, なり, か (disjunctive)

10.4.4 Other usage

The particles of exclusivity *だけ* and *ばかり*, and also the degree particle *くらい* can be adjoined to a finite clause, which is labelled IP-ADV.

- (85) やれるだけやってみよう。
'Let's try to do as much as we can.'

```
( (CP-IMP (IP-SUB (NP-SBJ *speaker+hearer*)
  (PP (IP-ADV (VB やれる))
    (P-OPTR だけ))
  (VB やっ)
  (P-CONN て)
  (VB2 み)
  (AX よう))
  (PU 。))
(ID 56_textbook_particles))
```

- (86) だが、それを見届けるだけの生命が私にあるかどうかの自信はなかった。

```
( (IP-MAT (NP-SBJ; {AUTHOR} *speaker*)
  (CONJ だが)
  (PU 、)
  (PP-OB1 (NP (PP (CP-QUE (IP-SUB (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
    (PP-PRD (IP-ADV
(NP-SBJ; {AUTHOR} *pro*)
(P-OB1
(NP; {MASAKO+MIGIFUMI'S_FUTURE} (PRO それ))
を))
(VB
見届ける))
(P-OPTR
だけ))
(AX の))
(N 生命))
(P-ROLE が))
(PP-SBJ (NP; {AUTHOR} (PRO 私)))
```

(P-ROLE に))
 (VB ある))
 (P-FINAL かどうか))
 (P-ROLE の))
 (N 自信))
 (P-OPTR は))
 (ADJI なかつ)
 (AXD た)
 (PU 。))
 (ID 97_aozora_Tsuboi-1968))

- (87) どの演奏も若さと情熱があふれんばかりに満ちていた。
 ‘Every performance was filled with an overwhelming amount of youth and passion.’

((IP-MAT (PP-LOC (NP (WD どの)
 (N 演奏))
 (P-OPTR も))
 (PP-SBJ (NP (CONJP (NP (N 若さ)
 (P-CONN と))
 (NP (N 情熱)))
 (P-ROLE が))
 (PP (IP-ADV (VB あふれん))
 (P-OPTR ばかり)
 (P-ROLE に))
 (VB 満ち)
 (P-CONN て)
 (VB2 い)
 (AXD た)
 (PU 。))
 (ID 325_textbook_djg_advanced))

- (88) ともかく、両足をふだんとはちがうくらい高く上げた。

((IP-MAT (NP-SBJ;{FATHER} *pro*)
 (ADVP (ADV ともかく))
 (PU 、)
 (PP-OB1 (NP (Q 両足))
 (P-ROLE を))
 (ADVP (PP (IP-ADV (NP-SBJ *pro*)
 (PP (NP (N ふだん))
 (P-ROLE と)
 (P-OPTR は))
 (VB ちがう))
 (P-OPTR くらい))
 (ADJI 高く))
 (VB 上げ)
 (AXD た)
 (PU 。))
 (ID 804_aozora_Harada-1960))

IP-ADV can be also found in adnominal て-clauses followed by の.

- (89) 生まれついでての芸術家

```
( (FRAG (NP (PP (IP-ADV (VB 生まれつい)
                        (P-CONN て))
                    (P-ROLE の))
        (N 芸術家)))
  (ID 346_dict_vv-lexicon))
```

(90) 見てのとおり、道から部屋の中を覗きこめるんだ。

```
( (IP-MAT;{LOOK_FROM_OUTSIDE} (NP-SBJ *arb*)
  (NP-ADV (PP (IP-ADV (NP-SBJ *arb*)
                      (VB 見)
                      (P-CONN て))
          (P-ROLE の))
        (N とおり))
  (PU 、)
  (PP (NP (N 道))
    (P-ROLE から))
  (PP-OB1 (NP (PP (NP;{OLDACRE_HOUSE_BEDROOM}
                  (P-ROLE の))
                (N 中))
            (P-ROLE を))
          (VB 覗きこめる)
          (FN ん)
          (AX だ)
          (PU 。))
  (ID 374_aozora_Doyle-1905))
```

11 Complementizer phrases (CPs)

CP clauses are those projected by sentence-final particles (including quotation markers) which are separated from the rest of the sentences, which in turn become their inner complements. A CP clause contains:

- one or more sentence-final particles (P-FINAL)
- a complement clause, which is either:
 - a quasi-matrix clause (IP-SUB),
 - a small clause (IP-EMB),
 - a fragment (FRAG), or
 - another CP.

CPs are classified into CP-QUEs (questions), CP-EXLs (exclamatives), CP-IMPs (imperatives), CP-FINALs (projections for sentence final particle), and CP-THTs (complementizer clause). This section deals with the first four CPs. For CP-THTs, see section 24.17.

11.1 Questions (CP-QUE)

Clauses describing the content of questions (IP-SUB, FRAG, etc.) are placed directly under a CP-QUE along with a question particle (P-FINAL) if any. Generally, question particles accompany question clauses, but not in some cases.

Questions are categorized into direct and indirect ones, which we do not differentiate by means of labels. Each case is elaborated below.

Clauses describing the content of direct questions (IP-SUB, FRAG, etc.) are put under CP-QUE projections.

(91) 目ざましが鳴らなかったのだろうか。

```
( (CP-QUE (IP-SUB (PP-SBJ (NP;{ALARM_CLOCK} (N 目ざまし))
                    (P-ROLE が))
      (VB 鳴ら)
      (NEG なかつ)
      (AXD た)
      (FN の)
      (MD だろう))
  (P-FINAL か)
  (PU 。))
(ID 53_aozora_Harada-1960))
```

(92) あなた、明日の会議お出になる。

‘Will you be present at the meeting tomorrow?’

```
( (CP-QUE (IP-SUB (NP-SBJ;{HEARER_691} (PRO あなた))
      (PU 、)
      (PP (NP (PP (NP (N 明日))
                    (P-ROLE の))
            (N 会議))
          (P-ROLE *に*))
      (VB お出)
      (AX に)
      (VB2 なる))
  (PU 。))
(ID 691_textbook_kisonihongo))
```

(93) 「それから？」

```
( (CP-QUE (PUL 「)
      (FRAG (CONJ それから))
      (PU ?))
  (ID 696_aozora_Miyazawa-1934))
```

(94) 頭痛がひどいって？

‘Your headache is really bad?’

```
( (CP-QUE (FRAG (CP-THT (IP-SUB (NP-SBJ *hearer*)
                                (PP-SBJ2 (NP (N 頭痛))
                                              (P-ROLE が))
                                              (ADJI ひどい))
                              (P-COMP って)))
  (PU ?))
(ID 883_textbook_particles))
```

One context for an indirect question is where a question phrase (CP-QUE) is followed by a complementizer (P-COMP), the whole forming a complement clause (CP-THT).

(95) 最後に自分に神を信仰するかと尋ねた。

```

( (IP-MAT (NP-SBJ *pro*)
  (PP (NP (N 最後))
    (P-ROLE に))
  (PP (NP (PRO 自分))
    (P-ROLE に))
  (CP-THT-OB1 (CP-QUE (IP-SUB (NP-SBJ *speaker*)
    (PP-OB1 (NP (N 神))
      (P-ROLE を))
    (VB 信仰)
    (VB0 する))
    (P-FINAL か))
    (P-COMP と))
  (VB 尋ね)
  (AXD た)
  (PU 。))
(ID 434_aozora_Natsume-1908))

```

There are also instances where an indirect question is formed without an accompanying complementizer particle. In these cases the question phrase (CP-QUE) is placed directly under the superordinate IP, with an appropriate extension tag on the label. Regarding the extensions for CP-QUE in indirect questions, see section 24.16.

(96) 新聞紙面の中で、スポーツ面がどれだけ、復興の力になるのか、正直分らない。

```

( (IP-MAT (NP-SBJ; {SAT0} *speaker*)
  (CP-QUE-OB1 (IP-SUB (PP (NP (PP (NP (N 新聞紙面))
    (P-ROLE の))
    (N 中))
    (P-ROLE で))
    (PU 、)
    (PP-SBJ (NP (N スポーツ面))
      (P-ROLE が))
    (PP-ADV (NP (WPRO どれ))
      (P-OPTR だけ))
    (PU 、)
    (IP-SMC-OB1 (NP-PRD (PP (NP (N 復興))
      (P-ROLE の))
      (N 力))
      (AX に))
    (VB なる)
    (FN の))
    (P-FINAL か))
  (PU 、)
  (ADVP (ADV 正直))
  (VB 分から)
  (NEG ない)
  (PU 。))
(ID 61_news_KAHOKU_206))

```

Moreover, we take two analyses for the particle *か* appearing in coordinated CP-QUEs, i.e., P-FINAL and P-CONN. See section 18.4 for the difference of these two *か*s.

11.2 Exclamative utterances (CP-EXL)

Exclamatives are tagged CP-EXL. The constructions we treat as exclamatives at present in this corpus are:

- sentences that contain *なんて/なんと/なんていう/なんという* and end with *な-の, こと, だろう, a copula and/or か*.

(97) *なんて奇妙な状況なのだろう！*

```
( (CP-EXL (IP-SUB (NP-SBJ *pro*)
                  (NP-PRD (IP-REL (NP-SBJ *T*)
                                (ADVP (WADV なんて))
                                (ADJN 奇妙)
                                (AX な))
                            (N 状況))
                  (AX な)
                  (FN の)
                  (MD だろう))
  (PU ！))
(ID 143_fiction_DICK-1952))
```

(98) 「ああ、なんと彼を愛しておられたことか」。

```
( (CP-EXL (PUL 「)
          (IP-SUB (NP-SBJ *pro*)
                  (INTJ ああ)
                  (PU 、)
                  (ADVP (WADV なんと))
                  (PP-OB1 (NP;{LAZARUS} (PRO 彼))
                          (P-ROLE を))
                  (VB 愛し)
                  (P-CONN て)
                  (VB2 おら)
                  (VB2 れ)
                  (AXD た))
          (P-FINAL こと)
          (P-FINAL か)
          (PUR 」)
          (PU 。))
(ID 988_bible_nt))
```

Note that such sentences that consist only of a noun phrase with an exclamation mark are not labelled CP-EXL.

(99) 「うわあ、おいしそうなケーキ！」
“”Wow, that cake looks good!””

```
( (IP-MAT (PUL 「)
        (NP-SBJ *pro*)
        (INTJ うわあ)
        (PU 、)
        (NP-PRD (IP-REL (NP-SBJ *T*)
                        (ADJI おいし)
```

```

                (AX そう)
                (AX な))
            (N ケーキ))
        (AX *)
        (PU !))
        (PUR 」))
    (ID 1089_textbook_particles))

```

- sentences that end with P-OPTR *なんて* or *とは*. In this case P-OPTR *なんて* or *とは* is placed under a CP-THT and the whole CP-THT is treated as a fragment (FRAG).

(100) こんなにうれしいことがあるなんて！

```

( (CP-EXL (FRAG (CP-THT (IP-SUB (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                                                    (ADVP (ADJN こんな)
                                                            (AX に))
                                                            (ADJI うれしい))
                                                    (N こと))
                                                    (P-ROLE が))
                                                    (VB ある))
                                                    (P-OPTR なんて))))
  (PU !))
(ID 3_misc_EXAMPLE2))

```

11.3 Imperative clauses (CP-IMP)

Imperatives are labelled CP-IMP. CP-IMPs with verbs in imperative or te-form as main predicate directly dominate an IP-SUB, while other CP-IMPs can dominate a FRAG. At present, items of the types listed below are treated as imperatives.

- Sentences in which the predicate is in imperative inflection

(101) 「こっちに来いよ。」

```

( (CP-IMP (PUL 「)
      (IP-SUB (NP-SBJ *hearer*)
                (PP (NP (PRO こっち))
                      (P-ROLE に))
                (VB 来い))
      (P-FINAL よ)
      (PU 。)
      (PUR 」))
  (ID 314_fiction_DICK-1952))

```

- Sentences in which a verbal noun is followed by a light verb (VB0) *願います* or *ください* (下さい)

(102) これにお名前をご記入の上ご提出ください

```

( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
                  (NP-ADV (PP (IP-ADV (PP (NP (PRO これ))
                                             (P-ROLE に))
                                             (PP-OB1 (NP (N お名前))

```

(P-ROLE を))
 (VB ご記入))
 (P-ROLE の))
 (N 上))
 (VB ご提出)
 (VB2 ください))
 (ID 19_misc_EXAMPLE2))

- Sentences where a verbal noun is employed without a supporting light verb

(103) 投票箱閉鎖。
 ((CP-IMP (IP-SUB (NP-SBJ *hearer*)
 (NP-OB1 (N 投票箱))
 (VB 閉鎖))
 (PU 。))
 (ID 14_diet_kaigiroku-10))

- Sentences headed by verbs in the て-form followed by auxiliary verbs (VB2) in the imperative inflection (ください (下さい), くれ (くれ, くれえ, おくれ, お呉れ), ごらん, ちょうだい (頂戴)).

(104) 取り替えてください。
 ‘Please change them.’
 ((CP-IMP (IP-SUB (NP-SBJ *hearer*)
 (VB 取り替え)
 (P-CONN て)
 (VB2 ください))
 (PU 。))
 (ID 251_textbook_purple_intermediate))

- Sentences ended by verbs in the て-form and construed as orders

(105) 「見て！
 ((CP-IMP (PUL 「)
 (IP-SUB (NP-SBJ *hearer*)
 (NP-OB1 *pro*)
 (VB 見)
 (P-CONN て))
 (PU ！))
 (ID 54_fiction_DICK-1952))

- Sentences ended by finite verbs followed by the negative imperative extension な

(106) こら、笑うな。
 ‘Hey, don’t laugh.’
 ((CP-IMP (IP-SUB (NP-SBJ *hearer*)
 (INTJ こら)
 (PU 、)
 (VB 笑う)
 (NEG な))
 (PU 。))
 (ID 282_textbook_purple_intermediate))

- Sentences ending in ように for which it may be thought that an imperative verb (e.g., しろ, しなさい, なれ, etc.) has been elided.

(107) ／福がいっぱいありますように！

```
( (CP-IMP (PU ／)
  (IP-SUB (PP-SBJ (NP (N 福))
    (P-ROLE が))
    (NP; *SBJ* (Q いっぱい))
    (VB あり)
    (AX ます))
  (P-FINAL ように)
  (PU !))
(ID 37_news_KAHOKU_105))
```

- And there are cases in which verbs ending in た form imperatives.

(108) さっさと行った。
‘Go quickly.’

```
( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
  (ADVP (ADV さっさと))
  (VB 行っ)
  (AX た))
  (PU 。))
(ID 532_textbook_kisonihongo))
```

- In formal registers imperatives of the form “... のこと” (analyzed as IP-NMZ(の) + こと); and “...すること” (IP-REL + こと) are attested. NPs having these forms are placed under a FRAG which in turn is under CP-IMP (for details on FRAG, see section 7).

(109) (戒名と道号については「戒名」の項目を参照のこと。)
‘(Refer to the section on “Kaimyo” for Kaimyo and Dougou.)’

```
( (CP-IMP (FRAG (PUL ( )
  (NP (PP (IP-NMZ (PP (NP (CONJP (NP (N 戒名))
    (P-CONN と))
    (NP (N 道号)))
    (P-ROLE について)
    (P-OPTR は))
    (PP-OB1 (NP (PP (NP (PUL 「)
      (N 戒名)
      (PUR 」))
      (P-ROLE の))
      (N 項目))
      (P-ROLE を))
      (VB 参照))
      (P-ROLE の))
      (N こと)))
    (PU 。)
    (PUR ))))
  (ID 11_wikipedia_KYOTO_5))
```

Subjects of imperatives are explicitly annotated. In cases where they are not expressed, a null pronoun (NP-SBJ *hearer*) must be supplemented.

(110) 「助けて！

```
( (CP-IMP (PUL 「)
  (IP-SUB (NP-SBJ; {GREGOR} *hearer*)
    (NP-OB1; {MOTHER} *speaker*)
    (VB 助け)
    (P-CONN て))
  (PU !))
(ID 406_aozora_Harada-1960))
```

If an NP referring to the hearer is marked with a role particle or toritate-particle, it is regarded as the subject and an extension -SBJ is added to the particle phrase.

(111) 君が行ってくれ。

‘You go, please.’

```
( (CP-IMP (IP-SUB (PP-SBJ (NP (PRO 君))
  (P-ROLE が))
  (VB 行っ)
  (P-CONN て)
  (VB2 くれ))
  (PU 。))
(ID 293_textbook_purple_intermediate))
```

(112) 君はここにいなさい。

‘You must stay here.’

```
( (CP-IMP (IP-SUB (PP-SBJ (NP; {HEARER_537} (PRO 君))
  (P-OPTR は))
  (PP (NP; {CURRENT_PLACE_537} (PRO ここ))
  (P-ROLE に))
  (VB い)
  (VB2 なさい))
  (PU 。))
(ID 537_textbook_kisonihongo))
```

If there is a bare NP corresponding to the hearer, frequently it is marked as an NP-VOC and associated with a null subject in the following way: (i) Sort information is added to the NP-VOC. (ii) A dummy element (CLEAN *VOC*) is introduced immediately after. (iii) Finally, immediately after the dummy element, a null *hearer* pronoun that shares sort information with the NP-VOC is introduced. As long as these three nodes appear adjacent to each other in this form, their order with respect to other elements before the imperative predicate is not an issue. See section 16.6 for examples of the treatment for NP-VOC.

(113) 田中君、取引先に資料を送りなさい。

‘Mr. Tanaka, send the information to the client.’

```
( (CP-IMP (IP-SUB (NP-VOC; {TANAKA} (NPR 田中君))
  (CLEAN *VOC*)
  (NP-SBJ; {TANAKA} *hearer*)
  (PU 、)
  (PP-OB2 (NP (N 取引先))
  (P-ROLE に))
  (PP-OB1 (NP (N 資料))
  (P-ROLE を))
```

```

                (VB 送り)
                (VB2 なさい))
        (PU 。))
    (ID 312_textbook_purple_intermediate))

```

There are cases where a bare NP hearer cannot be regarded as a vocative in any sense. In such cases it is marked as NP-SBJ.

(114) 前向きな姿勢、政府示せ

```

( (CP-IMP (IP-SUB (SYM □)
                  (NP-OB1 (IP-REL (NP-SBJ *T*)
                                (NP-OB1;{ATTRACTION} *pro*)
                                (ADJN 前向き)
                                (AX な))
                            (N 姿勢))
                  (PU 、)
                  (NP-SBJ (N 政府))
                  (VB 示せ)))
  (ID 67_news_KAHOKU_89))

```

11.4 Projection for sentence final particle (CP-FINAL)

When clauses accompanied by sentence-final particles (P-FINAL) do not represent speech acts that fall under the categories of questions, imperatives, or exclamations, they are assigned the label “CP-FINAL”. The sentence-final particle is placed directly under this node, sister to a preceding IP-SUB. Below is an example with sentence final particle よ (See section 14.7 for additional details).

(115) 私たちは船を着陸させなければならないのだよ。」

```

( (CP-FINAL (IP-SUB (PP-SBJ (NP (PRO 私たち))
                              (P-OPTR は))
                  (PP-CZZ (NP (N 船))
                          (P-ROLE を))
                  (VB 着陸)
                  (VB0 さ)
                  (VB2 セ)
                  (NEG なけれ)
                  (P-CONN ば)
                  (VB2 なら)
                  (NEG ない)
                  (FN の)
                  (AX だ))
          (P-FINAL よ)
          (PU 。)
          (PUR 」))
  (ID 106_fiction_DICK-1952))

```

A sentence-final particle can follow a fragment (FRAG) too, as in the following example:

(116) 行きたいんだけどなー。


```

( (CP-FINAL (FRAG (PP (IP-ADV (NP-SBJ *speaker*)
                               (VB 行き)
                               (AX たい)
                               (FN ん)
                               (AX だ))
                        (P-CONN けど)))
  (P-FINAL なー)
  (PU 。))
(ID 89_spoken_JM9))

```

If a constituent corresponding to a position in a preceding clause is postposed after a sentence-final particle, it is placed sister to that particle. Such expressions are treated as discontinuous constructions (see section 8.2 for details on these).

(117) 「文字だよ、確かに。」

```

( (CP-FINAL (PUL 「)
  (IP-SUB (NP-SBJ *pro*)
          (ADVP *ICH*-1)
          (NP-PRD (N 文字))
          (AX だ))
  (P-FINAL よ)
  (PU 、)
  (ADVP-1 (ADJN 確か)
          (AX に))
  (PU 。)
  (PUR 」))
(ID 321_fiction_DICK-1952))

```

Right dislocated constituents are analyzed in the same way also in cases where there is no sentence-final particle available. The constituents and the original clauses are put together under an exocentric CP.

(118) 世界を動かしますそれ！

```

( (CP-FINAL (IP-SUB (NP-SBJ *ICH*-1)
                    (PP-OB1 (NP (N 世界))
                             (P-ROLE を))
                    (VB 動かし)
                    (AX ます))
  (NP-1 (PRO それ))
  (PU !))
(ID 91_ted_talk_7))

```

11.5 CP projections over IP clauses

Most CPs take an IP as their complements. In other words, an IP occasionally has CP expansions. A crucial difference between an IP and a CP is that the former always exists wherever there is a predicate while this is not the case for the latter. A CP layer is projected only when

- there is an overt, or a supposedly omitted, sentence-final particle, and
- it is worth posulating an inherently covert particle so as to capture functional parallelism to other constructions such as speech acts (e.g., positive imperative sentences, which correspond to no sentence-final particle).

Otherwise it never appears.

The only IP that is dominated by CPs are IP-SUBs (quasi-matrix clauses) (section 10.1).

11.6 CP clauses and predicates

Some CP clauses are embedded in other clauses as either arguments or adjuncts. In any case, the outermost shells (but not inner ones) of those CPs must be marked with syntactic role extensions such as -OB1 and -ADV (section 9.1.3)

(119) 「大丈夫？先生！」と驚いた声で僕は聞いた。

```
( (IP-MAT (CP-THT-OB1 (CP-QUE (PUL 「  
                                (IP-SUB (NP-SBJ;{TEACHER} *pro*)  
                                          (ADJN 大丈夫))  
                                (PU ？)  
                                (NP-VOC;{TEACHER} (N 先生))  
                                (PU ！)  
                                (PUR ！))  
                                (P-COMP と))  
  (PP (NP (IP-EMB2 (VB 驚い)  
                  (AX た))  
      (N 声))  
    (P-ROLE で))  
  (PP-SBJ (NP;{STUDENTS} (PRO 僕ら))  
    (P-OPTR は))  
  (NP-OB2;{TEACHER} *pro*)  
  (VB 聞い)  
  (AXD た)  
  (PU 。))  
(ID 6_misc_discourse_1))
```

11.7 Control, ATB and CP projections

In regard to control environments (section 12) and ATB extraction (section 13), CP layers have no direct effects upon them. The only thing to note here is that, IP-SUBs, which are often complements of CPs, necessarily block them.

12 Control environments

A null subject whose antecedent is bound to be some argument of superordinating clauses can be found in adverbial subordinate clauses (IP-ADV-SCON) (occasionally with a further -CND extension), in gapless adnominal clauses (IP-EMB), in nominalized clauses (IP-NMZ), and in small clauses (IP-SMC). Such an anaphoric relation is called “control” in linguistic schools. The null subject is commonly referred to as “(big) PRO”. However, due to its conflict with our annotational labels for overt pronominals, we will instead use the term “controllee” hereafter.

There is no explicit annotation of nodes corresponding to controllees using *pro* or the like. Instead, the downstairs clause is left without any node position at all. This practice follows a general ambition (e.g., seen with the annotation of null elements in section 8) to avoid indexing annotation whenever possible. Control relationships can be read directly from the structures assigned by the annotator. This section describes the annotation configurations that create control environments. Table 4 indicates whether or not a clause type allows a

control environment.

Syntactic tag	Control environment
IP-MAT (matrix clause)	no
IP-SUB (clause under CP* layer)	no
IP-REL (relative clause)	no
IP-ADV-CONJ (coordinating conjunctive)	no
IP-ADV-SCON(-CND) (subordinate conjunctive)	yes
IP-ADV2-SCON(-CND) (subordinate conjunctive)	yes (obligatorily)
IP-EMB (gapless adnominal clause)	yes
IP-NMZ (nominalized clause)	yes
IP-SMC (small clause)	yes (obligatorily)

Table 4: Control environments

As Table 4 shows, control relations are not established across IP-REL (relative) or IP-MAT (matrix) layers. Nor are they allowed to straddle IP-SUB clause layers, which obligatorily call for a dominating CP*. A caveat is that the opposite does not hold; a CP-THT can contain a small clause (IP-SMC) and yet does not hinder control relations that come from IP-SMC and go beyond it. As for adverbial clauses IP-ADV-SCON(-CND) and IP-ADV-CONJ (and those project PPs), only the former license control relations.

A controllee may entertain multiple candidates, which are arguments of the immediately superordinating clause, for its antecedent. A particular accessibility hierarchy referring to grammatical roles will come to decide the actual antecedent. The hierarchy is as follows (the left being more prioritized):

OB2 > OB1 > SBJ2 > SBJ

There is one exception to the accessibility hierarchy. Some subordinate clauses specify for an antecedent with a subject grammatical role. When the accessibility hierarchy needs to be disregarded to accomodate this behaviour, the clause is marked as IP-ADV2 possibly with the further extensions of -SCON. Clauses with conjunctive particle *ながら* are good examples of this.

More generally, with all control environments (see Table 4 above), it is possible to ensure dedicated control by the subject of the containing clause by adding a ‘2’ to the clause tag of the control environment (IP-EMB2, IP-SMC2, and IP-NMZ2).

For antecedents with grammatical roles other than subject, precedence of the antecedent with respect to the controllee is a condition on accessibility for most control environments. On the other hand, a subject role antecedent can follow an adverbial clause (IP-ADV-SCON(-CND)). Furthermore, with respect to small clauses (IP-SMC) and clauses whose subject are obligatorily controlled by matrix subjects (IP-*2), the precedence condition does not apply for antecedents of any role.

The following sections demonstrate placement patterns for the subordinate clauses that do allow control, and the relations of control that arise.

12.1 Control into adverbial clauses (IP-ADV-SCON(-CND))

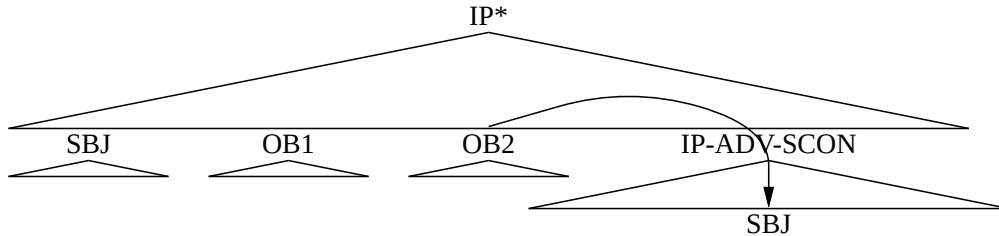
The present section concerns instances of IP-ADV-SCON(-CND). Constructions where an IP-ADV is the complement of a PP-SCON(-CND) are subsumed in this discussion. When IP-ADV is disambiguated with CONJ (see section 13), anaphoric relationships between upstairs anaphors and null elements do not fall under the description of control.

For IP-ADV, if there is no SBJ local to the adverbial clause, then a controllee can inherit its reference from a controller in nearest higher clause layer, favouring OB2 over OB1 over

SBJ2 over SBJ when any of these is present and provided such noun phrases are accessible. To be accessible a controller should precede the IP-ADV, with the exception of the subject which is always accessible.

12.1.1 OB2 as controller into IP-ADV-SCON(-CND)

The following illustrates the scenario of an OB2 acting as a controller.



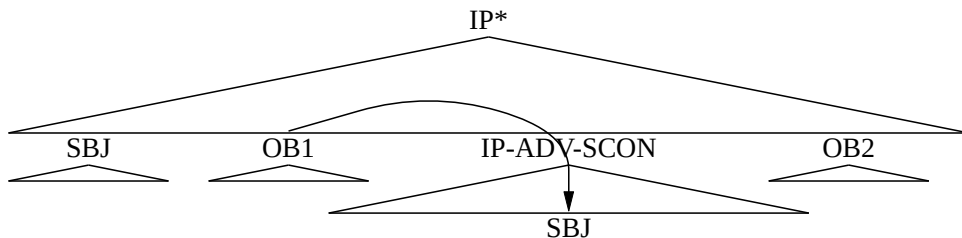
Below is an example of an OB2 which controls the subject of an IP-ADV under a PP-SCON:

(120) ランドセルは孫に、小学校に上がったのであげました。

```
( (IP-MAT (NP-SBJ; {SPEAKER_21} *speaker*)
  (PP-OB1 (NP (N ランドセル))
    (P-OPTR は))
  (PP-OB2 (NP (N 孫))
    (P-ROLE に))
  (PU , )
  (PP-SCON (IP-ADV (PP (NP (N 小学校))
    (P-ROLE に))
    (VB 上がっ)
    (AXD た))
    (P-CONN ので))
  (VB あげ)
  (AX まし)
  (AXD た)
  (PU 。))
  (ID 21_misc_EXAMPLE))
```

12.1.2 OB1 as controller into IP-ADV-SCON(-CND)

The following illustrates a scenario in which an OB1 controls the subject of an IP-ADV.



The following are examples with OB1s being controllers into IP-ADV under a PP-SCON or a PP-SCON-CND:

(121) そのお菓子は、まずかったので弟にやった。

```

( (IP-MAT (NP-SBJ;{SPEAKER_20} *speaker*)
  (PP-OB1 (NP;{SWEET_20} (D その)
    (N お菓子))
    (P-OPTR は))
  (PU , )
  (PP-SCON (IP-ADV (ADJI まずかつ)
    (AXD た))
    (P-CONN ので))
  (PP-OB2 (NP (N 弟))
    (P-ROLE に))
  (VB やっ)
  (AXD た)
  (PU 。))
(ID 20_misc_EXAMPLE))

```

(122) ビールはよく冷えていても飲みたくない。

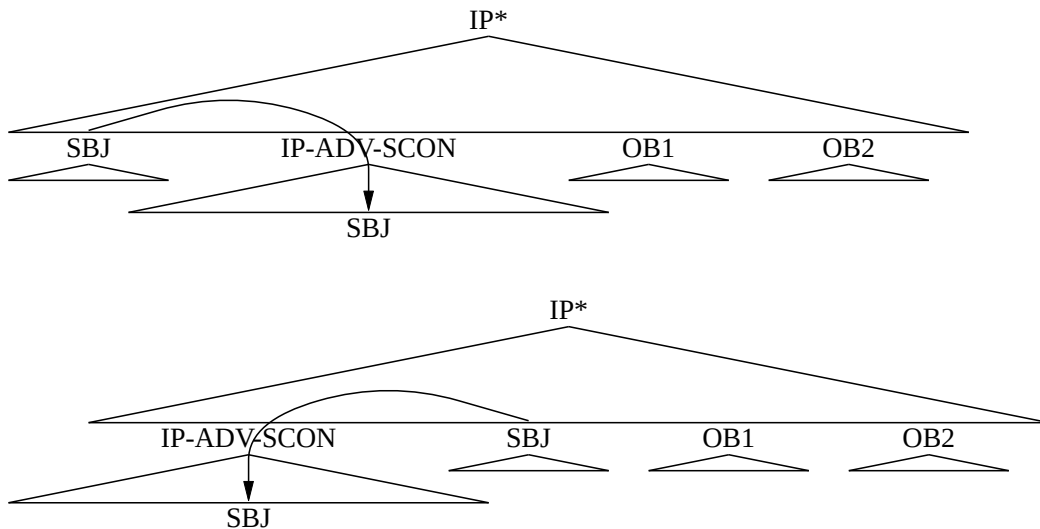
```

( (IP-MAT (NP-SBJ;{SPEAKER_26} *speaker*)
  (PP-OB1 (NP (N ビール))
    (P-OPTR は))
  (PP-SCON-CND (IP-ADV (ADVP (ADJI よく))
    (VB 冷え)
    (P-CONN て)
    (VB2 い)
    (P-CONN て))
    (P-OPTR も))
  (VB 飲み)
  (AX たく)
  (NEG ない)
  (PU 。))
(ID 26_misc_EXAMPLE))

```

12.1.3 SBJ as controller into IP-ADV-SCON(-CND)

The following illustrates scenarios of SBJ acting as controller into IP-ADV-SCON(-CND) and IP-ADV under PP-SCON(-CND).



The following are examples of SBJs at various positions controlling the subjects of IP-ADV-SCONs and IP-ADV-SCONs under PP-SCONs.

(123) 寂しかったので私は友人を呼んだ。

```
( (IP-MAT (PP-SCON (IP-ADV (ADJI 寂しかった)
                             (AXD た))
                    (P-CONN ので))
  (PP-SBJ (NP;{SPEAKER_19} (PRO 私))
          (P-OPTR は))
  (PP-OB1 (NP (N 友人))
          (P-ROLE を))
  (VB 呼ん)
  (AXD だ)
  (PU 。))
(ID 19_misc_EXAMPLE))
```

(124) ギョッとして武士は足を早める。

```
( (IP-MAT (IP-ADV-SCON (ADVP-CMPL (ADV ギョッと))
                       (VB し)
                       (P-CONN て))
  (PP-SBJ (NP;{KOSAKA_JINNAI} (N 武士))
          (P-OPTR は))
  (PP-OB1 (NP (N 足))
          (P-ROLE を))
  (VB 早める)
  (PU 。))
(ID 57_aozora_Kunieda-1925))
```

12.2 Control into gapless adnominal clauses (IP-EMB)

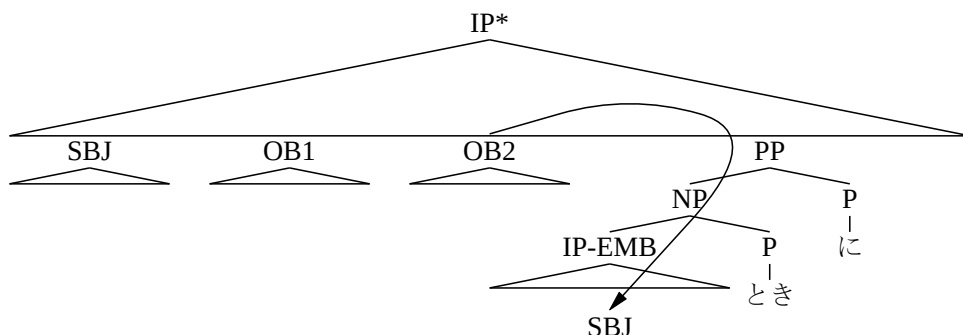
Control into IP-EMBs occurs as with IP-ADV-SCONs (see section 12.1) with a favouring of:

OB2 > OB1 > SBJ2 > SBJ

when any of these is present. In the same way as IP-ADV-SCONs, the position of controllers, as well as the accessibility hierarchy, is taken into consideration. That is, a controller must precede the IP-EMB whose subject it controls, with the exception of subject controllers, which are always accessible to controllees regardless of their locations.

12.2.1 OB2 as controller into IP-EMB

The following illustrates the scenario of an OB2 acting as a controller into IP-EMB.



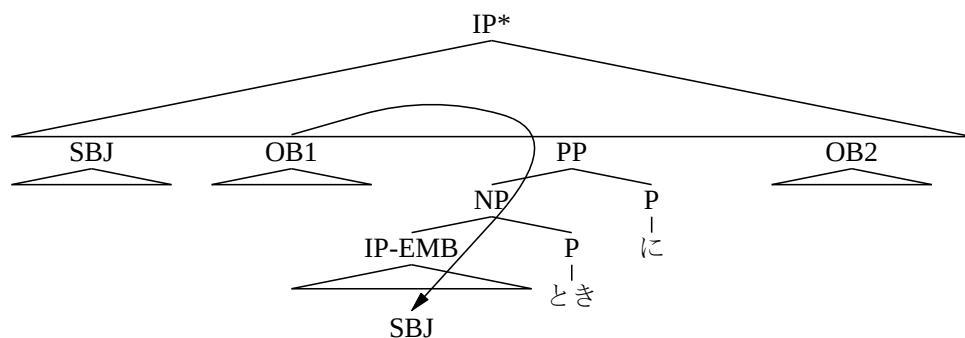
An example of an OB2 as a controller:

(125) 手紙は太郎にここへ来たときに渡した。

```
( (IP-MAT (NP-SBJ; {SPEAKER_24} *speaker*)
  (PP-OB1 (NP (N 手紙))
    (P-OPTR は))
  (PP-OB2 (NP (NPR 太郎))
    (P-ROLE に))
  (PP-TMP (NP (IP-EMB (PP (NP; {SPEAKER_CURRENT_POS_24} (PRO ここ))
    (P-ROLE へ))
    (VB 来)
    (AXD た))
    (N とき))
    (P-ROLE に))
  (VB 渡し)
  (AXD た)
  (PU 。))
(ID 24_misc_EXAMPLE))
```

12.2.2 OB1 as controller into IP-EMB

The following illustrates the scenario of an OB1 acting as a controller into an IP-EMB.



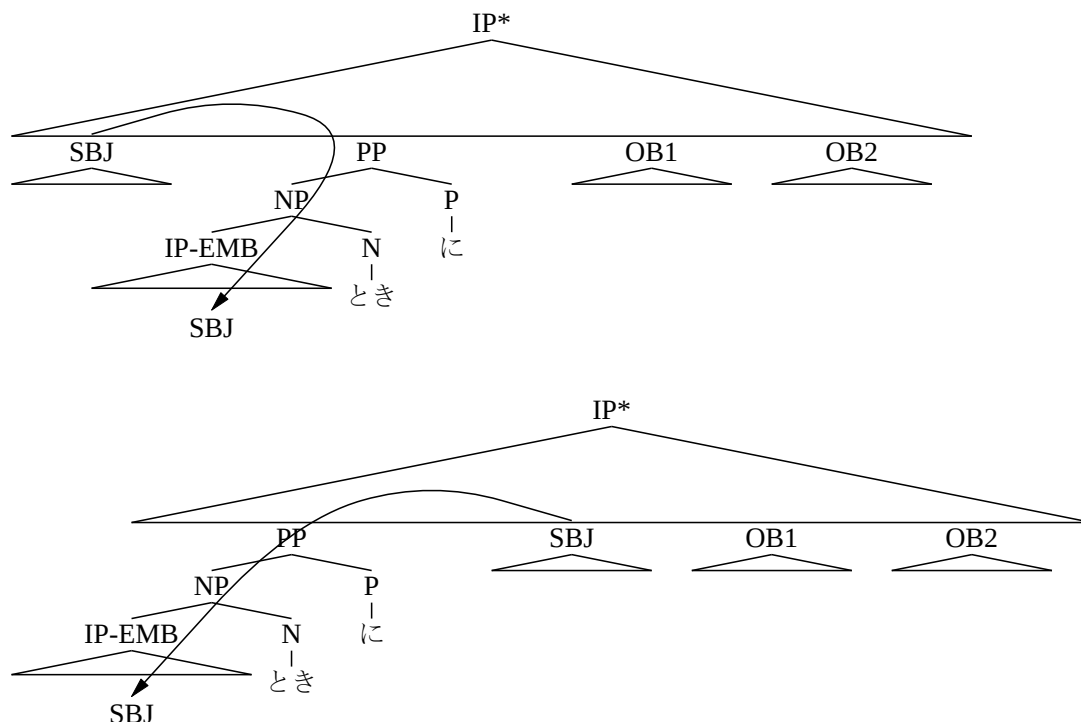
An example of an OB1 as a controller:

(126) 二郎はたこ焼を熱いうちに太郎に渡した。

```
( (IP-MAT (PP-SBJ (NP (NPR 二郎))
  (P-OPTR は))
  (PP-OB1 (NP (N たこ焼))
    (P-ROLE を))
  (PP (NP (IP-EMB (ADJI 熱い))
    (N うち))
    (P-ROLE に))
  (PP-OB2 (NP (NPR 太郎))
    (P-ROLE に))
  (VB 渡し)
  (AXD た)
  (PU 。))
(ID 23_misc_EXAMPLE))
```

12.2.3 SBJ as controller into IP-EMB

The following illustrates the scenario of a SBJ acting as controller into an IP-EMB.



Control from the subject of the containing clause can pass through an NP argument layer into an IP-EMB complement provided the NP restriction contains in addition to the IP-EMB complement only a head noun, annotated N.

The following are examples of SBJs as controllers into IP-EMBs:

- (127) 試験を受ける前に、トイレに行った。
 ‘I went to the toilet before I took the exam.’

```
( ( IP-MAT (NP-SBJ *speaker*)
  (PP (NP (IP-EMB (PP-OB1 (NP (N 試験))
    (P-ROLE を))
    (VB 受ける))
    (N 前))
    (P-ROLE に))
  (PU 、)
  (PP (NP (N トイレ))
    (P-ROLE に))
  (VB 行っ)
  (AXD た)
  (PU 。))
  (ID 1111_textbook_kisonihongo))
```

- (128) 小さかったころ私は犬を怖がっていた。

```
( ( IP-MAT (NP-TMP (IP-EMB (ADJI 小さかつ)
  (AXD た))
  (N ころ))
  (PP-SBJ (NP; {SPEAKER_22} (PRO 私))
```



```

(P-OPTR は))
(PP-OB1 (NP (N 犬))
(P-ROLE を))
(VB 怖がっ)
(P-CONN て)
(VB2 い)
(AXD た)
(PU 。))
(ID 22_misc_EXAMPLE))

```

12.3 Control into Nominalized clauses (IP-NMZ)

Control into an IP-NMZ parallels those into IP-ADV-SCON(-CNDS)s and IP-EMBs with a favouring of:

OB2 > OB1 > SBJ2 > SBJ

As with IP-ADV-SCON(-CND)s and IP-EMBs, a controller should precede the IP-NMZ in order to be accessible to the controllee, with the exception of the subject, which is always accessible regardless of its position.

The following are examples of SBJs as controller into IP-NMZs:

(129) 彼の子孫はそれを所有するにいたるであろう。

```

( (IP-MAT (PP-SBJ (NP (PP (NP;{CALEB} (PRO 彼))
(P-ROLE の))
(N 子孫))
(P-OPTR は))
(PP (IP-NMZ (PP-OB1 (NP;{LAND_THAT_CALEB_EXPLORED} (PRO それ))
(P-ROLE を))
(VB 所有)
(VB0 する))
(P-ROLE に))
(VB いたる)
(MD であろう)
(PU 。))
(ID 502_bible_ot))

```

(130) 辺の部分にフラップを作るには、円の2分の1が必要です

```

( (IP-MAT (NP-SBJ *arb*)
(PP (IP-NMZ (PP (NP (PP (NP (N 辺))
(P-ROLE の))
(N 部分))
(P-ROLE に))
(PP-OB1 (NP (N フラップ))
(P-ROLE を))
(VB 作る))
(P-ROLE に)
(P-OPTR は))
(PU 、)
(PP-OB1 (NP (PP (NP (N 円))
(P-ROLE の))
(NUMCLP (NUM 2分の1))))

```

(P-ROLE が))
 (ADJN 必要)
 (AX です))
 (ID 105_ted_talk_1))

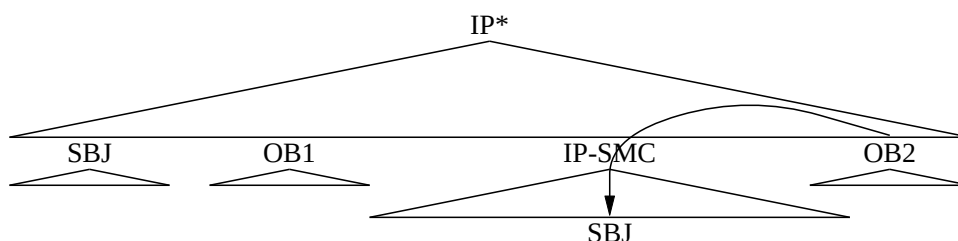
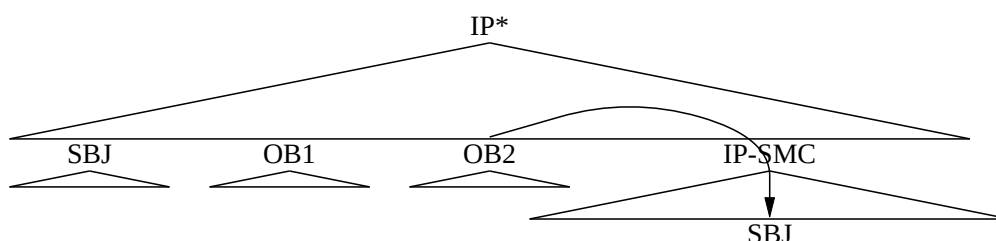
Incidentally, no example is attested at the moment where arguments other than subjects control into IP-NMZ.

12.4 Control into small clauses (IP-SMC)

IP-SMC is never annotated as containing a subject argument. Consequently it is an obligatory control environment. Typically forming a part of a complement of the predicate of the immediately containing clause, IP-SMC has its control relationship determined from among the full range of arguments present in the containing clause. This favours OB2 over OB1 over SBJ to act as the controller when any of these are present and irrespective of where these noun phrases occur.

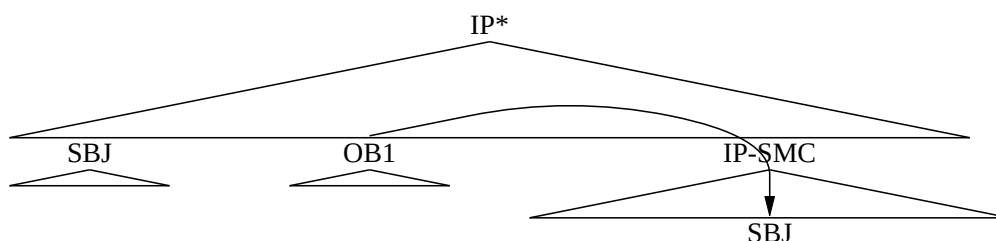
12.4.1 OB2 as controller into IP-SMC

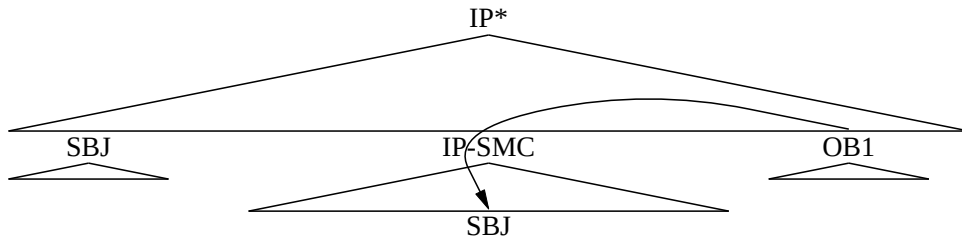
The following figures illustrate an OB2 controller which obligatorily binds the subject of an IP-SMC.



12.4.2 OB1 as controller into IP-SMC

The figures below are about OB1s' binding of IP-SMC subjects.





Examples with OB1s as controllers:

(131) 私は弟に買い物に行ってもらった。

```
( (IP-MAT (PP-SBJ (NP;{SPEAKER_16} (PRO 私))
          (P-OPTR は))
  (PP-DOB1 (NP (N 弟))
    (P-ROLE に))
  (IP-SMC-OB1 (PP-PRP (NP (N 買い物))
    (P-ROLE に))
    (VB 行っ)
    (P-CONN て))
  (VB もらっ)
  (AXD た)
  (PU 。))
(ID 16_misc_EXAMPLE))
```

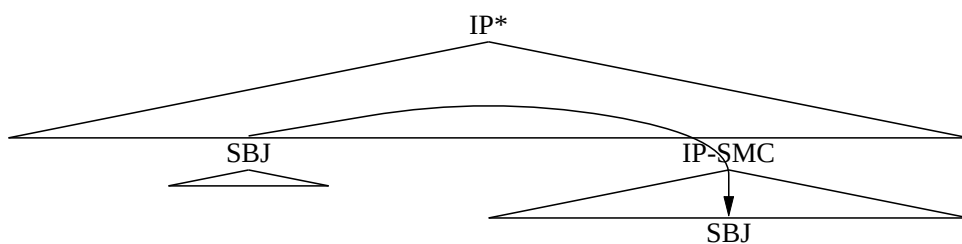
(132) わたくしの考えを述べさせていただきます。

‘Let me speak my idea.’

```
( (IP-MAT (NP-SBJ *speaker*)
  (NP-DOB1 *hearer*)
  (IP-SMC-OB1 (NP-CZZ *speaker*)
    (PP-OB1 (NP (PP (NP;{SPEAKER_1292} (PRO わたくし))
      (P-ROLE の))
      (N 考え))
      (P-ROLE を))
    (VB 述べ)
    (VB2 させ)
    (P-CONN て))
  (VB いただき)
  (AX ます)
  (PU 。))
(ID 1292_textbook_kisonihongo))
```

12.4.3 SBJ as controller into IP-SMC

The following figures illustrate cases where a SBJ controls the subject of an IP-SMC.



An example in which a SBJ is a controller:

(133) 死にたく思う。
 ((IP-MAT (NP-SBJ; {DAZAI} *speaker*)
 (IP-SMC-OB1 (VB 死に)
 (AX たく))
 (VB 思う)
 (PU 。))
 (ID 96_aozora_Dazai-1-1940))

12.5 SBJ as controller into IP-*2

Those IPs which are additionally marked by 2, namely IP-ADV2-SCON(-CND), IP-EMB2, IP-NMZ2, and IP-SMC2, must be under control relations with an external argument, as with IP-SMCs. What differs from IP-SMCs is that the controller, as well as the controllee, must be a subject (SBJ or SBJ2). The position of subject antecedents does not matter.

The following is an example of a SBJ as controller into an IP-ADV2-SCON:

(134) 絵本を買った子供が、それをおやつを食べながら読んでいた。
 ((IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (PP-OB1 (NP; {PICTBOOK} (N 絵本))
 (P-ROLE を))
 (VB 買っ)
 (AXD た))
 (N 子供))
 (P-ROLE が))
 (PU 、)
 (PP-OB1 (NP; {PICTBOOK} (PRO それ))
 (P-ROLE を))
 (IP-ADV2-SCON (PP-OB1 (NP (N おやつ))
 (P-ROLE を))
 (VB 食べ)
 (P-CONN ながら))
 (VB 読ん)
 (P-CONN で)
 (VB2 い)
 (AXD た)
 (PU 。))
 (ID 22_misc_EXAMPLE2))

12.6 Preventing control with null elements

When an upstairs candidate for antecedence, which is uniquely determined by the subcategory of the embedded IP and the accessibility hierarchy, is not what is meant by the sentence, control must be manually disabled by introducing a null NP-SBJ (*pro*, *speaker*, *hearer*, *arb*, etc.), whichever is appropriate (see section 8), into the controllee position. This is because control relations emerge whenever they are licensed unless otherwise specified.

In example (135), *arb* is internal to the IP-EMB to prevent the matrix SBJ controlling an empty subject position in the IP-EMB.

(135) 私の趣味は料理をすることです。

```

( (IP-MAT (PP-SBJ (NP (PP (NP;{SPEAKER_29} (PRO 私))
(P-ROLE の))
(N 趣味))
(P-OPTR は))
(NP-PRD (IP-EMB (NP-SBJ *arb*)
(PP-OB1 (NP (N 料理))
(P-ROLE を))
(VB する))
(N こと))
(AX です)
(PU 。))
(ID 29_misc_EXAMPLE))

```

There are cases (e.g., involving weather predicates), where neither control nor ATB antecedence (section 13) should be allowed. Prevention of all anaphoric relation is achieved by introducing (NP-SBJ *exp*) into the controllee position, as in example (136).

(136) 春子は寒くなると学校に来なくなる。

```

( (IP-MAT (PP-SBJ (NP (NPR 春子))
(P-OPTR は))
(PP-SCON-CND (IP-ADV (NP-SBJ *exp*)
(IP-SMC-OB1 (ADJI 寒く))
(VB なる))
(P-CONN と))
(IP-SMC-OB1 (PP (NP (N 学校))
(P-ROLE に))
(VB 来)
(NEG なく))
(VB なる)
(PU 。))
(ID 12_misc_TOPTEN))

```

When there is a co-reference between an upstairs argument and a null subject position in a control environment, but control is inappropriate due to either (i) the correct antecedent is not accessible to the null position, or (ii) the null position not being a subject position (which, as has been explained in this section, is out of the scope of the control mechanism), or (iii) both (i) and (ii), an antecedent relationship can be established through the explicit annotation of a zero pronoun (NP-SBJ *pro*) plus sort information shared between the zero pronoun and the antecedent.

(42) ダウンロードして印刷すれば、学校や家庭で手軽に取り組める。

```

( (IP-MAT (NP-SBJ *pro*)
(IP-ADV-SCON-CND (NP-OB1;{FILE} *pro*)
(IP-ADV-CONJ (VB ダウンロード)
(VB0 し)
(P-CONN て))
(VB 印刷)
(VB0 すれ)
(P-CONN ば))
(PU 、)
(NP-OB1;{FILE} *pro*)
(PP (NP (CONJP (NP (N 学校))
(P-CONN や))

```

```

      (NP (N 家庭)))
    (P-ROLE で))
  (ADVP (ADJN 手軽)
    (AX に))
  (VB 取り組める)
  (PU 。))
(ID 55_news_KAHOKU_97))

```

13 Clause coordination and Across The Board extraction

As is mentioned in sections 10.4.1 and 10.4.2, IP-ADV-CONJs (or IP-ADV's under PP-CONJs) are (the only) instances that allow Across the Board (ATB) extraction. All constituents that precede and are sister to the second-to-last conjunct (that is, the last (IP-ADV-CONJ ...)) are “inherited” by each conjunct. section 13.1 considers cases with only two conjuncts, while section 13.2 illustrates the more than two conjuncts scenario.

13.1 Cases with two conjuncts

As with control, a zero pronoun that takes an ATB extracted antecedent is not explicitly annotated. But also note that, unlike control, any constituent can be inherited by coordinate conjuncts, provided that it is (ATB) left-posed. Furthermore, the grammatical role of an extracted constituent is preserved in each conjunct (another contrast with control).

- In the example and figure below, both conjuncts are saturated. Nothing holds an antecedent relation with a null element in IP-ADV:

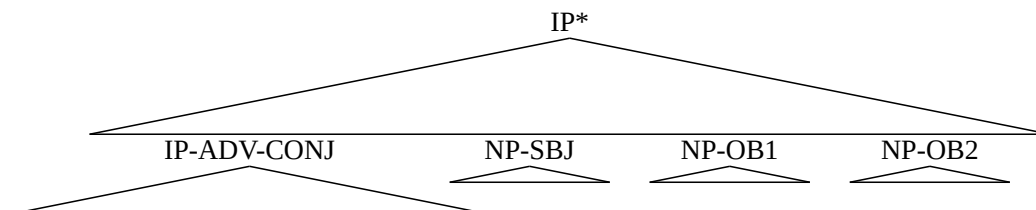
(138) また一方で、地元マスメディアも地元の人材活用をするようになって、バンド・タレント・芸能人・モデルなどのローカルタレントが増加して、隣県のメディアに進出する者も表れた。

```

( (IP-MAT (CONJ また)
  (PP (NP (N 一方))
    (P-ROLE で))
  (PU 、)
  (IP-ADV-CONJ (IP-ADV-CONJ (PP-SBJ (NP (N 地元マスメディア))
    (P-OPTR も))
    (PP (NP (IP-EMB (PP-OB1 (NP (PP (NP (N
地元))
(P-ROLE
の))
(N 人材活
用))
(P-ROLE を))
(VB する))
(N よう))
(P-ROLE に))
(VB なっ)
(P-CONN て))
(PU 、)
(PP-SBJ (NP (PP (NP (CONJP (NP (N バンド)))
(PU ・)

```

(CONJP (NP (N タレント)))
 (PU ・)
 (CONJP (NP (N 芸能人)))
 (PU ・)
 (NP (N モデル))
 (P-OPTR など)
 (P-ROLE の))
 (N ローカルタレント))
 (P-ROLE が))
 (VB 増加)
 (VB0 し)
 (P-CONN て))
 (PU 、)
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*))
 (PP (NP (PP (NP (N 隣県))
 (P-ROLE の))
 (N メディア))
 (P-ROLE に))
 (VB 進出)
 (VB0 する))
 (N 者))
 (P-OPTR も))
 (VB 表れ)
 (AXD た)
 (PU 。))
 (ID 263_wikipedia_Sendai_City))



- In the example and figure below, only the left-posed NP-SBJ holds an antecedent relation with a corresponding null element in IP-ADV.

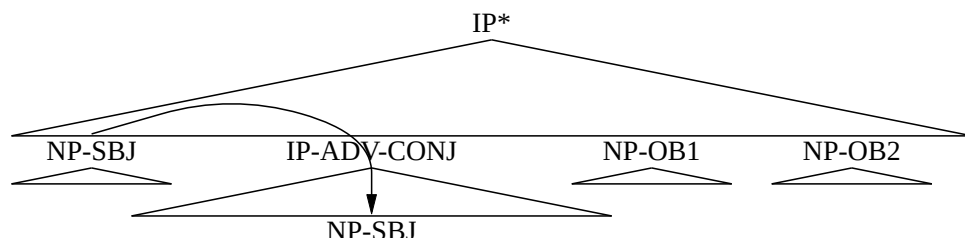
(139) それは1万5千円のもですが、今はバーゲンで1万円です。
 ‘It was originally fifteen thousand, but it’s now ten thousand as it’s on sale.’

((IP-MAT (PP-SBJ (NP;{COMMODITY_7} (PRO それ))
 (P-OPTR は))
 (PP-CONJ (IP-ADV (NP-PRD (IP-REL (NP-SBJ *T*))
 (NP-PRD (NUMCLP (NUM 1万5千)
 (CL 円)))
 (AX の))
 (N もの))
 (AX です))
 (P-CONN が))
 (PU ,)
 (PP-TMP (NP (N 今))

```

(P-OPTR は))
(IP-ADV-SCON (NP-PRD (N バーゲン))
  (AX で))
(NP-PRD (NUMCLP (NUM 1万)
  (CL 円)))
(AX です)
(PU 。))
(ID 8_misc_EXAMPLE))

```



- The following example is the same as above insofar as NP-SBJ holds an antecedent relation, while the NP-OB1 position is overtly filled in both conjuncts. But note that the adjunct 昨日は is additionally inherited by both:

(140) 昨日は刺身を食べ、お腹を壊してしまいました。
 ‘I had a stomach ache yesterday from eating sashimi.’

```

( (IP-MAT (NP-SBJ; {SPEAKER_13} *speaker*)
  (PP-TMP (NP (N 昨日))
    (P-OPTR は))
  (IP-ADV-CONJ (PP-OB1 (NP (N 刺身))
    (P-ROLE を))
    (VB 食べ)
    (P-CONN て))
  (PU , )
  (PP-OB1 (NP (N お腹))
    (P-ROLE を))
  (VB 壊し)
  (P-CONN て)
  (VB2 しまい)
  (AX まし)
  (AXD た)
  (PU 。))
  (ID 13_misc_EXAMPLE))

```

- In the example and the figure below, the left-posed NP-SBJ and NP-OB1 hold an antecedent relation with corresponding null elements in IP-ADV:

(141) 晩ごはんを作って、食べます。
 ‘I cook and eat dinner.’

```

( (IP-MAT (NP-SBJ *speaker*)
  (PP-OB1 (NP (N 晩ごはん))
    (P-ROLE を))
  (IP-ADV-CONJ (VB 作っ)

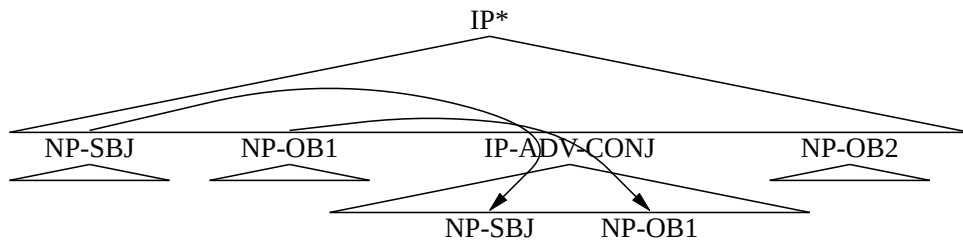
```



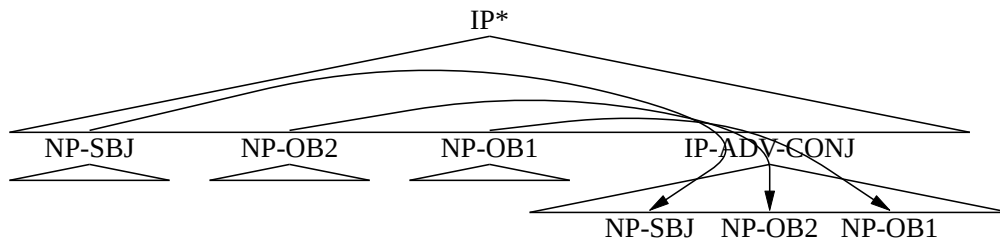
```

(P-CONN て))
(PU , )
(VB 食べ)
(AX ます)
(PU 。))
(ID 11_misc_EXAMPLE))

```



- In the figure below, the left-posed NP-SBJ, NP-OB2 and NP-OB1 hold antecedent relations with corresponding null elements in IP-ADV.



If there is an overt CONJ then it is treated as a constituent of the superordinate IP, that is, an IP level word.

(142) 私は長い間この動きを観察してそして参加してきました

```

( (IP-MAT (PP-SBJ (NP (PRO 私))
(P-OPTR は))
(NP-MSR (IP-REL (NP-SBJ *T*)
(ADJI 長い))
(N 間))
(IP-ADV-CONJ (PP-OB1 (NP (D この)
(N 動き))
(P-ROLE を))
(VB 観察)
(VB0 し)
(P-CONN て))
(CONJ そして)
(VB 参加)
(VB0 し)
(P-CONN て)
(VB2 き)
(AX まし)
(AXD た))
(ID 15_ted_talk_5))

```

13.2 Cases with more than three conjuncts

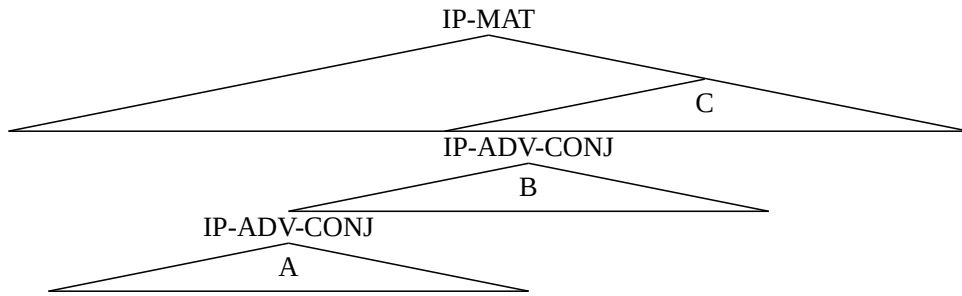
As is explained in section 10.4.2, clause-level coordination is represented with the stacking of clause content so that the first conjunct's clause content is dominated by the second conjunct's clause content, which is dominated by the third conjunct's clause content, and so on. Clauses so stacked should be leftmost with regards to the content of the next higher clause, except when the next higher clause is the last in the stack, that is, the last conjunct. Also, with the exception of the highest clause, all other clauses in the stack are labelled as IP-ADV nodes that contain a -CONJ extension. By contrast, the final clause in the stack has the clause label that is appropriate for the conjunction of all the clauses (e.g., IP-MAT, IP-SUB, or IP-ADV). This is shown by examples (143) and (144), and the figure below.

(143) 暗くて、たくましくて、ちょっとした悲しいリアス式海岸は、僕にとっての東北の原点。

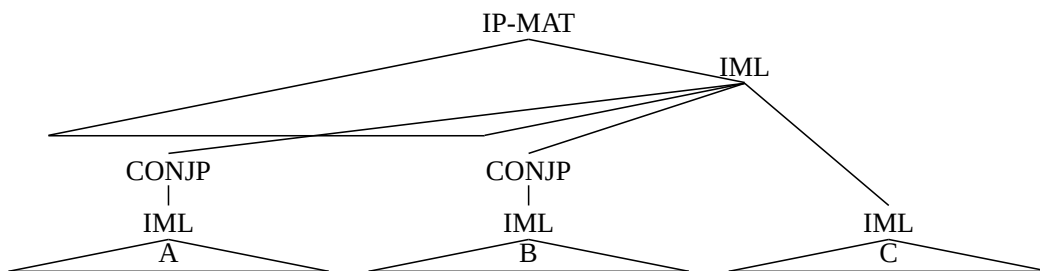
```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                        (IP-ADV-CONJ (IP-ADV-CONJ (ADJI 暗く)
                                                    (P-CONN て))
                        (PU 、)
                        (ADJI たくましく)
                        (P-CONN て))
                    (PU 、)
                    (ADVP (ADV ちょっと))
                    (ADJI もの悲しい))
                (N リアス式海岸))
            (P-OPTR は))
    (PU 、)
    (NP-PRD (PP (NP (PP (NP (PRO 僕))
                        (P-ROLE にとって)
                        (P-ROLE の))
                    (NPR 東北))
                (P-ROLE の))
            (N 原点))
    (AX *)
    (PU 。))
(ID 36_news_KAHOKU_303))
```

(144) 僕は集めて集めて集めまくった。

```
( (IP-MAT (NP-OB1;{STUFF_38} *pro*)
    (PP-SBJ (NP (N 僕))
            (P-OPTR は))
    (IP-ADV-CONJ (IP-ADV-CONJ (VB 集め)
                                (P-CONN て))
                (VB 集め)
                (P-CONN て))
    (VB 集め)
    (VB2 まくっ)
    (AXD た)
    (PU 。))
(ID 1_misc_EXAMPLE2))
```



When it comes to interpreting annotation that conforms to the stacked structure of the above figure, we can think of the following derived CONJP structure (see section 18) with IML (clause intermediate level) nodes as constituting the basis for interpretation. Such derived structure (obtained with an automatic process of normalisation) is essentially identical to the explicitly annotated CONJP structure seen with non-clausal coordination in section 18.



14 Particles/Postpositions (P)

Particles are tagged P together with some sort of node label extension. Particles will typically attach to a noun phrase or clause and carry out various functions. In terms of consequences for the annotation, particles can be grouped into the following types:

1. particles for core grammatical roles (P-ROLE),
2. particles for peripheral grammatical roles (P-ROLE),
3. conjunctive particles for non-clausal elements (P-CONN),
4. subordinating clausal connective particles (P-CONN),
5. coordinating clausal connective particles (P-CONN),
6. complementizer particles (P-COMP),
7. sentence-final particles (P-FINAL)
8. *toritate* (focus) particles (P-OPTR)

Note: Particles that share a given phonological form can mark more than one function or role in the same group. For example, in the group of particles for core grammatical roles, に can mark SBJ, SBJ2, LGS, OB1, and OB2. Furthermore, particles that share a given phonological form can appear in more than one group. For example, と appears in the group of particles for core grammatical roles (P-ROLE), the group of particles for peripheral grammatical roles

(P-ROLE), the group of conditional conjunctive particles (P-CONN), and the group of complementizer particles (P-COMP). Conversely, a particle of a given group and function may have more than one phonological form.

The term “case particle” is defined here as subsuming the class of particles for core grammatical roles and the class of particles for peripheral grammatical roles, while excluding all other classes. In the annotation here, these classes share the node label “P-ROLE”.

14.1 Complex particles

When a sequence of words as a whole functions like a single P, it is chunked as a single complex particle and labelled P. Many of these complex particles are chunked in accordance with the analysis in BCCWJ and CSJ. Of course, for many such sequences, there may be cases where one or more components are functioning as lexical items. Such cases require re-segmenting by hand with each segment reassigned to its appropriate structural position.

There are over 60 complex particles represented here, a rather long list for a functional category. Here are examples of some complex particles:

との, という, というより, といった, と同時に, において, におきまして, における, にかけて, にして, にしても, について, につきまして, につれて, にとって, にむけて, にむけた, にもかかわらず, によって, によると, によれば, にわたって, に係る, に向けて, に対し, に対して, に対する, に関して, に関する, をもって, を以て, を通して, を通じてまでも, ものの

For example, the complex particle *によって* can be associated with the core grammatical role LGS in passivized predications.

(145) このデザイン画は平山によって渡邊専務にもたらされた。

```
( (IP-MAT (PP-SBJ (NP;{DESIGN} (D この)
(N デザイン画))
(P-OPTR は))
(PP-LGS (NP (NPR 平山))
(P-ROLE によって))
(PP-OB2 (NP (NPR 渡邊専務))
(P-ROLE に))
(VB もたらさ)
(PASS れ)
(AXD た)
(PU 。))
(ID 60_wikipedia_Kamen_Rider))
```

The complex particle *について* in the following example marks an adjunct.

(146) モーセは、わたしについて書いたのである。

```
( (IP-MAT (NP-OB1 *pro*)
(PP-SBJ (NP (NPR モーセ))
(P-OPTR は))
(PU 、)
(PP (NP;{JESUS} (PRO わたし))
(P-ROLE について))
(VB 書い)
(AXD た))
```

```

(FN の)
(AX で)
(VB2 ある)
(PU 。))
(ID 390_bible_nt))

```

However, について in (147) is not analyzed as a single particle, but as a sequence ending with a verb:

(147) 彼は新しい仕事について、まるで生き返ったようだ。

```

( (IP-MAT (PP-SBJ (NP (PRO 彼))
                    (P-OPTR は))
  (IP-ADV-CONJ (PP (NP (IP-REL (NP-SBJ *T*)
                               (ADJI 新しい))
                             (N 仕事))
                (P-ROLE に))
              (VB つい)
              (P-CONN て))
  (PU 、)
  (ADVP (ADV まるで))
  (NP-PRD (IP-EMB (VB 生き返っ)
                 (AXD た))
          (N よう))
  (AX だ)
  (PU . ))
(ID 134_dict_vv-lexicon))

```

The contrast above is trivial as the sense of the word つく differs greatly between the examples.

The contrast between the complex particle につれて in (148) and the particle-verb sequence in (149) below is also easy to make because the complex particle almost always follows verb forms.

(148) 経済が発展するにつれて、社会の矛盾も拡大してきた。

‘As the economy develops, contradictions in society have expanded.’

```

( (IP-MAT (PP-SCON (IP-ADV (PP-SBJ (NP (N 経済))
                                       (P-ROLE が))
                                (VB 発展)
                                (VB0 する))
          (P-CONN につれて))
  (PU 、)
  (PP-SBJ (NP (PP (NP (N 社会))
                  (P-ROLE の))
            (N 矛盾))
          (P-OPTR も))
  (VB 拡大)
  (VB0 し)
  (P-CONN て)
  (VB2 き)
  (AXD た)
  (PU 。))
(ID 1196_textbook_kisonihongo))

```

(149) ディズニーランドに連れて行かれました。

```
( (IP-MAT (NP-SBJ; {MAN_43} *pro*)
  (PP (NP (N ディズニーランド))
    (P-ROLE に))
  (VB 連れ)
  (P-CONN て)
  (VB2 行か)
  (VB2 れ)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 6_misc_EXAMPLE2))
```

But for a complex particle like にむけて/にむけた more difficult distinctions must be made. In (150) below, the question is whether 向け takes a subject, an object, and a goal argument, or not. As it does not have a full argument structure here, we treat it as the complex particle にむけて/にむけた.

(150) 「国際交渉に向け日本政府の意思表示が必要だ」と国が早期に誘致を決断するよう訴えた。

```
( (IP-MAT (NP-SBJ; {EVANS} *pro*)
  (CP-THT-OB1 (IP-SUB (PUL 「)
    (NP-SBJ; {CORPORATION} *pro*)
    (PP (NP (N 国際交渉))
      (P-ROLE に向け))
    (PP-OB1 (NP (PP (NP (N 日本政府))
        (P-ROLE の))
      (N 意思表示))
      (P-ROLE が))
    (ADJN 必要)
    (AX だ)
    (PUR 」))
    (P-COMP と))
  (NP-ADV (IP-EMB (PP-SBJ (NP (N 国))
    (P-ROLE が))
    (PP (NP (N 早期))
      (P-ROLE に))
    (PP-OB1 (NP (N 誘致))
      (P-ROLE を))
    (VB 決断)
    (VB0 する))
    (N よう))
  (VB 訴え)
  (AXD た)
  (PU 。))
(ID 19_news_KAHOKU_89))
```

14.2 Particles for core grammatical roles (P-ROLE): が, を, に, と, の, etc.

Particles for core grammatical roles head PPs with core grammatical roles. However, there is no one-to-one correspondence between role and particle. Consequently, PPs with core

grammatical roles are given node label extensions (PP-SBJ, PP-OB1, PP-OB2, PP-CMPL, PP-SBJ2, PP-LGS, PP-CZZ). Thus, for example, a subject PP headed by P-ROLE が will receive the node label PP-SBJ.

An example with P-ROLES marking NPs with various roles: が with NP-SBJ, を with NP-OB1, and に with NP-OB2:

(151) それが私に何とやら奇妙な感じを与えたのである。

```
( (IP-MAT (PP-SBJ (NP (PRO それ))
                    (P-ROLE が))
  (PP-OB2 (NP (PRO 私))
          (P-ROLE に))
  (ADVP (ADV 何とやら))
  (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
                     (ADJN 奇妙)
                     (AX な))
          (N 感じ))
        (P-ROLE を))
  (VB 与え)
  (AXD た)
  (FN の)
  (AX で)
  (VB2 ある)
  (PU 。))
(ID 39_aozora_Edogawa-1929))
```

14.2.1 Role particle が

Role particle が frequently marks a subject (SBJ). However, other role particles like に can also mark subjects (see 14.2.3, 14.2.9). In particular, in noun modifying clauses particle の can also mark subjects (see section 14.2.5)

Role particle が marks not only subjects, but also other grammatical roles. It marks primary objects (OB1) with the following kinds of predicates. Note, however, that the same grammatical function can often be expressed by a particle other than が for these same predicates. For example, the primary object of a potential predicate can be accompanied by を as well as by が.

- predicates denoting existence or possession (いる, ある, ない, etc.)

(152) 太郎は財産がある。

‘Taro has property.’

```
( (IP-MAT (PP-SBJ (NP;{TARO_282} (NPR 太郎))
          (P-OPTR は))
  (PP-OB1 (NP (N 財産))
          (P-ROLE が))
  (VB ある)
  (PU 。))
(ID 282_textbook_kisonihongo))
```

- predicates denoting ability or cognition (できる, 分かる, 見える, 聞こえる, etc.); potential verbs (verbs with consonant-ending stems + eru/ vowel-ending verb stems + られる); verbal nouns + できる (実感できる, 説明できる, etc.)

(153) スミスさんは中国語が分かる。
'Mr. Smith understands Chinese.'

```
( (IP-MAT (PP-SBJ (NP (NPR スミスさん))
                        (P-OPTR は))
  (PP-OB1 (NP (N 中国語))
           (P-ROLE が))
  (VB 分かる)
  (PU 。))
(ID 64_textbook_dlg_gram_terms))
```

- verbs and ナ-adjectives denoting necessity (要る, 必要だ, 不要だ, etc.)

(154) 救急車が必要ですか。
'Do you need an ambulance?'

```
( (CP-QUE (IP-SUB (NP-SBJ *hearer*)
                    (PP-OB1 (NP (N 救急車))
                              (P-ROLE が))
                    (ADJN 必要)
                    (AX です))
  (P-FINAL か)
  (PU 。))
(ID 740 textbook TANAKA))
```

- Predicates denoting likes and dislikes, strengths and weaknesses, feelings (好きだ, 嫌いだ, 憎い, 欲しい, verb stems + たい, 上手だ, 下手だ, 得意だ, 苦手だ, うまい, うれしい, なつかしい, こわい, etc.)

(155) 私は虫が嫌いです。
'I hate bugs.'

```
( (IP-MAT (PP-SBJ (NP (PRO 私))
                       (P-OPTR は))
  (PP-OB1 (NP (N 虫))
           (P-ROLE が))
  (ADJN 嫌い)
  (AX です)
  (PU 。))
(ID 31_textbook_purple_basic))
```

(156) おしぼりが欲しいのです。
'Do you have hot towels?'

```
( (IP-MAT (NP-SBJ *pro*)
      (PP-OB1 (NP (N おしぼり))
                (P-ROLE が))
      (ADJI 欲しい)
      (FN の)
      (AX です)
      (PU 。))
  (ID 363_textbook_TANAKA))
```

Role particle が can also mark a secondary subject (SBJ2) in a ‘double subject’ sentence:

- (157) 象は鼻が長い。
 ‘The nose of an elephant is long.’

```
( (IP-MAT (PP-SBJ (NP (N 象))
                      (P-OPTR は))
  (PP-SBJ2 (NP (N 鼻))
            (P-ROLE が))
  (ADJI 長い)
  (PU 。))
(ID 3_misc_EXAMPLE))
```

14.2.2 Role particle を

Role particle を can mark the core argument role of primary object (OB1). In the annotation here, this includes not only canonical “direct objects”, but also the “source” arguments of verbs denoting departure or separation such as 出る, 降りる, 発つ, 出発する, 離れる, やめる, 卒業する, “path” arguments of verbs denoting motion such as 歩く, 走る, ジョギングする, 旅行する, 飛ぶ, 通る, 渡る, 行く, 来る, “time period” arguments of verbs denoting passage of time such as 過ごす, 明かす, 暮らす.

- (158) 午前6時に家を出ました。
 ‘I left home at 6 a.m.’

```
( (IP-MAT (NP-SBJ *speaker*)
  (PP-TMP (NP (N 午前)
              (NUMCLP (NUM 6)
                      (CL 時)))
  (P-ROLE に))
  (PP-OB1 (NP (N 家)
              (P-ROLE を))
  (VB 出)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 71_textbook_purple_intermediate))
```

- (159) 私たちはショッピングセンターをぶらぶら歩いた。
 ‘We wandered round the shopping center.’

```
( (IP-MAT (PP-SBJ (NP (PRO 私たち))
  (P-OPTR は))
  (PP-OB1 (NP (N ショッピングセンター))
  (P-ROLE を))
  (ADVP (ADV ぶらぶら))
  (VB 歩い)
  (AXD た)
  (PU 。))
(ID 188_textbook_TANAKA))
```

- (160) 私たちはトランプをしながら楽しい時間を過ごした。
 ‘We had a good time playing cards.’

```

( (IP-MAT (PP-SBJ (NP (PRO 私たち))
                    (P-OPTR は))
  (IP-ADV-SCON (PP-OB1 (NP (N トランプ))
                       (P-ROLE を))
                (VB し)
                (P-CONN ながら))
  (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
                     (ADJI 楽しい))
           (N 時間))
          (P-ROLE を))
  (VB 過ごし)
  (AXD た)
  (PU 。))
(ID 534_textbook_TANAKA))

```

However, when a verb of motion does not co-occur with a path element, it is not necessary to add an object null pronoun corresponding to that unless the context supplies some independent reason.

- (161) ビルはベルリンに車で行った。
 ‘Bill went to Berlin by car.’

```

( (IP-MAT (PP-SBJ (NP (NPR ビル))
                    (P-OPTR は))
  (PP (NP (NPR ベルリン))
      (P-ROLE に))
  (PP (NP (N 車))
      (P-ROLE で))
  (VB 行っ)
  (AXD た)
  (PU 。))
(ID 1185_misc_JSeM_beta_150530))

```

With regard to verbs denoting passage of time, expressions denoting periods of time may co-occur with these unaccompanied by any particles. In the absence of some positive reason to mark such expressions as objects, they are annotated as NP-MSR. For details on the use of the extension -MSR, see section 9.2.2.

- (162) 何をするかと言うと誰かの家で1週間過ごします

```

( (IP-MAT (NP-SBJ *pro*)
  (PP-SCON-CND (IP-ADV (NP-SBJ *exp*)
                      (CP-THT-OB1 (CP-QUE (IP-SUB (NP-SBJ *pro*)
                                                  (PP-OB1 (NP (WPRO
何))
                                                    (P-ROLE
を))
                                                  (VB する))
                                                  (P-FINAL か))
                                                  (P-COMP と))
                      (VB 言う))
                      (P-CONN と))
  (PP (NP (PP (NP (WPRO 誰)
                 (P-OPTR か))
              (P-ROLE の))

```

```

      (N 家))
    (P-ROLE で))
  (NP-MSR (NUMCLP (NUM 1)
                  (CL 週間)))
  (VB 過ごし)
  (AX ます))
(ID 96_ted_talk_10))

```

It is rare for role particle を to appear more than once in the same clause. See section 24.7 for details on this type of construction.

14.2.3 Role Particle に

Role particle に marks the secondary object (OB2) of many donatory/benefactive and other 3-place verbs, such as やる, あげる, もらう, くれる, 与える, 貸す, 借りる, 渡す, 届ける, 贈る, 提出する, 聞く, 教える, 伝える, たずねる, 報告する, 命じる, 相談する, 紹介する, etc. For example, see (151). In the following example, the secondary object is marked with に, while the primary object is indicated with a null pronoun *pro*.

(163) そこで彼らは、もう一度この盲人に聞いた、

```

( (IP-MAT (NP-OB1 *pro*)
  (CONJ そこで)
  (PP-SBJ (NP;{PHARISEES} (PRO 彼ら))
    (P-OPTR は))
  (PU 、)
  (NP-MSR (ADV もう)
    (NUMCLP (NUM 一)
      (CL 度)))
  (PP-OB2 (NP;{MAN_BLIND} (D この)
    (N 盲人))
    (P-ROLE に))
  (VB 聞い)
  (AXD た)
  (PU 、))
(ID 786_bible_nt))

```

Role particle に marks the subject of predicates denoting possession (e.g., ある, いる, ない, etc.), potential and cognition (e.g., できる, 分かる, 見える, 聞こえる, etc.), necessity (e.g., 必要だ, 不要だ, 要る, etc.), and feelings (e.g., うれしい, 悲しい, etc.). These predicates overlap with those that mark primary objects with が (see section 14.2.1).

(164) 実をいうと、私にもその理由はわからない。
 ‘To tell the truth, I do not understand the reason, either.’

```

( (IP-MAT (PP-SCON-CND (IP-ADV (PP-OB1 (NP (N 実))
    (P-ROLE を))
  (VB いう))
  (P-CONN と))
  (PU 、)
  (PP-SBJ (NP;{SPEAKER_129} (PRO 私))
    (P-ROLE に)
    (P-OPTR も))
  (PP-OB1 (NP;{REASON_129} (D その)

```

In principle, the non-subject argument in a 2-place predicate is assigned the core grammatical role OB1. Accordingly, there are predicates for which the primary object is marked by role particle *に*. Below are a few typical sorts of scenarios.

- (165) その手にさわった革財布。

- objects of some psychological dispositions: 恋する, 惚れる, 甘える, 頼る, 満足する, 不満だ, 見とれる, あこがれる, あきれる, 感心する, 悩む, こだわる, etc.

- objects of some acts of cognition: 気づく, 着目する, etc.

92

(VB 助け)
(VB2 合い))

(PU 、)
(PP-OB1 (NP (N 命))
(P-ROLE を))
(VB 守る))

(N すべ))
(P-ROLE を))

(PP (NP (IP-REL (NP-SBJ *T*)
(ADJN さまざま)
(AX な))
(N 視点))
(P-ROLE で))
(VB 考え)
(P-CONN て))
(ADJI ほしい)
(PU 。))

(ID 78_news_KAHOKU_112))

に can also be used to mark the logical subject of passive sentences. In such scenarios, the phrase に projects is tagged as PP-LGS.

(47) ジョンは先生にしかられた。

((IP-MAT (PP-SBJ (NP (NPR ジョン))
(P-OPTR は))
(PP-LGS (NP (N 先生))
(P-ROLE に))
(VB しから)
(PASS れ)
(AXD た)
(PU 。))

(ID 22_misc_BUFFALO))

When PPs headed by に serve as arguments of verbs する and なる and cannot be regarded as being predicated of another argument, they are given the extension tag -CMPL (for cases where predication holds, see section 15.5).

(172) 日本人が働き者だということを我々はよく耳にする。

‘We often hear it said that the Japanese are good workers .’

((IP-MAT (PP-OB1 (NP (CP-THT (IP-SUB (PP-SBJ (NP (N 日本人))
(P-ROLE が))
(NP-PRD (N 働き者))
(AX だ))
(P-COMP という))
(N こと))
(P-ROLE を))
(PP-SBJ (NP (PRO 我々))
(P-OPTR は))
(ADVP (ADV よく))
(PP-CMPL (NP (N 耳))
(P-ROLE に))
(VB する)

(PU 。))
 (ID 369_textbook_particles))

(175) だって彼女はいつも風といちゃついてるんだから」

((FRAG (PP (IP-ADV (CONJ だって)
 (PP-SBJ (NP (PRO 彼女))
 (P-OPTR は))
 (ADVP-MSR (ADV いつも))
 (PP-OB1 (NP (N 風))
 (P-ROLE と))
 (VB いちゃつい)
 (VB2 てる)
 (FN ん)
 (AX だ))
 (P-CONN から)
 (PUR 」)))

(ID 37_aozora_Yuki-1-2000))

In many instances these predicates are reciprocal predicates in which a plural subject element can saturate the argument structure:

(176) ヘプバーンは「私とユベールはよく似ています。好みが同じなのです」と語っている。

((IP-MAT (PP-SBJ (NP (NPR ヘプバーン))
 (P-OPTR は))
 (CP-THT-OB1 (multi-sentence (PUL 「
 (IP-MAT (PP-SBJ (NP (CONJP (NP (PRO
 私))
 (P-CONN
 と))
 (NP (NPR ユベール)))
 (P-OPTR は))
 (ADVP (ADJI よく))
 (VB 似)
 (P-CONN て)
 (VB2 い)
 (AX ます)
 (PU 。))
 (IP-MAT (PP-SBJ (NP (N 好み))
 (P-ROLE が))
 (ADJN 同じ)
 (AX な)
 (FN の)
 (AX です))
 (PUR 」))
 (P-COMP と))
 (VB 語っ)
 (P-CONN て)
 (VB2 いる)

(PU 。))
 (ID 362_wikipedia_Audrey_Hepburn))

And also と marks secondary objects of a variety of 3-place reciprocal predicates.

(177) 彼は、弟と一等賞を競り合った。

((IP-MAT (PP-SBJ (NP (PRO 彼))
 (P-OPTR は))
 (PU 、)
 (PP-OB2 (NP (N 弟))
 (P-ROLE と))
 (PP-OB1 (NP (NUMCLP (NUM 一)
 (CL 等))
 (N 賞))
 (P-ROLE を))
 (VB 競り)
 (VB2 合っ)
 (AXD た)
 (PU .))
 (ID 1431_dict_vv-lexicon))

When PPs headed by と serve as arguments of verbs such as する, なる, etc. and cannot be regarded as being predicated of another argument, they are given the extension tag -CMPL (for cases where predication holds, see section 15.5).

(178) 英雄を襲うのは、黒々とした死の闇である。

((IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (PP-OB1 (NP (N 英雄))
 (P-ROLE を))
 (VB 襲う))
 (N の))
 (P-OPTR は))
 (PU 、)
 (NP-PRD (IP-REL (NP-SBJ *T*)
 (ADVP-CMPL (ADV 黒々)
 (AX と))
 (VB し)
 (AX た))
 (PP (NP (N 死))
 (P-ROLE の))
 (N 闇))
 (AX で)
 (VB2 ある)
 (PU 。))
 (ID 19_book_excerpt-52))

(179) 一体支那人はいざとなると、覚悟が好い。

((IP-MAT (ADVP (ADV 一体))
 (PP-SBJ (NP (N 支那人))
 (P-OPTR は))
 (PP-SCON-CND (IP-ADV (PP-CMPL (ADVP (ADV いざ))
 (P-ROLE と))

(VB なる))
(P-CONN と))
(PU 、)
(PP-SBJ2 (NP (N 覚悟))
(P-ROLE が))
(ADJI 好い)
(PU 。))
(ID 179_aozora_Mori-1912))

The particle と in naming constructions with verbs such as 名付ける or 呼ぶ is treated as P-COMP (see section 14.6.3).

14.2.5 Role particle の

Subjects are typically marked by が within noun-modifying clauses, but の can also mark a subject in this context.

(180) これは、わが社の開発した最新型のワープロです。

‘This is the latest word processor model which our company has developed.’

((IP-MAT (PP-SBJ (NP;{STUFF_898} (PRO これ))
(P-OPTR は))
(PU 、)
(NP-PRD (IP-REL (NP-OB1 *T*)
(PP-SBJ (NP;{SPEAKER_899} (NP-POS (PRO わが))
(N 社))
(P-ROLE の))
(VB 開発)
(VB0 し)
(AXD た))
(PP (NP (N 最新型))
(P-ROLE の))
(N ワープロ))
(AX です)
(PU 。))
(ID 899_textbook_kisonihongo))

(181) 私の知らぬお名前であった。

((IP-MAT (NP-SBJ;{INDUSTRY_POST_SAMPLE_SENDER} *pro*)
(NP-PRD (IP-REL (NP-OB1 *T*)
(PP-SBJ (NP;{DAZAI} (PRO 私))
(P-ROLE の))
(VB 知ら)
(NEG ぬ))
(N お名前))
(AX で)
(VB2 あっ)
(AXD た)
(PU 。))
(ID 17_aozora_Dazai-1-1940))

As previously mentioned in section 14.2.1, role particle が can mark the primary object of some predicates. In noun-modifying clauses, role-particle の can mark primary objects in place of が.

(182) 高価な物品を購うことのできない者たちは、草鞋を作っている。

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                                (PP-OB1 (NP (IP-EMB (NP-SBJ *pro*)
                                                    (PP-OB1 (NP (IP-REL (NP-SBJ
*T*)
                                                                (ADJN
高価)
                                                                (AX
な))
                                                                (N 物品))
                                                                (P-ROLE を))
                                                                (VB 購う))
                                                                (N こと))
                                                                (P-ROLE の))
                                                                (VB でき)
                                                                (NEG ない))
                                                                (N 者たち))
                                (P-OPTR は))
(PU 、)
(PP-OB1 (NP (N 草鞋))
        (P-ROLE を))
(VB 作っ)
(P-CONN て)
(VB2 いる)
(PU 。))
(ID 44_aozora_Hayashida-2015))
```

14.2.6 Role particles marking logical subjects (LGS)

The logical subject of a direct passive construction is typically marked by role particle に (see (47) for an example). In the corpus are also found examples of such logical subjects marked with role particles によって, により, から, より, and で.

(183) 東大寺は745年に聖武天皇によって建てられた。
‘Todaiji was built in 745 by Emperor Shomu.’

```
( (IP-MAT (PP-SBJ (NP (NPR 東大寺))
                    (P-OPTR は))
  (PP (NP (NUMCLP (NUM 745)
                  (CL 年)))
      (P-ROLE に))
  (PP-LGS (NP (NPR 聖武天皇))
          (P-ROLE によって))
  (VB 建て)
  (PASS られ)
  (AXD た)
  (PU 。))
(ID 138_textbook_purple_intermediate))
```

(184) 本山は、足利義満により建立された京都の相国寺。
‘Head temple is Shokoku-ji in Kyoto , established by Yoshimitsu ASHIKAGA.’

((IP-MAT (PP-SBJ (NP (N 本山))
(P-OPTR は))
(PU 、)
(NP-PRD (IP-REL (NP-SBJ *T*)
(PP-LGS (NP (NPR 足利義満))
(P-ROLE により))
(VB 建立)
(VB0 さ)
(PASS れ)
(AXD た))
(PP (NP (NPR 京都))
(P-ROLE の))
(NPR 相国寺))
(AX *)
(PU 。))
(ID 113_wikipedia_KYOTO_2))

- (185) ワシントンの桜は、1912年に日本から贈られました。
‘The cherry trees in Washington , DC were given by Japan in 1912 .’

((IP-MAT (PP-SBJ (NP (PP (NP (NPR ワシントン))
(P-ROLE の))
(N 桜))
(P-OPTR は))
(PU 、)
(PP (NP (NUMCLP (NUM 1912)
(CL 年)))
(P-ROLE に))
(PP-LGS (NP (NPR 日本))
(P-ROLE から))
(VB 贈ら)
(PASS れ)
(AX まし)
(AXD た)
(PU 。))
(ID 142_textbook_purple_intermediate))

- (186) 質疑を終わりましたところ、日本共産党を代表して西山委員より修正案が提出
されました。

((IP-MAT (NP-ADV (IP-EMB (NP-SBJ *speaker+pro*)
(PP-OB1 (NP (N 質疑))
(P-ROLE を))
(VB 終わり)
(AX まし)
(AXD た))
(N ところ))
(PU 、)
(IP-ADV-SCON (PP-OB1 (NP (NPR 日本共産党))
(P-ROLE を))
(VB 代表)
(VB0 し)
(P-CONN て))

(PP-LGS (NP (N 西山委員))
 (P-ROLE より))
 (PP-SBJ (NP (N 修正案))
 (P-ROLE が))
 (VB 提出)
 (VB0 さ)
 (PASS れ)
 (AX まし)
 (AXD た)
 (PU 。))
 (ID 149_diet_kaigiroku-17))

(187) ああ、この土地の南も北も、皆敵で埋め尽くされている

((IP-MAT (INTJ ああ)
 (PU 、)
 (NP-SBJ (PP (NP (D この)
 (N 土地))
 (P-ROLE の))
 (NML (CONJP (NP (N 南))
 (P-CONN も))
 (NP (N 北))
 (P-CONN も)))
 (PU 、)
 (NP;*SBJ* (Q 皆))
 (PP-LGS (NP (N 敵))
 (P-ROLE で))
 (VB 埋め)
 (VB2 尽くさ)
 (PASS れ)
 (P-CONN て)
 (VB2 いる))
 (ID 356_aozora_Hayashida-2015))

14.2.7 Role particles marking causees (CZZ)

The causee argument of a causative construction is typically marked by role particle に or を (see (188) and (189) for examples.) In the corpus are also found examples of such causee arguments marked with role particles から, において, に対し, に対して, について, へ, and をして.

(188) これは神の子たちが人の娘たちのところにはいて、娘たちに産ませたものである。

((IP-MAT (PP-SBJ (NP (PRO これ))
 (P-OPTR は))
 (NP-PRD (IP-REL (PP-SBJ (NP (PP (NP (N 神))
 (P-ROLE の))
 (N 子たち))
 (P-ROLE が))
 (IP-ADV-CONJ (PP (NP (PP (NP (PP (NP (N 人))
 (P-ROLE の))

(N 娘たち))
 (P-ROLE の))
 (N ところ))
 (P-ROLE に))
 (VB はいっ)
 (P-CONN て))
 (PU 、)
 (PP-CZZ (NP (N 娘たち))
 (P-ROLE に))
 (NP-OB1 *T*)
 (VB 産ま)
 (VB2 せ)
 (AXD た))
 (N もの))
 (AX で)
 (VB2 ある)
 (PU 。))
 (ID 163_bible_ot))

(189) わたしは、その人々を終りの日によみがえらせるであろう。

((IP-MAT (PP-SBJ (NP (PRO わたし))
 (P-OPTR は))
 (PU 、)
 (PP-CZZ (NP; {PEOPLE} (D その)
 (N 人々))
 (P-ROLE を))
 (PP (NP (PP (NP (N 終り))
 (P-ROLE の))
 (N 日))
 (P-ROLE に))
 (VB よみがえら)
 (VB2 せる)
 (MD であろう)
 (PU 。))
 (ID 468_bible_nt))

(190) 独裁者が部族に対しその降伏条件に無理矢理同意させた。

‘The dictator forced the tribe to agree on the terms of surrender.’

((IP-MAT (PP-SBJ (NP (N 独裁者))
 (P-ROLE が))
 (PP-CZZ (NP (N 部族))
 (P-ROLE に対し))
 (PP (NP (D その)
 (N 降伏条件))
 (P-ROLE に))
 (ADVP (ADV 無理矢理))
 (VB 同意)
 (VB0 さ)
 (VB2 せ)
 (AXD た)

(PU 。))
 (ID 298_textbook_TANAKA))

(191) しかるに女子解放運動は、女子をしてその母性を失わしめるから宜《よろし》く
 ない。

((IP-MAT;{CRITICISING_WOMENS_EMANCIPATION_MOVEMENT_2} (CONJ しかるに)
 (PP-SBJ (NP;{WOMENS_EMANCIPATION_MOVEMENT_2} (N 女子解放運動))
 (P-OPTR は))
 (PU 、)
 (PP-SCON (IP-ADV (PP-CZZ (NP;{WOMEN} (N 女子))
 (P-ROL を)
 (P-ROL して))
 (PP-OB1 (NP;{MATERNITY} (D;{WOMEN} その)
 母性))
 (P-ROL を))
 (VB 失わ
 (VB2 しめる))
 (P-CONN か
 (ADJI 宜《よろし》く)
 (NEG ない)
 (PU 。))

(ID 66_aozora_Yosano-1921))

14.2.8 Role particles marking secondary objects (OB2)

For many 3-place predicates, including donatory/benefactive verbs, the secondary object (i.e., the third argument) is marked by role particle に (see section 14.2.3). In this corpus we also find role particle から and (complex) role particles に対し and に対して used to mark secondary objects.

(192) その家は我々から光を奪った。
 ‘The house deprived us of light.’

((IP-MAT (PP-SBJ (NP (D その)
 (N 家))
 (P-OPTR は))
 (PP-OB2 (NP (PRO 我々))
 (P-ROLE から))
 (PP-OB1 (NP (N 光))
 (P-ROLE を))
 (VB 奪っ)

(AXD た)
 (PU 。))
 (ID 756_textbook_TANAKA))

(193) なお、本件に対し附帯決議が付されております。

((IP-MAT (CONJ なお)
 (PU 、)
 (NP-LGS *pro*)
 (PP-OB2 (NP (N 本件))
 (P-ROLE に対し))
 (PP-SBJ (NP (N 附帯決議))
 (P-ROLE が))
 (VB 付さ)
 (PASS れ)
 (P-CONN て)
 (VB2 おり)
 (AX ます)
 (PU 。))
 (ID 36_diet_kaigiroku-17))

14.2.9 Other particles marking subjects (SBJ) and primary objects (OB1)

Particles other than typical core particles like が or を can mark subjects and primary objects. Lists of role particles that mark these arguments, respectively, are presented below:

- Role particles marking subjects: が, の, に, から, より, で, からして, といたしまして, として, において, におかれまして, について, につきまして, によって/に由って, により
- Role particles marking primary objects: を, が, に, と, で, へ, において, について, につきまして, によって, により, に対し, に対して, をして, をば, をもって/を以て,

In the following examples, から and で are used to mark the subject role.

(194) 鈴木さんにはあなたから伝えて下さい。
 ‘I would like you to inform Mr. Suzuki of something.’

((CP-IMP (IP-SUB (NP-OB1; {MATTER_218} *pro*)
 (PP-OB2 (NP; {SUZUKI_218} (NPR 鈴木さん))
 (P-ROLE に)
 (P-OPTR は))
 (PP-SBJ (NP; {HEARER} (PRO あなた))
 (P-ROLE から))
 (VB 伝え)
 (P-CONN て)
 (VB2 下さい))
 (PU 。))
 (ID 218_textbook_kisonihongo))

(195) 後は私達でやります。
 ‘We will do the rest.’


```
( (IP-MAT (PP-TMP (NP (N 後))
                    (P-OPTR は))
  (PP-SBJ (NP; {SPEAKER_MEN_237} (PRO 私達))
          (P-ROLE で))
  (VB やり)
  (AX ます)
  (PU 。))
(ID 237_textbook_kisonihongo))
```

In the following examples, *で* and *について* are used to mark the primary object role.

- (196) 彼の人生は困難でいっぱいです。
 ‘His life is full of trouble.’

```
( (IP-MAT (PP-SBJ (NP (PP (NP (PRO 彼))
                          (P-ROLE の))
                    (N 人生))
          (P-OPTR は))
  (PP-OB1 (NP (N 困難))
          (P-ROLE で))
  (ADJN いっぱい)
  (AX です)
  (PU 。))
(ID 814_textbook_TANAKA))
```

- (197) 私はその問題についてじっくり考えた。
 ‘I reflected on the problem.’

```
( (IP-MAT (PP-SBJ (NP (PRO 私))
                    (P-OPTR は))
  (PP-OB1 (NP (D その)
              (N 問題))
          (P-ROLE について))
  (ADVP (ADV じっくり))
  (VB 考え)
  (AXD た)
  (PU 。))
(ID 170_textbook_TANAKA))
```

14.3 Particles for peripheral roles (P-ROLE): *の, に, へ, で, から, まで, と, etc*

Deciding what is optional depends not only on the particle but on its relationship with the predicate in question. An allative particle such as *まで* (or *に* in some contexts) may be considered to mark optional elements for a basic verb of motion such as *行く*, but for motion verbs like *到着する* and *来る*, an endpoint could be considered an essential part of the interpretation, leading an annotator to mark up *まで* in an expression like *在来線がとうとう村まで来た* as projecting PP-OB1. Again, a role particle *へ* may be optional for a basic verb of motion such as *行く* (as in (200) below, for example), but might be considered an argument when relating to a predicate like *向かう*. A list setting out the argument structures of common verbs would resolve many of these details, but in the absence of this, annotators have to proceed with some sensitivity to these issues.

While role particles may themselves reveal information about grammatical role, the annotation can still benefit from further specification, especially in the case of extremely polysemic particles such as *に*. For example, in (198) below, there are two particle phrases headed by

に, one of them temporal location, and another marking spatial location. These functions can be specified, respectively, by the extensions -TMP and -LOC.

- に marking a specific point in time, as well as に marking place information:

(198) 1997年には仙台市泉区にホームスタジアムである仙台スタジアムが建設された。

```
( (IP-MAT (NP-LGS *pro*)
  (PP-TMP (NP (NUMCLP (NUM 1997)
    (CL 年)))
    (P-ROLE に)
    (P-OPTR は))
  (PP-LOC (NP (NPR 仙台市泉区))
    (P-ROLE に))
  (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
    (NP-PRD (N ホームスタジアム))
    (AX で)
    (VB2 ある))
    (NPR 仙台スタジアム))
    (P-ROLE が))
  (VB 建設)
  (VB0 さ)
  (PASS れ)
  (AXD た)
  (PU 。))
(ID 194_wikipedia_Sendai_City))
```

In addition to temporal and spatial location as exemplified above, role particle に can mark goals of motion (山に登る), states resulting from change (日本語に翻訳する), purposes of motion (釣りに出かける), causes (酒に酔う), bases for frequency or proportion (一日に三度ご飯を食べる), etc. (Masuoka and Takubo 1992, Nihongo Kijutsu Bunpou Kenkyuukai 2009a). Among these, the extension -PRP is attached to に-headed PPs denoting purposes of motion, as in the example below. For details on annotation practice in instances where に attaches to clauses denoting purposes of motion, see section 24.15.

(199) 彼女のお母さんは買い物に行きました。

‘Her mother has gone shopping.’

```
( (IP-MAT (PP-SBJ (NP (PP (NP (PRO 彼女))
  (P-ROLE の))
  (N お母さん))
  (P-OPTR は))
  (PP-PRP (NP (N 買い物))
  (P-ROLE に))
  (VB 行き)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 237_textbook_TANAKA))
```

Adding functional information presented in examples above can only be done by annotators’ intuition and time-consuming. Therefore, there exist PPs that do not have functional information label in the current annotation.

- へ as target of directional movement:

(200) 次の日、ツバメは波止場へ行きました。

```
( (IP-MAT (NP-TMP (PP (NP (N 次))
                        (P-ROLE の))
                        (N 日))
  (PU 、)
  (PP-SBJ (NP (N ツバメ))
    (P-OPTR は))
  (PP (NP (N 波止場))
    (P-ROLE へ))
  (VB 行き)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 205_aozora_Yuki-1-2000))
```

- で as marker of cause:

(201) 爺さんは酒の加減でなかなか赤くなっている。

```
( (IP-MAT (PP-SBJ (NP (N 爺さん))
                  (P-OPTR は))
  (PP (NP (PP (NP (N 酒))
                (P-ROLE の))
        (N 加減))
    (P-ROLE で))
  (IP-SMC-OB1 (ADVP (ADV なかなか))
    (ADJI 赤く))
  (VB なっ)
  (P-CONN て)
  (VB2 いる)
  (PU 。))
(ID 234_aozora_Natsume-1908))
```

- から as marker of a starting point and まで as marker of a finishing point:

(202) ITELは1988年から1992年までAPCOMを所有していた。

‘ITEL owned APCOM from 1988 to 1992.’

```
( (IP-MAT (PP-SBJ (NP;{ORG} (NPR ITEL))
                  (P-OPTR は))
  (PP (NP (NUMCLP (NUM 1988)
                  (CL 年)))
    (P-ROLE から))
  (PP (NP (NUMCLP (NUM 1992)
                  (CL 年)))
    (P-ROLE まで))
  (PP-OB1 (NP;{ORG} (NPR APCOM))
    (P-ROLE を))
  (VB 所有)
  (VB0 し)
  (P-CONN て)
  (VB2 い)
```

(AXD た)
 (PU 。))
 (ID 1778_misc_JSeM_beta_150530))

- と as marker of a “partner in action”:

(203) 私はアンディーと一緒にパーティーに行きました。
 ‘I went to a party together with Andy.’

((IP-MAT (PP-SBJ (NP (PRO 私))
 (P-OPTR は))
 (PP (NP (NPR アンディー))
 (P-ROLE と))
 (ADVP (ADJN 一緒)
 (AX に))
 (PP (NP (N パーティー))
 (P-ROLE に))
 (VB 行き)
 (AX まし)
 (AXD た)
 (PU 。))
 (ID 329_textbook_djg_basic))

Note again that a “partner in action” may need to be specified as an argument (OB1 or OB2), depending on the predicate it appears with (see section 14.2.4 for details).

Role particle の is first and foremost a genitive marker marking a relationship (possessor::possessee, whole::part, set::member, etc.) between one noun phrase and the head of another (see 14.3).

(204) 私の心は、不安と期待に掻き乱れた。

((IP-MAT (PP-SBJ (NP (PP (NP (PRO 私))
 (P-ROLE の))
 (N 心))
 (P-OPTR は))
 (PU 、)
 (PP (NP (CONJP (NP (N 不安))
 (P-CONN と))
 (NP (N 期待)))
 (P-ROLE に))
 (VB 掻き乱れ)
 (AXD た)
 (PU .))
 (ID 710_dict_vv-lexicon))

(205) 日本語の勉強の時間
 ‘Japanese language study time’

((FRAG (NP (PP (NP (PP (NP (N 日本語))
 (P-ROLE の))
 (N 勉強))
 (P-ROLE の))
 (N 時間)))
 (ID 4_misc_EXAMPLE))

When a head noun denotes an action, a の-headed complement PP can denote elements that have the same semantic roles as arguments. For example the の-headed complement PP in (206) has the semantic role of theme with respect to 決定 and the の-headed complement PP in (207) has the semantic role of agent with respect to 決定. However, as these are not arguments of predicates, they aren't supplied with grammatical role information.

(206) どれを優先するか^{*}の決定は、今後の課題だ。

‘The decision on which issue has priority is a task for later.’

```
( (IP-MAT (PP-SBJ (NP (PP (CP-QUE (IP-SUB (NP-SBJ;{MAN_1214} *pro*)
                                         (PP-OB1 (NP (WPRO どれ))
                                         (P-ROLE を))
                                         (VB 優先)
                                         (VB0 する))
                                         (P-FINAL か))
                                         (P-ROLE の))
                                         (N 決定))
                                         (P-OPTR は))
(PU 、)
(NP-PRD (PP (NP (N 今後))
              (P-ROLE の))
              (N 課題))
(AX だ)
(PU 。))
(ID 1214_textbook_kisonihongo))
```

(207) 4 内閣総理大臣は、前項の規定による閣議の決定があつたときは、遅滞なく、基本方針を公表しなければならない。

‘-LRB- 4 -RRB- When a cabinet decision is made under the preceding paragraph , the Prime Minister shall publicly announce the Basic Policy without delay .’

```
( (IP-MAT (LST (LS 4))
      (PP-SBJ (NP (N 内閣総理大臣))
      (P-OPTR は))
(PU 、)
(PP-TMP (NP (IP-EMB (PP-SBJ (NP (PP (NP (PP (NP (N 前項))
                                         (P-ROLE の))
                                         (N 規定))
                                         (P-ROLE による))
                                         (PP (NP (N 閣議))
                                         (P-ROLE の))
                                         (N 決定))
                                         (P-ROLE が))
                                         (VB あつ)
                                         (AXD た))
                                         (N とき))
                                         (P-OPTR は))
(PU 、)
(IP-ADV-SCON (NP-SBJ (N 遅滞))
              (ADJI なく))
(PU 、)
(PP-OB1 (NP (N 基本方針))
```

```

(P-ROLE を))
(VB 公表)
(VB0 し)
(NEG なけれ)
(P-CONN ば)
(VB2 なら)
(NEG ない)
(PU 。))
(ID 49_law_h15A119))

```

Note that the form の appears as the adnominal form of the copula, so care is needed to distinguish this from the genitive particle (see section 15.12.1 for details).

There are many more role particles than just the basic ones listed above. Most of the items are “complex particles” formed by concatenating two or more words (see section 14.1 for discussion).

14.4 Non-clausal connective particles (P-CONN)

In elements formed by connecting two or more non-clausal elements of the same or similar type (NPs, PPs, ADVPs, CP-THTs, etc.) into coordinated structures, the connective particle P-CONN usually appears. In these contexts P-CONN projects CONJP. We refer to this type of coordination as “non-clausal coordination”, although CPs are clauses.

- と as a connective particle between NPs:

(208) 鈴木さんと高津さんが協議した。

‘Mr. Suzuki and Mr. Takatsu discussed a matter.’

```

( (IP-MAT (PP-SBJ (NP (CONJP (NP; {SUZUKI_317} (NPR 鈴木さん))
(P-CONN と))
(NP; {SUZUKI_317} (NPR 高津さん)))
(P-ROLE が))
(VB 協議)
(VB0 し)
(AXD た)
(PU 。))
(ID 317_textbook_kisonihongo))

```

- か as a connective particle between NPs:

(209) スミスかジョーンズかアンダーソンが契約書にサインした。

‘Either Smith, Jones or Anderson signed the contract.’

```

( (IP-MAT (PP-SBJ (NP (CONJP (NP (NPR スミス))
(P-CONN か))
(CONJP (NP (NPR ジョーンズ))
(P-CONN か))
(NP (NPR アンダーソン)))
(P-ROLE が))
(PP (NP (N 契約書))
(P-ROLE に))
(VB サイン)
(VB0 し)

```

(AXD た)
 (PU 。))
 (ID 964_misc_JSeM_beta_150530))

- や as a connective particle between NPs:

(210) 机や椅子を並べて下さい。
 ‘Please put desks and chairs in line.’

((CP-IMP (IP-SUB (NP-SBJ *hearer*)
 (PP-OB1 (NP (CONJP (NP (N 机))
 (P-CONN や))
 (NP (N 椅子)))
 (P-ROLE を))
 (VB 並べ)
 (P-CONN て)
 (VB2 下さい))
 (PU 。))
 (ID 894_textbook_kisonihongo))

- も as a connective particle between PPs:

(211) 捕り方衆の叫び声があっちからもこっちからも聞こえて来る。

((IP-MAT (PP-SBJ (NP (PP (NP (N 捕り方衆))
 (P-ROLE の))
 (N 叫び声))
 (P-ROLE が))
 (PP (CONJP (PP (NP (PRO あっち))
 (P-ROLE から))
 (P-CONN も))
 (PP (NP (PRO こっち))
 (P-ROLE から))
 (P-CONN も))
 (VB 聞こえ)
 (P-CONN て)
 (VB2 来る)
 (PU 。))
 (ID 5_aozora_Kunieda-1925))

- も as a connective particle between CP-THTs:

(212) しかし運慶の方では不思議とも奇体ともとんと感じ得ない様子で一生懸命に彫っている。

((IP-MAT (CONJ しかし)
 (PP-SBJ (NP (PP (NP (NPR 運慶))
 (P-ROLE の))
 (N 方))
 (P-ROLE で)
 (P-OPTR は))
 (IP-ADV-SCON (NP-PRD (IP-EMB (CP-THT-OB1 (CONJP (CP-THT (IP-SUB
 (NP-SBJ *pro*))

(ADJN

不思議))

(P-COMP

と))

(P-CONN も))

(CP-THT (IP-SUB (NP-SBJ

pro))

(ADJN

奇体))

(P-COMP と))

(P-CONN も))

(ADVP (ADV とんと))

(VB 感じ)

(VB2 得)

(NEG ない))

(N 様子))

(AX で))

(NP-OB1 *pro*)

(ADVP (ADJN 一生懸命)

(AX に))

(VB 彫っ)

(P-CONN て)

(VB2 いる)

(PU 。))

(ID 372_aozora_Natsume-1908))

In addition, various conjunctive adverbs (CONJ) can appear in the same environments:

- Below is an example of a conjunctive adverb 「あるいは」 connecting two NPs.

(213) 近代以降は女子あるいは成人女性が舞う場合も多い。
 ‘Since the modern age it has in many cases been performed by a girl or an adult woman.’

((IP-MAT (PP-TMP (NP (N 近代以降))

(P-OPTR は))

(PP-SBJ (NP (IP-EMB (NP-OB1 *pro*)

(PP-SBJ (NP (CONJP (NP (N 女子))

(CONJ あるいは))

(NP (N 成人女性)))

(P-ROLE が))

(VB 舞う))

(N 場合))

(P-OPTR も))

(ADJI 多い)

(PU 。))

(ID 78_wikipedia_KYOTO_12))

- Below is an example of a conjunctive adverb 「かつ」 connecting two ADVPs.

(214) 外国語は、楽しく、かつ効果的に勉強したい。
 ‘We’d like to study foreign languages in an enjoyable yet effective way.’


```

( (IP-MAT (NP-SBJ *arb*)
  (PP-OB1 (NP (N 外国語))
    (P-OPTR は))
  (PU 、)
  (ADVP (CONJP (ADVP (ADJI 楽しく))
    (PU 、)
    (CONJ かつ))
  (ADVP (ADJN 効果的)
    (AX に)))
  (VB 勉強)
  (VB0 し)
  (AX たい)
  (PU 。))
(ID 193_textbook_djg_advanced))

```

See the discussion on the pattern of non-clausal coordination in section 18.

14.5 Clausal conjunctive particles (P-CONN)

Linking phrases of the same (or similar) type of clauses into a series can create different sorts of structures. For IP-ADV_s, the linkage can be either subordinating or coordinating, and relative clauses modifying the same single head N are linked in parallel, simple parataxis (for this latter case see section 16.5.1).

Among clause-linking connective particles (P-CONN), there are those that take an adverbial clause (IP-ADV) as their complement (projecting a PP), and there are those that attach directly to the predicate of the adverbial clause (placed under IP-ADV). In the first scenario, if the clause is subordinated, SCON will be added as an extension forming PP-SCON (possibly with extensions, e.g., PP-SCON-CND for a subordinate clause that is a conditional), whereas a coordinated clause will appear under PP-CONJ. In the second scenario, depending on the type of clause linkage, one of these three extensions will be added to the clause, forming either IP-ADV-SCON (also IP-ADV-SCON-CND), or IP-ADV-CONJ. The specific connective particles are introduced below. For details on control environments in adverbial clauses, see section 12.1. For details on the distinction between subordination and coordination, see section 10.4.3.

14.5.1 Conjunctive particles (P-CONN) subordinating conditional IPs

In scenarios where connective particles (P-CONN) link non-final clauses (IP-ADV) to following clauses, if the linkage is subordinating, the function of the subordinated clause is sometimes conditional, and the constituent will take the extension -SCON-CND.

- An example of a conditional clause linked to a following clause with と projecting a PP-SCON-CND:

(215) 試験があまり難しいと、合格者は出ないだろう。
 ‘If the examination is very difficult, there will be no successful candidate.’

```

( (IP-MAT (PP-SCON-CND (IP-ADV (PP-SBJ (NP (N 試験))
  (P-ROLE が))
  (ADVP (ADV あまり))
  (ADJI 難しい))
  (P-CONN と))
  (PU 、)
  (PP-SBJ (NP (N 合格者)))

```

```

(P-OPTR は))
(VB 出)
(NEG ない)
(MD だろう)
(PU 。))
(ID 100_textbook_kisonihongo))

```

Note that it is not always the case that (P-CONN と) introduces a conditional clause. For example, in (216) below a non-conditional subordinate clause is marked by this element:

(216) 太郎がギターを弾くと春子が歌った。

```

( (IP-MAT (PP-SCON (IP-ADV (PP-SBJ (NP (NPR 太郎))
(P-ROLE が))
(PP-OB1 (NP (N ギター))
(P-ROLE を))
(VB 弾く))
(P-CONN と))
(PP-SBJ (NP (NPR 春子))
(P-ROLE が))
(VB 歌っ)
(AXD た)
(PU 。))
(ID 3_misc_TOPTEN))

```

Furthermore, (P-CONN と) can mark coordinated clauses as in the example below:

(217) あの教授は学生が分かろうと分かるまいとかまわず授業を進めていく。
‘That professor keeps lecturing regardless of whether his students understand it or not.’

```

( (IP-MAT (PP-SBJ (NP (D あの)
(N 教授))
(P-OPTR は))
(PP-SCON-CND (IP-ADV (PP-SBJ (NP (N 学生))
(P-ROLE が))
(PP-CONJ (IP-ADV (VB 分かろ)
(AX う))
(P-CONN と))
(VB 分かる)
(NEG まい))
(P-CONN と))
(IP-ADV-SCON (NP-OB1 *pro*)
(VB かまわ)
(NEG ず))
(PP-OB1 (NP (N 授業))
(P-ROLE を))
(VB 進め)
(P-CONN て)
(VB2 いく)
(PU 。))
(ID 639_textbook_djg_advanced))

```

Note incidentally that (P-CONN と) can coordinate non-clausal constituents, and that (P-ROLE と) can express grammatical roles, and that (P-COMP と) marks quotations.

When a connective particle P-CONN is analyzable as having the character of a suffix, it is placed after a stem as the last element of an adverbial clause (IP-ADV), and the extension specifying its function (e.g., CND) is attached to the IP-ADV node. Below are examples of conditional connective particles of this type.

たら, だら, ば, たって, て, ちゃ

- A dependent clause introduced by *たら* expressing a conditional meaning:

(218) たって携帯の会社変えたらアドレスとか全部変わるもんね。

```
( (CP-FINAL (IP-SUB (CONJ たって)
                    (IP-ADV-SCON-CND (NP-SBJ *arb*)
                                     (NP-OB1 (PP (NP (N 携帯))
                                                (P-ROLE の))
                                                (N 会社))
                                     (VB 変え)
                                     (P-CONN たら))
                    (PP-SBJ (NP (N アドレス))
                           (P-OPTR とか))
                    (NP; *SBJ* (Q 全部))
                    (VB 変わる))
    (P-FINAL もん)
    (P-FINAL ね)
    (PU 。))
(ID 89_misc_KNB))
```

- A dependent clause introduced by *ば* expressing a conditional meaning:

(219) まっすぐに王城に行き着けば、それでよいのだ。

```
( (IP-MAT (NP-SBJ *speaker*)
      (IP-ADV-SCON-CND (ADVP (ADJN まっすぐ)
                             (AX に))
                       (PP (NP (N 王城))
                           (P-ROLE に))
                       (VB 行き着け)
                       (P-CONN ば))
    (PU 、)
    (PP (NP (PRO それ))
        (P-ROLE で))
    (ADJI よい)
    (FN の)
    (AX だ)
    (PU 。))
(ID 198_aozora_Dazai-2-1940))
```

- An example with *toritate* particle *も* immediately following clause-level constituent (P-CONN て). Note that in this case it is the *toritate* particle that projects the PP, and the extension SCON-CND is added to the PP node.

(122) ビールはよく冷えていても飲みたくない。

```
( (IP-MAT (NP-SBJ;{SPEAKER_26} *speaker*)
  (PP-OB1 (NP (N ビール))
    (P-OPTR は))
  (PP-SCON-CND (IP-ADV (ADVP (ADJI よく))
    (VB 冷え)
    (P-CONN て)
    (VB2 い)
    (P-CONN て))
    (P-OPTR も))
  (VB 飲み)
  (AX たく)
  (NEG ない)
  (PU 。))
(ID 26_misc_EXAMPLE))
```

Note that for the forms listed as connective particles (P-CONN) above, in addition to their use in PP-SCON-CND and IP-ADV-SCON-CND, there are also instances where the same forms appear with non-conditional subordinate clauses (PP-SCON and IP-ADV-SCON), and some of these are homophonous with non-connective particles as well. For example, the connective particle *たら* in (221) below introduces a subordinate clause, but it is not the case that *たら* marks a conditional clause here.

(221) 奇体だと思っていましたら、また腹かけから何か出しました。

```
( (IP-MAT (IP-ADV-SCON (NP-SBJ *pro*)
  (CP-THT-OB1 (IP-SUB (NP-SBJ *pro*)
    (ADJN 奇体)
    (AX だ))
    (P-COMP と))
  (VB 思っ)
  (P-CONN て)
  (VB2 い)
  (AX まし)
  (P-CONN たら))
  (PU 、)
  (NP-SBJ *pro*)
  (ADVP (ADV また))
  (PP (NP (N 腹かけ))
    (P-ROLE から))
  (NP-OB1 (WPRO 何)
    (P-OPTR か))
  (VB 出し)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 773_aozora_Miyazawa-1934))
```

There are also cases where connective particle *ば* doesn't mark conditional clauses. Below is an example of *ば* marking a coordinated clause *ば*.

(222) 漆も塗ってなければ磨きもかけてない。

```
( (IP-MAT (NP-SBJ *arg*)
  (NP-OB2 *pro*)
  (IP-ADV-CONJ (PP-OB1 (NP (N 漆))
```

```

(P-OPTR も))
(VB 塗っ)
(VB2 て)
(NEG なけれ)
(P-CONN ば))
(PP-OB1 (NP (N 磨き))
(P-OPTR も))
(VB かけ)
(VB2 て)
(NEG ない)
(PU 。))
(ID 292_aozora_Natsume-1908))

```

14.5.2 Conjunctive particles (P-CONN) subordinating non-conditional IPs

For linkages between clauses, the other type of subordinating conjunction is non-conditional. The semantic effects of the subordinated clauses are various: concessive, adversative, purposive, cause-introducing, grounds-introducing, reason-introducing, additive, alternative, expressive of temporal relations of concurrence, simultaneity, priority, etc. In the configuration involving particles that aren't analyzed as suffixes, a dependent clause IP-ADV is the complement of a particle phrase PP with the extension SCON added to that PP node.

- A dependent clause introduced by *けれども* expressing a *concessive* relation:

(223) この論文は2度読んでみたけれども、理解できなかった。
 'I read this paper twice but could not understand.'

```

( (IP-MAT (NP-SBJ *speaker*)
  (PP-OB1 (NP; {PAPER_1171} (D この)
    (N 論文))
    (P-OPTR は))
  (PP-SCON (IP-ADV (NP-SBJ *speaker*)
    (NP-OB1; {PAPER_1171} *pro*)
    (NP-MSR (NUMCLP (NUM 2)
      (CL 度)))
    (VB 読ん)
    (P-CONN で)
    (VB2 み)
    (AXD た))
    (P-CONN けれども))
  (PU 、)
  (VB 理解)
  (VB0 でき)
  (NEG なかつ)
  (AXD た)
  (PU 。))
(ID 1171_textbook_kisonihongo))

```

- A dependent clause introduced by *から* expressing a *reason*:

(224) 用事がありますから、失礼します。
 'Excuse me, I have something to do.'

```
( (IP-MAT (NP-SBJ *speaker*)
  (PP-SCON (IP-ADV (NP-SBJ *speaker*)
    (PP-OB1 (NP (N 用事))
      (P-ROLE が))
    (VB あり)
    (AX ます))
    (P-CONN から))
  (PU 、)
  (VB 失礼)
  (VB0 し)
  (AX ます)
  (PU 。))
(ID 1134_textbook_kisonihongo))
```

- Clause-level constituent て immediately followed by から expressing *temporal priority*:

(225) 毎朝ご飯を食べてから、コーヒーを飲みます。
 ‘Every morning after eating a meal I drink coffee.’

```
( (IP-MAT (NP-SBJ; {SPEAKER_5} *speaker*)
  (NP-TMP (Q 毎朝))
  (PP-SCON (IP-ADV (PP-OB1 (NP (N ご飯))
    (P-ROLE を))
    (VB 食べ)
    (P-CONN て))
    (P-CONN から))
  (PU , )
  (PP-OB1 (NP (N コーヒー))
    (P-ROLE を))
  (VB 飲み)
  (AX ます)
  (PU 。))
(ID 5_misc_EXAMPLE))
```

- A dependent clause introduced by ので expressing reason:

(226) この薬はにがくないので、飲みやすいです。
 ‘This medicine is easy to take because it isn’t bitter.’

```
( (IP-MAT (NP-SBJ; {MAN_6} *pro*)
  (PP-SCON (IP-ADV (PP-SBJ (NP; {DRUG_6} (D この)
    (N 薬))
    (P-OPTR は))
    (ADJI にがく)
    (NEG ない))
    (P-CONN ので))
  (PU , )
  (NP-OB1; {DRUG_6} *pro*)
  (VB 飲み)
  (AX やすい)
  (AX です)
  (PU 。))
(ID 6_misc_EXAMPLE))
```

Connective particles *ながら*, *たら/だら*, and *て/で* can mark adverbial clauses expressing temporal relations (simultaneity or priority) as well as cause, grounds, and reason. These particles are placed under an IP-ADV, to which the extension SCON is added. Below is an example with *ながら* expressing simultaneity:

(227) 太郎がギターを弾きながら歌った。

```
( (IP-MAT (PP-SBJ (NP (NPR 太郎))
                    (P-ROLE が))
  (IP-ADV-SCON (PP-OB1 (NP (N ギター))
                      (P-ROLE を))
                (VB 弾き)
                (P-CONN ながら))
  (VB 歌っ)
  (AXD た)
  (PU 。))
(ID 22_misc_TOPTEN))
```

14.5.3 Conjunctive particles (P-CONN) coordinating independent IPs

For linkages between clauses, another relation mediated by particles is that of coordination between independent IPs. In coordinated clause linkage with a non-suffix connective particle, the preceding clause is an IP-ADV under PP-CONJ. In coordinated clause linkage with only a suffix connective particle under the IP-ADV, the extension CONJ attaches directly to the IP-ADV node. When more than two clauses are coordinated, the structure is different from that for subordinated clauses in that each non-final coordinated clause appears directly below the clause that immediately follows it. For the purposes of semantic interpretation, however, clauses so coordinated are treated as being at the same structural level. See section 13 for a discussion of the conditions on antecedents for co-reference with empty positions in this configuration.

- Here is a list of some of the particles that mark coordinate IPs:

が,けれども,けども,し,とともに/と共に,ども,やら,わ,

There is some overlap in the inventory of coordinating and subordinating particles. Only a few particles are regularly coordinating in clause final position. Whether a clause is independent of and not embedded within an immediately following clause or not is decidable by the meaning of the sentence as a whole and by the patterns of constituent-sharing possible between clauses. (see section 10.4.3 for details). The example below has a connective particle *が* following the first clause. Note that the subject argument position for both clauses takes the same antecedent (here a zero pronoun in a leftmost ATB position).

(228) 前回は民主党の推薦を受け大勝したが、今回は市民党の立場で戦う。

```
( (IP-MAT (NP-SBJ *pro*)
  (PP-CONJ (IP-ADV (PP-TMP (NP (N 前回))
                          (P-OPTR は))
            (IP-ADV-CONJ (PP-OB1 (NP (PP (NP;{ORG} (NPR 民
主党))
                                (P-ROLE の))
                              (N 推薦))
                            (P-ROLE を))
```

```

(VB 受け))
(VB 大勝)
(VB0 し)
(AXD た))
(P-CONN が))
(PU 、)
(PP-TMP (NP (N 今回))
(P-OPTR は))
(PP (NP (PP (NP (N 市民党))
(P-ROLE の))
(N 立場))
(P-ROLE で))
(VB 戦う)
(PU 。))
(ID 135_news_KAHOKU_28))

```

Connective particles て/で, たり/だり, たら/だら, ば, and たって introducing non-final coordinated clauses appear inside those clauses rather than following them. In such cases the extension CONJ is added to the IP-ADV node. In the example below, a null-pronoun subject and three overt constituents are shared by the coordinated clauses.

(229) 公園では肩掛け送風機で落ち葉を吹き寄せて一箇所に集めている。

```

( (IP-MAT (NP-SBJ *pro*)
(PP (NP (N 公園))
(P-ROLE で)
(P-OPTR は))
(PP (NP (N 肩掛け送風機))
(P-ROLE で))
(PP-OB1 (NP (N 落ち葉))
(P-ROLE を))
(IP-ADV-CONJ (VB 吹き寄せ)
(P-CONN て))
(PP (NP (NUMCLP (NUM 一)
(CL 箇所)))
(P-ROLE に))
(VB 集め)
(P-CONN て)
(VB2 いる)
(PU . ))
(ID 2724_dict_vv-lexicon))

```

14.6 Complementizer particles (P-COMP): と, という, etc.

Complementizer particles such as と or という (P-COMP) introduce a clausal constituent that denotes the content of speech, thought, representation, or reception which may be anything from a sequence of full sentential utterances to an interjection or a fragment. They take as their complement various phrases such as IP-SUB, CP-QUE, IP-IMP, CP-FINAL, CP-EXL, INTJP, multi-sentence, IP-SMC, etc. and project the phrasal category CP-THT, which in turn serves as the complement of a predicate or a noun (See section 24.17 for details). In addition, the particule と takes NP as its complement and projects PP-CMPL.

14.6.1 Complementizer particles (P-COMP) introducing content complements of predicates

Below is a list of some of the complementizer particles introducing content complements of predicates:

って, と, とか, なんて

- An example with と introducing a declarative clause that is the complement of the verb 言う ('say'):

(230) ジョンは、ビルが自分を傷つけたと言った。
'John said Bill had hurt himself.'

```
( (IP-MAT (PP-SBJ (NP (NPR ジョン))
                    (P-OPTR は))
  (PU 、)
  (CP-THT-OB1 (IP-SUB (PP-SBJ (NP (NPR ビル))
                                (P-ROLE が))
                (PP-OB1 (NP (PRO 自分))
                        (P-ROLE を))
                (VB 傷つけ)
                (AXD た))
                (P-COMP と))
  (VB 言っ)
  (AXD た)
  (PU 。))
(ID 1151_misc_JSeM_beta_150530))
```

14.6.2 Complementizer particles (P-COMP) introducing content complements of nouns

Below is a list of some complementizer particles introducing content complements of nouns:

いう, って, っていう, という (と云う, と言う), といった (と言った), とかいう (とか言う), とする, との, なんて, なんていう, なんと云う, の

- An example with (P-COMP という) introducing a clause as the complement of the noun 意味 ('meaning'):

(231) ギリシャ語の忘我 (エクスタシー) は何かの横に立つという意味です

```
( (IP-MAT (PP-SBJ (NP (PP (NP (N ギリシャ語))
                          (P-ROLE の))
                    (N 忘我)
                    (PRN (PUL ( )
                             (NP (N エクスタシー))
                             (PUR ))))
                    (P-OPTR は))
  (NP-PRD (CP-THT (IP-SUB (NP-SBJ *arb*)
                          (PP (NP (PP (NP (WPRO 何)
                                           (P-OPTR か))
                                           (P-ROLE の))
                          (N 横))
```

(P-ROLE に))
 (VB 立つ))
 (P-COMP という))
 (N 意味))
 (AX です))
 (ID 35_ted_talk_3))

Some complex particles like という and との allow questions to modify nouns:

- (232) こんなことを続けてもいいのかという疑問が絶えず私を苦しめた。
 ‘A question whether I can continue a thing like this tortured me incessantly.’

((IP-MAT (PP-SBJ (NP (CP-THT (CP-QUE (IP-SUB (NP-SBJ *speaker*)
 (PP-OB1 (NP;{ACTIVITY_1211})

(D こんな)

(N

こと))

(P-ROLE を))
 (VB 続け)
 (P-CONN て)
 (P-OPTR も)
 (ADJI-MD いい)
 (FN の))
 (P-FINAL か))
 (P-COMP という))
 (N 疑問))
 (P-ROLE が))
 (ADVP (ADV 絶えず))
 (PP-OB1 (NP;{SPEAKER_1211} (PRO 私))
 (P-ROLE を))
 (VB 苦しめ)
 (AXD た)
 (PU 。))
 (ID 1211_textbook_kisonihongo))

Note that when introducing complements of nouns, if particles such as という and って take an NP rather than a clause, then those particles project a PP not a CP:

- (233) 晩年の政宗は、『酔余口号』という漢詩を残している。

((IP-MAT (PP-SBJ (NP;{MASAMUNE} (PP (NP (N 晩年))
 (P-ROLE の))
 (NPR 政宗))

(P-OPTR は))

(PU 、)

(PP-OB1 (NP (PP (NP (PUL 『)
 (NPR 酔余口号)
 (PUR 』))

(P-ROLE という))

(N 漢詩))

(P-ROLE を))

(VB 残し)

(P-CONN て)

(VB2 いる)

(PU 。))
 (ID 194_wikipedia_Datemasamune))

14.6.3 Complementizer particles (P-COMP) と in naming constructions

In naming constructions with verbs such as 名付ける or 呼ぶ, the extention CMPL is added to PP projected by P-COMP と (that appears with proper nouns or other “mention” uses of words).

(234) オンラインコミュニティの中に、「伊達 f a n」と名付けた特設ページを設ける。

((IP-MAT (NP-SBJ *pro*)
 (PP (NP (PP (NP (NPR オンラインコミュニティ))
 (P-ROLE の))
 (N 中))
 (P-ROLE に))
 (PU 、)
 (PP-OB1 (NP (IP-REL (NP-OB1 *T*)
 (NP-SBJ *pro*)
 (PP-CMPL (NP (PUL 「)
 (NPR 伊達 f a n)
 (PUR 」))
 (P-COMP と))
 (VB 名付け)
 (AXD た))
 (N 特設ページ))
 (P-ROLE を))
 (VB 設ける)
 (PU 。))
 (ID 49_news_KAHOKU_87))

(235) あらゆる自然災害に備え、暮らしの安全安心を生み出す事業活動を「減災産業」と呼ぶ。

((IP-MAT (NP-SBJ *arb*)
 (PP-OB1 (NP (IP-EMB (NP-SBJ *arb*)
 (IP-ADV-SCON (PP (NP (D あらゆる)
 (N 自然災害))
 (P-ROLE に))
 (VB 備え))
 (PU 、)
 (PP-OB1 (NP (PP (NP (N 暮らし))
 (P-ROLE の))
 (N 安全安心))
 (P-ROLE を))
 (VB 生み出す))
 (N 事業活動))
 (P-ROLE を))
 (PP-CMPL (NP (PUL 「)
 (N 減災産業)
 (PUR 」))

(P-COMP と))
(VB 呼ぶ)
(PU 。))
(ID 5_news_KAHOKU_82))

14.7 Sentence-final particles (P-FINAL): か, ね and よ, etc.

Utterance-final particles (P-FINAL) include the following forms. (These are more closely related to speech act type than to predication.)

か/かー, かい, かしら, かな/かなあ/かなー/がな, かね, がの, こと, さ/さー/さー, じゃ/ぢや, じゃん, ずら, ぜ, ぞ/ぞオ, ぞい, だい, だって, だと, ぢやあ, ぢやい, つけ, ったら, っちゃ, って/ッて/ッてえ, ってば, っと/ッと, で, とも, ど, な/なあ/なあ/なア/なー/ナ, ね/ねえ/ねえ/ねー, ねん, ので/のでー, のに, べ, ぺ, もの/も, や/や/やー/哉, やい, やら, やん, よ/よう/よー/ヨ, わ/わあ/わー, わい

These are analyzed as projecting a CP layer and as taking preceding dependent clauses (IP-SUB) as complements. The type of CP depends on the combination of final particle and IP-SUB, forming either questions (CP-QUE), exclamations (CP-EXL), or utterances not characterizable as either sub-type (CP-FINAL).

(236) 「この船は西へ行くんですか」

```

( (CP-QUE (PUL 「)
      (IP-SUB (PP-SBJ (NP (D この)
                           (N 船))
                       (P-OPTR は))
              (PP (NP (N 西))
                  (P-ROLE へ))
              (VB 行く)
              (FN ん)
              (AX です))
      (P-FINAL か)
      (PUR 」))
(ID 404_aozora_Natsume-1908))

```

(98) 「ああ、なんと彼を愛しておられたことか」。

((CP-EXL (PUL 「
 (IP-SUB (NP-SBJ *pro*)
 (INTJ ああ)
 (PU 、)
 (ADVP (WADV なんと))
 (PP-OB1 (NP;{LAZARUS} (PRO 彼))
 (P-ROLE を))
 (VB 愛し)
 (P-CONN て)
 (VB2 おら)
 (VB2 れ)
 (AXD た))
 (P-FINAL こと)
 (P-FINAL か)

```

(PUR 』)
(PU 。))
(ID 988_bible_nt))

```

(238) それは残念ですね。

```

( (CP-FINAL (IP-SUB (PP-SBJ (NP (PRO それ))
                               (P-OPTR は))
                    (ADJN 残念)
                    (AX です))
  (P-FINAL ね)
  (PU 。))
(ID 163_aozora_Edogawa-1929))

```

When there are multiple sentence-final particles, they all appear side by side under the same CP projection.

(239) 「多分、あなたは食用豆類をいくつか見つけることができるわよ。

```

( (CP-FINAL (PUL 「)
  (IP-SUB (ADVP (ADV 多分))
    (PU 、)
    (PP-SBJ (NP (PRO あなた))
      (P-OPTR は))
    (PP-OB1 (NP (IP-EMB (PP-OB1 (NP (N 食用豆類))
                                   (P-ROLE を))
                             (NP;*OB1* (NUMCLP (WNUM いく)
                                                  (CL つ))
                             (P-OPTR か))
                           (VB 見つける))
              (N こと))
              (P-ROLE が))
            (VB できる))
    (P-FINAL わ)
    (P-FINAL よ)
    (PU 。))
(ID 164_fiction_DICK-1952))

```

14.8 Interjectional particles (P-INTJ)

Interjectional particles (P-INTJ) have a fairly free distribution, along with introducing vocative phrases. Here is a list:

さ/さー, な/なー, ね/ねー, よ

14.9 Toritate (focus) particles (P-OPTR): か, しか, は, ばかり, も, etc.

The class of *toritate* particles (sometimes called *fuku-joshi*, lit. “adverbial particles”) are labelled P-OPTR. They can be roughly described as relating a constituent to the domain of discourse. For example, *は* marks things that are already in the domain, or marks elements that are in contrast to something else in the domain. And *も* in affirmative contexts marks things additional to a restricted domain. The distribution of *toritate* particles is fairly free.

When a *toritate* particle marks an NP, ADVP, or IP, it projects a PP. When a *toritate* particle marks a constituent that is headed by a particle (typically a PP or a CP-THT), it appears alongside that particle.

Relevant particles include:

か, きり, くらい, ぐらい, こそ, ごと, さえ, しか, しも, すら, だけ, だって, って, でも, とか, とも, ともあれ, など, なら, ならば, なんか, なんて, にしてからが, にしても, にせよ, に限って, のみ, は, ばかり, ばかりか, ばかりか, ほど, 程, も, やら

- A *toritate* particle は marking an expression with a temporal meaning gets an extension TMP:

(240) その時は母も笑った。

```
( (IP-MAT (PP-TMP (NP (D その)
                        (N 時))
                    (P-OPTR は))
  (PP-SBJ (NP (N 母))
          (P-OPTR も))
  (VB 笑っ)
  (AXD た)
  (PU 。))
(ID 538_aozora_Natsume-1908))
```

- An example of *toritate* particle も following particle と, where も is in construction with an interrogative (here a WPRO) under negative scope:

(241) 子供は何とも云わなかった。

```
( (IP-MAT (PP-SBJ (NP (N 子供))
                    (P-OPTR は))
  (PP-OB1 (NP (WPRO 何))
          (P-COMP と)
          (P-OPTR も))
  (VB 云わ)
  (NEG なかつ)
  (AXD た)
  (PU 。))
(ID 535_aozora_Natsume-1908))
```

- An example with *toritate* particle は occurring with an extension indicating primary object role and *toritate* particle しか occurring with an extension indicating subject role:

(242) 解決策は当事者しか導き出せない。

```
( (IP-MAT (PP-OB1 (NP (N 解決策))
                   (P-OPTR は))
  (PP-SBJ (NP (N 当事者))
          (P-OPTR しか))
  (VB 導き出せ)
  (NEG ない)
  (PU 。))
(ID 86_news_KAHOKU_65))
```

14.9.1 Topic PPs (PP-TPC)

A は-marked noun phrase that has no clearly defined function within the sentence is usually labelled PP-TPC.

(243) 自分も確にこれは死ぬなと思った。

```
( (IP-MAT (PP-SBJ (NP (PRO 自分))
                    (P-OPTR も))
  (CP-THT-OB1 (CP-FINAL (IP-SUB (NP-SBJ *pro*)
                                (ADVP (ADJN 確)
                                       (AX に))
                                (PP-TPC (NP (PRO これ))
                                       (P-OPTR は))
                                (VB 死ぬ))
              (P-FINAL な))
            (P-COMP と))
  (VB 思っ)
  (AXD た)
  (PU 。))
(ID 10_aozora_Natsume-1908))
```

(244) 帰りは私が先生をお送りします。

‘I will give the professor a ride on the way back.’

```
( (IP-MAT (PP-TPC (NP (N 帰り))
                    (P-OPTR は))
  (PP-SBJ (NP (PRO 私))
          (P-ROLE が))
  (PP-OB1 (NP (N 先生))
          (P-ROLE を))
  (VB お送り)
  (VB0 し)
  (AX ます)
  (PU 。))
(ID 773_textbook_purple_intermediate))
```

However, if the role of a は-marked PP can be specified, then a disambiguating extension such as -SBJ or -TMP is added.

(245) 今は国産的なものは安い。

```
( (IP-MAT (PP-TMP (NP (N 今))
                    (P-OPTR は))
  (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                     (ADJN 国産的)
                     (AX な))
          (N もの))
        (P-OPTR は))
  (ADJI 安い)
  (PU 。))
(ID 188_aozora_Nomura-19-1950))
```

The first subject in a so-called double subject constructions, which is usually marked by the particle は, is annotated as PP-SBJ, while the second subject (usually marked by the particle が) is annotated as PP-SBJ2.

(246) 彼は財布がすっからかんだ
 ((IP-MAT (PP-SBJ (NP (N 彼))
 (P-OPTR は))
 (PP-SBJ2 (NP (N 財布))
 (P-ROLE が))
 (ADJN すっからかん)
 (AX だ))
 (ID 230_dict_pth_q))

14.10 Particles as clausal constituents

Sometimes particles are directly dominated by an IP without projecting a PP. Below is a discussion of the basic scenarios for this annotation.

14.10.1 Connective particles (P-CONN) as final elements under IP-ADV

As already pointed out in sections 14.5.1 and 14.5.2, among the connective particles (P-CONN) there are those that are best analyzed as suffixes, and these attach not to IP-ADV, but to the final element inside of IP-ADV. Below is a list of the particles of this type.

- て/てー/で/でー (see ex. (122)),
- ながら (see ex. (227)),
- ば/ばー (see ex. (219) and ex.(222)),
- たら/たらー/だら (see ex. (218) and ex.(221)),
- つつ,
- たって/だって,
- たり/だり,
- がてら

Below are examples for つつ, たって/だって, and たり/だり.

(247) 太郎が新聞を読みつつご飯を食べている。
 ((IP-MAT (PP-SBJ (NP (NPR 太郎))
 (P-ROLE が))
 (IP-ADV-SCON (PP-OB1 (NP (N 新聞))
 (P-ROLE を))
 (VB 読み)
 (P-CONN つつ))
 (PP-OB1 (NP (N ご飯))
 (P-ROLE を))
 (VB 食べ)
 (P-CONN て)
 (VB2 いる)
 (PU 。))
 (ID 2_misc_TOPTEN))

- (248) あの人には話したって分かりません。
 ‘Even if I tell him that , he won’t understand it .’

```
( (IP-MAT (NP-SBJ *pro*)
      (IP-ADV-SCON-CND (NP-SBJ *pro*)
                        (NP-OB1 *pro*)
                        (PP-OB2 (NP (D あの)
                                   (N 人))
                               (P-ROLE に)
                               (P-OPTR は))
                        (VB 話し)
                        (P-CONN たって))
      (VB 分かり)
      (AX ませ)
      (NEG ん)
      (PU 。))
  (ID 315_textbook_djg_basic))
```

- (249) 彼女はそわそわと行ったり来たりした。

```
( (IP-MAT (PP-SBJ (NP (PRO 彼女))
                  (P-OPTR は))
      (ADVP (ADV そわそわ)
            (AX と))
      (IP-ADV-CONJ (VB 行っ)
                  (P-CONN たり))
      (VB 来)
      (P-CONN たり)
      (VB2 し)
      (AXD た)
      (PU 。))
  (ID 120_fiction_DICK-1952))
```

14.10.2 Connective/*toritate*/role particles (P-CONN, P-OPTR, P-ROLE) within complex predicates

Connective particles and *toritate* particles can appear within complex predicates involving voice or aspect forming expressions such as [VB て/で いる/ある/おく], [VB て/で あげる/やる], [VB て/で いく/くる]. In these scenarios connective particle て/で is placed directly under an IP in a flat configuration. The auxiliary verb following connective particle て/で is labelled VB2 (see section 15.4 for details).

- (250) あいつはきっとデートをしているんだ。
 ‘He must be going out on a date.’

```
( (IP-MAT (PP-SBJ (NP ;{TANAKA_654} (PRO あいつ))
                  (P-OPTR は))
      (ADVP (ADV きっと))
      (PP-OB1 (NP (N デート))
              (P-ROLE を))
      (VB し)
      (P-CONN て)
      (VB2 いる))
```

```

(FN ん)
(AX だ)
(PU 。))
(ID 655_textbook_kisonihongo))

```

The connective particle *たり/だり* in expressions like [VB *たり/だり* する] is sister to the following VB2 する in a flat configuration. The connective particle *たり/だり* frequently appears in paired expressions of the form [VB₁ *たり/だり*, VB₂ *たり/だり*する] where the first occurrence ends a non-final clause and the second occurrence is part of a complex predicate, as in the example below (see (249) for another example).

(251) うちのスタッフが殴られたり、罵倒されたりすることもあります。

```

( (IP-MAT (PP-SBJ (NP (IP-EMB (NP-LGS *pro*)
                               (PP-SBJ (NP (PP (NP (N うち))
                                                (P-ROLE の))
                                                (N スタッフ))
                                                (P-ROLE が))
                               (IP-ADV-CONJ (VB 殴ら)
                                                (PASS れ)
                                                (P-CONN たり))
                               (PU 、)
                               (VB 罵倒)
                               (VB0 さ)
                               (PASS れ)
                               (P-CONN たり)
                               (VB2 する))
                               (N こと))
                               (P-OPTR も))
    (VB あり)
    (AX ます)
    (PU 。))
  (ID 102_news_KAHOKU_37))

```

The same sort of annotation is made for *toritate* particle *など* in construction with a following する in expressions like VB *など*する. The same applies for connective particle *なり* and する in expressions like VB *なり*する.

(252) 暑い日は帽子をかぶるなどしなさい

```

( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
                  (PP-TMP (NP (IP-REL (NP-SBJ *T*)
                                       (ADJI 暑い))
                              (N 日))
                              (P-OPTR は))
                  (PP-OB1 (NP (N 帽子))
                           (P-ROLE を))
                  (VB かぶる)
                  (P-OPTR など)
                  (VB2 し)
                  (VB2 なさい)))
  (ID 28_misc_EXAMPLE2))

```

- (253) 読めない漢字は辞書を引くなり、日本人に聞くなりしなさい。
 ‘As for kanji you can’t read, find out the reading either by looking it up in a dictionary or by asking a Japanese.’

```
( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
  (PP-TPC (NP (IP-REL (NP-OB1 *T*)
    (NP-SBJ *hearer*)
    (VB 読め)
    (NEG ない))
    (N 漢字))
    (P-OPTR は))
  (PP-CONJ (IP-ADV (PP-OB1 (NP (N 辞書))
    (P-ROLE を))
    (VB 引く))
    (P-CONN なり))
  (PU 、)
  (NP-OB1 *pro*)
  (PP-OB2 (NP (N 日本人))
    (P-ROLE に))
  (VB 聞く)
  (P-CONN なり)
  (VB2 し)
  (VB2 なさい))
  (PU 。))
(ID 215_textbook_djg_intermediate))
```

In negated expressions, *toritate* particle は frequently appears with NEG.

- (254) 岩ではない、

```
( (IP-MAT (NP-SBJ *pro*)
  (NP-PRD (N 岩))
  (AX で)
  (P-OPTR は)
  (NEG ない)
  (PU 、))
(ID 59_fiction_DICK-1952))
```

Furthermore, the *toritate* particles は, も, しか, ばかり, さえ, etc. appear within complex predicates immediately following the connective particle て/で and the gerund form で of the copula だ, directly under an IP.

- (255) 女子は遊んでばかりいます。

‘The only things Tomoko is doing is playing.’

```
( (IP-MAT (PP-SBJ (NP (N 女子))
  (P-OPTR は))
  (VB 遊ん)
  (P-CONN で)
  (P-OPTR ばかり)
  (VB2 い)
  (AX ます)
  (PU 。))
(ID 14_textbook_djg_basic))
```

(256) さっきまでの絶対的な自信はややゆらいだようではあったが。

```
( (FRAG (PP (IP-ADV (PP-SBJ (NP (PP (NP (N さっき))
                                   (P-ROLE まで)
                                   (P-ROLE の))
                                   (IP-REL (NP-SBJ *T*)
                                           (ADJN 絶対的)
                                           (AX な))
                                   (N 自信))
                                   (P-OPTR は))
      (NP-PRD (IP-EMB (ADVP (ADV やや))
                     (VB ゆらい)
                     (AXD だ))
      (N よう))
      (AX で)
      (P-OPTR は)
      (VB2 あっ)
      (AXD た))
  (P-CONN が)
  (PU 。)))
(ID 297_aozora_Doyle-1905))
```

Likewise, the role particles (P-ROLE) を, に, が as well as the conjunctive particles (P-CONN) と, ば which constitute complex predicates such as [VB ざるを得ない], [VB etc. に違いない], [VB わけに (は/も) いかない], [VB がいい/よい], [VB といい], [VB といけない] [VB なければならない] are placed directly under an IP.

(257) 結果、江戸幕府は院政の存在を黙認せざるをえなくなる。

‘As a result, Edo Bakufu had no choice but to tolerate the existence of insei.’

```
( (IP-MAT (NP-ADV (N 結果))
  (PU 、)
  (PP-SBJ (NP (NPR 江戸幕府))
    (P-OPTR は))
  (IP-SMC-OB1 (PP-OB1 (NP (PP (NP (N 院政))
                                (P-ROLE の))
                                (N 存在))
                  (P-ROLE を))
    (VB 黙認)
    (VB0 セ)
    (NEG ざる)
    (P-ROLE を)
    (VB2 え)
    (NEG なく))
  (VB なる)
  (PU 。))
(ID 59_wikipedia_KYOTO_17))
```

(258) その国はたいへん美しいに違いない。

‘The country must be very beautiful.’

```
( (IP-MAT (PP-SBJ (NP (D その)
                      (N 国))
```

(P-OPTR は))
 (ADVP (ADV たいへん))
 (ADJI 美しい)
 (P-ROLE に)
 (MD 違いない)
 (PU 。))
 (ID 210_textbook_TANAKA))

(259) この機会を逃がすわけに行かないのだ。

((IP-MAT (NP-SBJ; {IZAWA} *speaker*)
 (PP-OB1 (NP (D この)
 (N 機会))
 (P-ROLE を))
 (VB 逃がす)
 (FN わけ)
 (P-ROLE に)
 (VB2 行か)
 (NEG ない)
 (FN の)
 (AX だ)
 (PU 。))
 (ID 337_aozora_Sakaguchi-1947))

(260) その身代りを呼ぶがよい。

((CP-IMP (IP-SUB (NP-SBJ *hearer*)
 (PP-OB1 (NP (D その)
 (N 身代り))
 (P-ROLE を))
 (VB 呼ぶ)
 (P-ROLE が)
 (ADJI-MD よい))
 (PU 。))
 (ID 113_aozora_Dazai-2-1940))

(261) ▼埋蔵資源があるといい。

((IP-MAT (NP-SBJ *pro*)
 (SYM ▼)
 (PP-SCON-CND (IP-ADV (PP-SBJ (NP (N 埋蔵資源))
 (P-ROLE が))
 (VB ある))
 (P-CONN と))
 (ADJI-MD いい)
 (PU 。))
 (ID 10_news_KAHOKU_8795))

(262) 明日の朝は6時に起きないといけない。
 ‘I have to get up at six tomorrow morning.’

((IP-MAT (NP-SBJ *speaker*)
 (PP-TMP (NP (PP (NP (N 明日))

(VB0 する)
 (FN の)
 (AX です)
 (PUR 』))
 (ID 259_aozora_Hayashida-2015))

14.11 Particles directly under NP

When a particle such as とか, と, やら, か, or も ends a non-clausal coordination, the coordination-ending particle is placed under the NP dominating the conjuncts:

- (265) この近くには温泉とか野球場とかがあって、とても楽しいです。
 ‘In the neighbourhood there is a hot spring, a baseball ground, etc, so it is a lot of fun.’

((IP-MAT (PP (NP; {VICINITY_884} (D この)
 (N 近く))
 (P-ROLE に)
 (P-OPTR は))
 (IP-ADV-CONJ (PP-SBJ (NP (CONJP (NP (N 温泉))
 (P-CONN とか))
 (NP (N 野球場))
 (P-CONN とか))
 (P-ROLE が))
 (VB あっ)
 (P-CONN て))
 (PU 、)
 (NP-SBJ *speaker*)
 (ADVP (ADV とても))
 (ADJI 楽しい)
 (AX です)
 (PU 。))
 (ID 884_textbook_kisonihongo))

Aside from instances of coordination, the practice of burying Ps inside an NP is also adopted when か and も are part of an NP with an indeterminate (WH) element (see section 20.1.3 for details).

- (266) 誰かが助けるだろう。
 ‘I hope somebody will help him.’

((IP-MAT (NP-OB1; {MAN_67} *pro*)
 (PP-SBJ (NP (WPRO 誰)
 (P-OPTR か))
 (P-ROLE が))
 (VB 助ける)
 (MD だろう)
 (PU 。))
 (ID 67_textbook_kisonihongo))

- (267) 誰もその問題を解けなかった。
 ‘Nobody could solve the problem.’

```
( (IP-MAT (NP-SBJ (WPRO 誰)
                  (P-OPTR も))
  (PP-OB1 (NP; {PROBLEM_737} (D その)
                                (N 問題))
          (P-ROLE を))
  (VB 解け)
  (NEG なかつ)
  (AXD た)
  (PU 。))
(ID 737_textbook_kisonihongo))
```

14.12 Particle stacking

PPs usually do not stack up. That is, a PP is normally not the complement of a P. When there is more than one particle attached to a noun, they are placed in series under the same PP.

- Two adjoining role particles (へ+と):

(268) そのカートは都市へと方向転換した。

```
( (IP-MAT (PP-SBJ (NP (D その)
                      (N カート))
                (P-OPTR は))
  (PP (NP (N 都市))
    (P-ROLE へ)
    (P-ROLE と))
  (VB 方向転換)
  (VB0 し)
  (AXD た)
  (PU 。))
(ID 714_fiction_DICK-1952))
```

- A role particle followed by a *toritate* particle (について+も):

(269) この点はどの作物についても言えることであります。

```
( (IP-MAT (PP-SBJ (NP (D この)
                      (N 点))
                (P-OPTR は))
  (NP-PRD (IP-EMB (NP-SBJ *pro*)
                (PP (NP (WD どの)
                        (N 作物))
                  (P-ROLE について)
                  (P-OPTR も))
            (VB 言える))
          (N こと))
  (AX で)
  (VB2 あり)
  (AX ます)
  (PU 。))
(ID 36_diet_kaigiroku-7))
```

- A conjunctive particle followed by a *toritate* particle (から+こそ):

(270) 脇役が良いからこそ、主役が引き立つ。

```
( (IP-MAT (PP-SCON (IP-ADV (PP-SBJ (NP (N 脇役))
                                         (P-ROLE が))
                                         (ADJI 良い))
                    (P-CONN から)
                    (P-OPTR こそ))
  (PU 、)
  (PP-SBJ (NP (N 主役))
          (P-ROLE が))
  (VB 引き立つ)
  (PU . ))
(ID 2569_dict_vv-lexicon))
```

- A complementizer particle followed by a toritate-particle (と+は):

(271) そんなに頼まれてはいやとは言えないね。

‘You beg me this much, I cannot say no.’

```
( (CP-FINAL (IP-SUB (NP-SBJ *speaker*)
                    (PP-SCON-CND (IP-ADV (NP-LGS *pro*)
                                           (ADVP (ADJN そんな)
                                                  (AX に))
                                           (VB 頼ま)
                                           (PASS れ)
                                           (P-CONN て))
                                   (P-OPTR は))
                    (CP-THT-OB1 (IP-SUB (NP-SBJ *pro*)
                                           (ADJN いや))
                                   (P-COMP と)
                                   (P-OPTR は))
                                   (VB 言え)
                                   (NEG ない))
                    (P-FINAL ね)
                    (PU 。 ))
  (ID 994_textbook_particles))
```

The sole exception to this policy is when PPs are coordinated (see sections 14.4 and 18 for details).

(272) 「……卑猥にも不潔にもなじむことがない。

```
( (IP-MAT (PUL 「)
  (PU ……))
  (PP-SBJ (NP (IP-EMB (NP-SBJ *hearer*)
                      (PP (CONJP (PP (NP (N 卑猥))
                                       (P-ROLE に))
                                   (P-CONN も))
                      (PP (NP (N 不潔))
                           (P-ROLE に))
                           (P-CONN も))
                      (VB なじむ))
          (N こと))
  (P-ROLE が))
```

```

      (ADJI ない)
      (PU 。))
(ID 553_aozora_Hisao-1939))

```

14.13 Particle omission

There are instances when for a given NP, が, を, へ, に and other particles that might be expected to appear given the grammatical role played by that NP in its context do not in fact appear. This happens particularly often when argument NPs are introduced in conversation and the headlines of newspaper articles. When such a bare NP appears at the left periphery, it frequently takes on the discourse function of a topic. When the grammatical function (subject, primary object, etc.) of a bare NP with respect to a predicate is retrievable, the annotation either specifies the function directly with an extension to the phrase tag, or by referring to a particle that would otherwise denote that function. For convenience we call these particles “omitted particles”. If the bare NP is an argument (i.e., has a core grammatical role), then there is no reference to a particle and the argument is directly labelled with its role, e.g., NP-SBJ, NP-OB1, etc. In (273) below, the noun phrase 掲示板のポスター has the core grammatical role of OB1 with respect to the predicate 見た, and so is labelled as such.

```

(273) なんか、美奈子、掲示板のポスター、見た？
( (CP-QUE (IP-SUB (ADVP (ADV なんか))
      (PU 、)
      (NP-VOC;{ADDRESSEE} (NPR 美奈子))
      (CLEAN *VOC*)
      (NP-SBJ;{ADDRESSEE} *hearer*)
      (PU 、)
      (NP-OB1 (PP (NP (N 掲示板))
                    (P-ROLE の))
              (N ポスター))
      (PU 、)
      (VB 見)
      (AXD た))
  (PU ？))
(ID 28_spoken_JF6))

```

If the bare NP is an adjunct (i.e., has a peripheral grammatical role), then a PP projection is created and a particle specifying that role is inserted as a terminal beginning and ending with ‘*’. For an instantiation of this treatment, see in (274) how the bare adjunct NP 炊き出し準備 is marked up as an NP complement to an omitted particle *で*:

```

(274) 炊き出し準備、高台避難後に自宅に戻る (宮城県七ヶ浜町)
( (IP-MAT (NP-SBJ *pro*)
      (PP (NP (N 炊き出し準備))
          (P-ROLE *で*))
      (PU 、)
      (PP (NP (N 高台避難後))
          (P-ROLE に))
      (PP (NP (N 自宅))
          (P-ROLE に))
      (VB 戻る)
      (PRN (PUL ()))

```

```

      (NP (NPR 宮城県七ヶ浜町))
      (PUR ) )))
(ID 77_news_KAHOKU_34))

```

15 Predicates

The predicate is the most important syntactic unit in a clause, with the functions of almost all other constituents being oriented thereto. Predicates in Japanese can be extended by elements that specify voice, aspect, polarity, modality, evidentiality, etc. The basic elements of the predicate are discussed below.

15.1 Verbs (VB)

When appearing with subjects, predicates formed on VB project clauses. In the example below, the verbal syntagm 覚った heads the matrix clause (IP-MAT), and the extended verbal syntagm 達したのだ heads the complement clause (IP-SUB).

(275) 芳一は大きな門口に達したのだと覚った——

```

( (IP-MAT (PP-SBJ (NP (NPR 芳一))
      (P-OPTR は))
  (CP-THT-OB1 (IP-SUB (NP-SBJ *pro*)
      (PP (NP (PNL 大きな)
        (N 門口))
      (P-ROLE に))
      (VB 達し)
      (AXD た)
      (FN の)
      (AX だ))
      (P-COMP と))
    (VB 覚っ)
    (AXD た)
    (PU —))
(ID 59_aozora_Togawa-1937-1))

```

- a verb projecting an IP-ADV:

(276) 家事一切に関わらず、のんびりと心のぜいたくをする。

```

( (IP-MAT (NP-SBJ *speaker*)
  (IP-ADV-CONJ (PP (NP (N 家事)
      (PRN (NP;* (Q 一切))))
    (P-ROLE に))
    (VB 関わら)
    (NEG ず))
  (PU 、)
  (ADVP (ADV のんびり)
    (AX と))
  (PP-OB1 (NP (PP (NP (N 心))
      (P-ROLE の))
    (N ぜいたく))
    (P-ROLE を))

```

(VB する)
 (PU 。))
 (ID 15_news_KAHOKU_10414))

- a verb selecting an IP-SMC (もらう, いただく, する and なる are among predicates which select an IP-SMC. See section 15.5 and 15.7 for details):

(277) 冷蔵庫に入れても硬くならない不思議な「バター餅」。

((IP-MAT (NP-SBJ *pro*)
 (NP-PRD (IP-REL (NP-SBJ *T*)
 (PP-SCON-CND (IP-ADV (NP-SBJ *pro*)
 (PP (NP (N 冷蔵庫))
 (P-ROLE に))
 (VB 入れ)
 (P-CONN て))
 (P-OPTR も))
 (IP-SMC-OB1 (ADJI 硬く))
 (VB なら)
 (NEG ない))
 (IP-REL (NP-SBJ *T*)
 (ADJN 不思議)
 (AX な))
 (PUL 「)
 (N バター餅)
 (PUR 」))
 (AX *)
 (PU 。))
 (ID 40_news_KAHOKU_457))

- a verb projecting an IP-REL:

(278) 邦彦はいったんやめたたばこをまた吸い出した。
 ‘Kunihiko resumed smoking, which he had quit for a time.’

((IP-MAT (PP-SBJ (NP (NPR 邦彦))
 (P-OPTR は))
 (PP-OB1 (NP (IP-REL (NP-OB1 *T*)
 (NP-SBJ *pro*)
 (ADVP (ADV いったん))
 (VB やめ)
 (AXD た))
 (N たばこ))
 (P-ROLE を))
 (ADVP (ADV また))
 (VB 吸い出し)
 (AXD た)
 (PU 。))
 (ID 148_textbook_djg_advanced))

- a verb projecting an IP-EMB:

(279) ただ餅を搗く音だけする。

```

( (IP-MAT (ADVP (ADV ただ))
  (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
    (PP-OB1 (NP (N 餅))
      (P-ROLE を))
    (VB 搗く))
    (N 音))
    (P-OPTR だけ))
    (VB する)
    (PU 。)))
  (ID 505_aozora_Natsume-1908))

```

Expressions that are treated as lexical compound verbs in the BCCWJ and CSJ corpora (e.g., かきわける, そぎとる, とりいれる, はりつける, etc.) are kept as one segment in the NPCMJ, but auxiliary verbs of various types (which are chunked in LUWs in BCCWJ and CSJ) are separated into their constituent segments in the NPCMJ and mostly labelled VB2. A traditional definition of “auxiliary verb” is a form that can appear as a core lexical verb in some contexts, but is also used in secondary verb position to express a value in a grammatical category such as deixis, aspect, polarity, etc.

15.2 Predicate extensions

Aside from afterthoughts (倒置法 —see section 23.4), the elements that can follow core predicates in a main clause, extending those predicates, are as follows:

- P-CONN (connective particle) / P-OPTR (*toritate* particle)
- VB0 (light verb)
- VB2 (secondary verb)
- AX (auxiliary verb)
- MD (modal element)
- FN (formal noun)

As mentioned in section 6, these are immediately dominated by the IP, to form a relatively flat structure. As special cases, we establish the following categories (with accompanying node labels):

- Among items normally analyzed as auxiliaries, the direct passive morpheme られ/れ is assigned the part-of-speech node label PASS (see section 24.8). When this morpheme is used to form indirect passives, it is labelled PASS2 (see section 24.11).
- Among items normally analyzed as auxiliaries or modals, forms of the negative morphemes ない, ず, etc. and the negative volition/conjecture marker まい are assigned the part-of-speech node label NEG.
- The tense marker た/だ normally labelled AXD is labelled AX in the context of noun modifying clauses where the meaning is not past but stative (see section 15.10).

15.3 Light verbs (VB0)

VB0s are the stems or inflected forms of verbs like する, いたす (致す), なさる, 申し上げる, 下さる, できる. VB0s appear after VBs that are sometimes called “verbal nouns” such as 移動, チェック, etc. They too can be followed by VB2, PASS, NEG, and the like. In addition, the preceding verbal noun (VB) can be accompanied by a *toritate* particle (P-OPTR) such as は or も.

(280) 「やあ耕助君、失敬したねえ。」

```
( (CP-FINAL (PUL 「)
      (IP-SUB (INTJ やあ)
                (NP-SBJ (NPR 耕助君))
                (PU 、)
                (VB 失敬)
                (VB0 し)
                (AXD た))
      (P-FINAL ねえ)
      (PU 。)
      (PUR 」))
(ID 669_aozora_Miyazawa-1934))
```

(281) 誰も殺害に対する責任を主張しなかった。

```
( (IP-MAT (NP-SBJ (WPRO 誰)
                  (P-OPTR も))
      (PP-OB1 (NP (PP (NP (N 殺害))
                      (P-ROLE に対する))
                (N 責任))
              (P-ROLE を))
      (VB 主張)
      (VB0 し)
      (NEG なかつ)
      (AXD た)
      (PU 。))
(ID 54_news_Voice_of_America))
```

(282) 軍隊は一般的な職業で、また軍人は名誉であり、尊敬もされる。」

```
( (IP-MAT (IP-ADV-CONJ (PP-SBJ (NP (N 軍隊))
                                (P-OPTR は))
              (NP-PRD (IP-REL (NP-SBJ *T*)
                          (ADJN 一般的)
                          (AX な))
                    (N 職業))
              (AX で))
      (PU 、)
      (CONJ また)
      (PP-SBJ (NP (N 軍人))
              (P-OPTR は))
      (IP-ADV-CONJ (ADJN 名誉)
                    (AX で)
                    (VB2 あり))
```

(PU 、)
 (NP-LGS *arb*)
 (VB 尊敬)
 (P-OPTR も)
 (VB0 さ)
 (PASS れる)
 (PU 。)
 (PUR 』))

(ID 431_fiction_DICK-1952))

VBs followed by VB0s sometimes accompany the prefix お or ご (that is, 御) to make honorific or humilific verb forms.

(283) 花子は鈴木先生に結果をご報告した。
 ‘Hanako reported to Mr. Suzuki the result.’

((IP-MAT (PP-SBJ (NP; {HANAKO_1311} (NPR 花子))
 (P-OPTR は))
 (PP-OB2 (NP; {SUZUKI_1311} (NPR 鈴木先生))
 (P-ROLE に))
 (PP-OB1 (NP (N 結果))
 (P-ROLE を))
 (VB ご報告)
 (VB0 し)
 (AXD た)
 (PU 。))

(ID 1311_textbook_kisonihongo))

In addition, VB0s can sometimes appear in an honorific form such as なさる or 下さる. Such VB0s must be distinguished from their VB2 (secondary verb) counterparts discussed below, using the following replacement test: First, remove the honorific prefix お/ご(御), if there is one, from the verbal noun (VB). Then replace the VB0 candidate with する. If this results in a grammatical string, then the candidate is actually a VB0 (e.g., 御安心なさい can be replaced with 安心する without losing grammaticality in (284)). Otherwise it is a VB2 (e.g., 置きなさい cannot be replaced with *置きする in (285)).

(284) もう大丈夫ですから、御安心なさい。

((CP-IMP (IP-SUB (NP-SBJ *hearer*)
 (PP-SCON (IP-ADV (ADVP (ADV もう))
 (ADJN 大丈夫)
 (AX です))
 (P-CONN から))
 (PU 、)
 (VB 御安心)
 (VB0 なさい))
 (PU 。))

(ID 254_aozora_Akutagawa-1921))

(285) 「鉛筆を置きなさい！」

((CP-IMP (PUL 「
 (IP-SUB (NP-SBJ; {SHAKESPEARE} *hearer*)
 (PP-OB1 (NP (N 鉛筆))
 (P-ROLE を))

```

                (VB 置き)
                (VB2 なさい))
        (PU ! )
        (PUR 」 ))
(ID 105_ted_talk_11))

```

15.4 Secondary verbs (VB2)

VB2s are non-initial verbs that follow lexical verbs or adjectives that normally can inflect. We present classes of this category in turn. VB2s that immediately follow a verb in its infinitive combining stem include the following:

- aspectual verbs 始める, 出す, かける, 続ける, 終える, 終る, 止む, あげる;
- potential verbs 兼る, 得る, 抜く, 損う, おおす;
- degree verbs 過ぎる, 尽す, 果てる, 切る, 足りる;
- direction verbs 込む, 回る, 去る;
- various other verbs 忘れる, 間違える, 直す, 合う, 慣れる; etc.

(286) やがて光は消え始めた。

```

( (IP-MAT (ADVP (ADV やがて))
  (PP-SBJ (NP (N 光))
    (P-OPTR は))
    (VB 消え)
    (VB2 始め)
    (AXD た)
    (PU 。))
(ID 513_fiction_DICK-1952))

```

Secondary verbs immediately following the て-form of verbs (i.e., (VB ...)(P-CONN て) or (VB ...)(P-CONN で)) include the following items.

- いる, ある, おく, しまう, みる, みせる, あげる, くれる, やる, くださる, いく, くる, いらっしゃる, まいる, お出で, ご覧, 頂戴, etc.

(287) 今、調べています。
'I am checking it now.'

```

( (IP-MAT (NP-SBJ; {MAN_478} *pro*)
  (NP-OB1; {MATTER_478} *pro*)
  (NP-TMP (N 今))
  (PU 、)
  (VB 調べ)
  (P-CONN て)
  (VB2 い)
  (AX ます)
  (PU 。))
(ID 478_textbook_kisonihongo))

```

(288) 震災は人々の記憶から薄れ始めているのか。

((CP-QUE (IP-SUB (PP-SBJ (NP (N 震災))
(P-OPTR は))
(PP (NP (PP (NP (N 人々))
(P-ROLE の))
(N 記憶))
(P-ROLE から))
(VB 薄れ)
(VB2 始め)
(P-CONN て)
(VB2 いる)
(FN の))
(P-FINAL か)
(PU 。))

(ID 6_news_KAHOKU_39))

Various verbs following イ-adjectives and ナ-adjectives are also analyzed as VB2:

- すぎる：多すぎる，元気すぎる
- ござる・存じる：ありがとうございます，ありがとう存じます

(289) 逆に階段の段差は小学生には高すぎる。

((IP-MAT (ADVP (ADJN 逆)
(AX に))
(PP-SBJ (NP (PP (NP (N 階段))
(P-ROLE の))
(N 段差))
(P-OPTR は))
(PP (NP (N 小学生))
(P-ROLE に)
(P-OPTR は))
(ADJI 高)
(VB2 すぎる)
(PU 。))

(ID 83_news_KAHOKU_37))

Verb ある following non-finite forms of the copula だ and following the infinitive form of イ-adjectives is also treated as VB2.

(290) 彼はいと高き神の祭司である。

((IP-MAT (PP-SBJ (NP; {MELCHIZEDEK} (PRO 彼))
(P-OPTR は))
(NP-PRD (PP (NP (PNLP (ADVP (ADV いと))
(ADJI 高き))
(N 神))
(P-ROLE の))
(N 祭司))
(AX で)
(VB2 ある)
(PU 。))

(ID 368_bible_ot))

(291) この本はあまりよくありません。

‘This book is not very good.’

((IP-MAT (PP-SBJ (NP (D この)
 (N 本))
 (P-OPTR は))
 (ADVP (ADV あまり))
 (ADJI よく)
 (VB2 あり)
 (AX ませ)
 (NEG ん)
 (PU 。))
 (ID 6_textbook_djg_basic))

Verbs in complex expressions with deontic modal flavour are treated as VB2.

- なら：なければならない，なくてはならない，てはならない
- いけ：なければいけない，くてはいけない，てはいけない

(292) それらは雄と雌とでなければならない。

((IP-MAT (PP-SBJ (NP;{PAIR} (PRO それら))
 (P-OPTR は))
 (NP-PRD (CONJP (NP (N 雄))
 (P-CONN と))
 (NP (N 雌))
 (P-CONN と))
 (AX で)
 (NEG なけれ)
 (P-CONN ば)
 (VB2 なら)
 (NEG ない)
 (PU 。))
 (ID 186_bible_ot))

(293) 「もちろん他の像を立てなくてはならない」と市長は言いました。

((IP-MAT (CP-THT-OB1 (IP-SUB (PUL 「)
 (NP-SBJ *speaker+pro*)
 (ADVP (ADV もちろん))
 (PP-OB1 (NP (PP (NP (N 他))
 (P-ROLE の))
 (N 像))
 (P-ROLE を))
 (VB 立て)
 (NEG なくて)
 (P-OPTR は)
 (VB2 なら)
 (NEG ない)
 (PUR 」))
 (P-COMP と))
 (PP-SBJ (NP (N 市長))
 (P-OPTR は))
 (VB 言い)
 (AX まし)
 (AXD た))

(PU 。))
 (ID 318_aozora_Yuki-1-2000))

- (294) 学校では携帯を使ってはいけない。
 ‘You may not use a cell phone at school.’

((IP-MAT (NP-SBJ *hearer*)
 (PP (NP (N 学校))
 (P-ROLE で)
 (P-OPTR は))
 (PP-OB1 (NP (N 携帯))
 (P-ROLE を))
 (VB 使っ)
 (P-CONN て)
 (P-OPTR は)
 (VB2 いけ)
 (NEG ない)
 (PU 。))
 (ID 610_textbook_purple_basic))

Below are cases where the verb する is treated as VB2.

- after the conjunctive particle たり/だり which follows predicates in the infinitive form.

- (295) 「それは鉄とまぜたり、薬をつくったりするのだそうです。」

((IP-MAT (PUL 「
 (NP-SBJ *pro*)
 (PP-TPC (NP (PRO それ))
 (P-OPTR は))
 (IP-ADV-CONJ (NP-OB1 *pro*)
 (PP (NP (N 鉄))
 (P-ROLE と))
 (VB まぜ)
 (P-CONN たり))
 (PU 、)
 (PP-OB1 (NP (N 薬))
 (P-ROLE を))
 (VB つくっ)
 (P-CONN たり)
 (VB2 する)
 (FN の)
 (AX だ)
 (MD そう)
 (AX です)
 (PU 。)
 (PUR 」))
 (ID 192_aozora_Miyazawa-1934))

- after the *toritate* particles など, とか which follow a VB (See also (252) for an example).

- (296) 国が所有者から土地を一時的に借り上げるなどし、復興を加速させるべきだった」

((IP-MAT (PP-SBJ (NP (N 国))
(P-ROLE が))
(IP-ADV-CONJ (PP-OB2 (NP (N 所有者))
(P-ROLE から))
(PP-OB1 (NP (N 土地))
(P-ROLE を))
(ADVP (ADJN 一時的)
(AX に))
(VB 借り上げる)
(P-OPTR など)
(VB2 し))
(PU 、)
(PP-CZZ (NP (N 復興))
(P-ROLE を))
(VB 加速)
(VB0 さ)
(VB2 せる)
(MD べき)
(AX だっ)
(AXD た)
(PUR じ))
(ID 105_news_KAHOKU_51))

- after the conjunctive particle なり which follows a VB (See (253) for an example).
- in the construction [すれ + the conjunctive particle ば + する + ほど/だけ].

(297) 早くすればするだけ有利だ。
‘The faster you do it, the more advantageous it is.’

((IP-MAT (NP-SBJ *speaker*)
(PP-SCON (IP-ADV (ADVP (ADJI 早く))
(VB すれ)
(P-CONN ば)
(VB2 する))
(P-OPTR だけ))
(ADJN 有利)
(AX だ)
(PU 。))
(ID 58_textbook_particles))

- after the *toritate* particles は, も, さえ, や, でも which follow a VB in the infinitive form.

(298) あの男には説明しても分かりはしない。
‘That guy would not understand even if you explained it to him.’

((IP-MAT (NP-OB1 *pro*)
(PP-SBJ (NP (D あの)
(N 男))
(P-ROLE に)
(P-OPTR は))
(PP-SCON-CND (IP-ADV (NP-SBJ *pro*))

(NP-OB1 *pro*)
 (VB 説明)
 (VB0 し)
 (P-CONN て))
 (P-OPTR も))
 (VB 分かり)
 (P-OPTR は)
 (VB2 し)
 (NEG ない)
 (PU 。))
 (ID 493_textbook_djg_intermediate))

- し in the constructions [なく + し + て], [ず + し + て] which appears at the end of an adverbial clause (IP-ADV).

(299) 努力なくしてはこの事業はできない。
 ‘Without effort we won’t be able to finish this undertaking.’

((IP-MAT (NP-SBJ *arb*)
 (PP-SCON-CND (IP-ADV (NP-SBJ (N 努力))
 (ADJI なく)
 (VB2 し)
 (P-CONN て))
 (P-OPTR は))
 (PP-OB1 (NP (D この)
 (N 事業))
 (P-OPTR は))
 (VB でき)
 (NEG ない)
 (PU 。))
 (ID 271_textbook_djg_advanced))

(300) インカ帝国を知らずして南米大陸を語ることにはできない。
 ‘You cannot talk about the South American continent without some knowledge of the Inca Empire.’

((IP-MAT (NP-SBJ *arb*)
 (PP-OB1 (NP (IP-EMB (IP-ADV-SCON-CND (PP-OB1 (NP (NPR インカ帝国))
 (P-ROLE を))
 (VB 知ら)
 (NEG ず)
 (VB2 し)
 (P-CONN て))
 (PP-OB1 (NP (N 南米大陸))
 (P-ROLE を))
 (VB 語る))
 (N こと))
 (P-OPTR は))
 (VB でき)
 (NEG ない)
 (PU 。))
 (ID 648_textbook_djg_advanced))

なる appears as VB2 in an honorific verbal syntagm, when it appears with a honorific form of verb prefixed by お or ご (御) and followed by the particle に.

(301) 鈴木先生は本をお書きになった。

‘Mr. Suzuki wrote a book.’

```
( (IP-MAT (PP-SBJ (NP; {SUZUKI_1295} (NPR 鈴木先生))
      (P-OPTR は))
  (PP-OB1 (NP (N 本))
    (P-ROLE を))
  (VB お書き)
  (AX に)
  (VB2 なっ)
  (AXD た)
  (PU 。))
(ID 1295_textbook_kisonihongo))
```

15.5 Special cases for verbs する and なる

When verbs する (or analogous forms いたす, なさる, etc.) and なる follow either a く-form イ-adjective, or [ナ-adjective/nominal predicate + に], frequently a small clause is projected by the predicate preceding する or なる making する or なる the first verb in a verbal syntagm, hence VB. There are three conditions that a small clause must satisfy in this context: (i) the head of the small clause must denote a property, not an event; (ii) OB1 of する or the SBJ of なる must be interpretable as the subject of the head of the small clause; (iii) OB1 of する or the SBJ of なる must precede the small clause, unless the small clause is marked with a *toritate* particle. If these conditions are satisfied, then a small clause analysis is adopted.

IP-SMCs preceding する in the above-mentioned type of construction are given an extension tag CNT (continuative). To instantiate, in the examples below, the realisation of the actions denoted by 細帯を長くして and 息子を言語学者にし entails that 長い is predicated of 細帯 and that 息子 is predicated of 言語学者, respectively. Accordingly, イ-adjective 長く and [言語学者 + に] project a small clause IP-SMC-CNT here.

(302) そうして細帯を長くして、子供を縛っておいて、その片端を拝殿の欄干に括りつける。

```
( (IP-MAT (NP-SBJ *pro*)
      (CONJ そうして)
      (IP-ADV-CONJ (IP-ADV-CONJ (PP-OB1 (NP (N 細帯))
        (P-ROLE を))
      (IP-SMC-CNT (ADJI 長く))
      (VB し)
      (P-CONN て))
      (PU 、)
      (PP-OB1 (NP (N 子供))
        (P-ROLE を))
      (VB 縛っ)
      (P-CONN て)
      (VB2 おい)
      (P-CONN て))
      (PU 、)
      (PP-OB1 (NP (D その)
```

(N 片端))
 (P-ROLE を))
 (PP (NP (PP (NP (N 拝殿))
 (P-ROLE の))
 (N 欄干))
 (P-ROLE に))
 (VB 括りつける)
 (PU 。))
 (ID 566_aozora_Natsume-1908))

- (303) 息子を言語学者にしたいなんて。
 ‘You want your son to be a linguist!’

((CP-EXL (FRAG (CP-THT (IP-SUB (NP-SBJ; {MAN_349} *pro*)
 (PP-OB1 (NP (N 息子))
 (P-ROLE を))
 (IP-SMC-CNT (NP-PRD (N 言語学者))
 (AX に))
 (VB し)
 (AX たい))
 (P-OPTR なんて)))
 (PU 。))
 (ID 349_textbook_kisonihongo))

Note that this analysis is not applied to another construction involving する preceded by an adjective: When する has no primary object (OB1) and its subject is interpretable as the subject of the adjective, then the adjective projects an IP-SMC-OB1.

- (304) 花子はその時おとなしくしていたらしい。
 ‘It seems Hanako remained quiet at that time.’

((IP-MAT (PP-SBJ (NP; {HANAKO_356} (NPR 花子))
 (P-OPTR は))
 (NP-TMP (D その)
 (N 時))
 (IP-SMC-OB1 (ADJI おとなしく))
 (VB し)
 (P-CONN て)
 (VB2 い)
 (AXD た)
 (MD らしい)
 (PU 。))
 (ID 356_textbook_kisonihongo))

IP-SMCs preceding なる are given an extension tag OB1. In the examples below, the realisation of the events denoted by 路はだんだん暗くなる and 花子はきれいになった entails that 暗い is predicated of 路, and that 花子 is predicated of きれい, respectively, so 暗く and [きれい+に] projects a small clause IP-SMC-OB1.

- (305) 路はだんだん暗くなる。

((IP-MAT (PP-SBJ (NP (N 路))
 (P-OPTR は))
 (ADVP (ADV だんだん))

```

      (IP-SMC-OB1 (ADJI 暗く))
      (VB なる)
      (PU 。))
(ID 209_aozora_Natsume-1908))

```

(306) 花子はきれいになった

```

( (IP-MAT (PP-SBJ (NP (NPR 花子))
      (P-OPTR は))
  (IP-SMC-OB1 (ADJN きれい)
      (AX に))
  (VB なっ)
  (AXD た))
(ID 25_misc_EXAMPLE2))

```

Occasionally an NP-SBJ2 needs to be interpolated as a controller for the small clause in these constructions:

(307) 気が変になりそうなんです。

```

( (IP-MAT (NP-SBJ;{MCFARLANE} *speaker*)
      (PP-SBJ2 (NP (PP (NP;{MCFARLANE} *pro*)
      (P-ROLE *の*))
      (N 気))
      (P-ROLE が))
      (IP-SMC-OB1 (ADJN 変)
      (AX に))
      (VB なり)
      (AX そう)
      (AX な)
      (FN ん)
      (AX です)
      (PU 。))
(ID 40_aozora_Doyle-1905))

```

When an イ-adjective or a ナ-adjective preceding なる requires two arguments, the second argument, namely the primary object (OB1) must be included in the IP-SMC-OB1 projected by the adjective.

(308) おかあさんが恋しくなったわけではない、

```

( (IP-MAT (NP-SBJ;{HARU} *speaker*)
      (IP-SMC-OB1 (PP-OB1 (NP;{OKASAN} (N おかあさん))
      (P-ROLE が))
      (ADJI 恋しく))
      (VB なっ)
      (AXD た)
      (FN わけ)
      (AX で)
      (P-OPTR は)
      (NEG ない)
      (PU 、))
(ID 7_book_excerpt-22))

```

(309) 私はまたあの花火というやつが好きになった。


```

( (IP-MAT (PP-SBJ (NP (PRO 私))
                    (P-OPTR は))
  (CONJ また)
  (IP-SMC-OB1 (PP-OB1 (NP (D あの)
                        (PP (NP (N 花火))
                          (P-ROLE という))
                        (N やつ))
              (P-ROLE が))
            (ADJN 好き)
            (AX に))
  (VB なっ)
  (AXD た)
  (PU 。))
(ID 28_aozora_Kajii-1925))

```

This small-clause analysis is contrasted with constructions such as those in the examples below, where the subject-predicate relation doesn't hold (though the matrix subject can control a position further down in the structure) and the condition on property ascription isn't met.

(310) 新しい機種も気になるし。

```

( (FRAG (PP (IP-ADV (NP-SBJ *pro*)
                  (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
                                (ADJI 新しい))
                              (N 機種))
                            (P-OPTR も))
                (PP-CMPL (NP (N 気))
                          (P-ROLE に))
                (VB なる))
      (P-CONN し)
      (PU 。)))
(ID 80_misc_KNB))

```

(311) 今後の医療運営は被災地の人口流出にも向き合うことになる。

```

( (IP-MAT (PP-SBJ (NP (PP (NP (N 今後))
                        (P-ROLE の))
                      (N 医療運営))
            (P-OPTR は))
  (PP (NP (IP-EMB (PP (NP (PP (NP (N 被災地))
                              (P-ROLE の))
                            (N 人口流出))
                        (P-ROLE に)
                      (P-OPTR も))
      (VB 向き合う))
    (N こと))
  (P-ROLE に))
  (VB なる)
  (PU 。))
(ID 25_news_KAHOKU_93))

```

15.6 イ-adjectives (ADJI)

ADJIs (also called イ-adjectives) such as 大きい and うつくしい have a unique conjugation paradigm which, for instance, lacks the imperative inflection. ADJIs have some limitations

on co-occurrence with modifiers and predicate extensions, and in certain contexts they exhibit special focus interactions with particles. But with regard to projection, they behave as other predicates. When appearing with subjects, outside of a noun phrase, they can project a main clause, IP-SUB under CP, IP-ADV, or IP-SMC, with basically the same constraints on grammatical function and grammatical marking as verbs and other predicates.

- in a main clause:

(312) 新市を軌道に乗せる意欲は強い。

```
( (IP-MAT (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
                               (PP-OB1 (NP (N 新市))
                                             (P-ROLE を))
                               (PP (NP (N 軌道))
                                     (P-ROLE に))
                               (VB 乗せる))
                        (N 意欲))
    (P-OPTR は))
  (ADJI 強い)
  (PU 。))
(ID 160_news_KAHOKU_28))
```

- in an IP-SUB under CP:

(313) そんなこともないですか？

```
( (CP-QUE (IP-SUB (PP-SBJ (NP (D そんな)
                               (N こと))
                             (P-OPTR も))
      (ADJI ない)
      (AX です))
  (P-FINAL か)
  (PU ?))
(ID 21_news_KAHOKU_10414))
```

- in a subordinated IP-ADV:

(314) 人間で言えば80歳近いのに、まだやんちゃですよ」

```
( (CP-FINAL (IP-SUB (NP-SBJ *pro*)
                    (PP-SCON (IP-ADV (IP-ADV-SCON-CND (NP-SBJ *speaker*)
                                                         (NP-OB1 *pro*)
                                                         (PP (NP (N 人間))
                                                               (P-ROLE で))
                                                         (VB 言え)
                                                         (P-CONN ば))
                                                         (PP (NP (NUMCLP (NUM 80)
                                                                (CL 歳)))
                                                               (P-ROLE *に*))
                                                         (ADJI 近い))
                                                         (P-CONN のに))
                                                         (PU 、)
                                                         (ADVP (ADV まだ))
```

(ADJN やんちゃ)
 (AX です))
 (P-FINAL よ)
 (PUR 』))
 (ID 8_news_KAHOKU_13153))

- in a coordinated IP-ADV:

(315) 家族愛の深さは尊いが、互いを心配するあまり、津波避難が遅れる場合もある。

((IP-MAT (PP-CONJ (IP-ADV (PP-SBJ (NP (PP (NP (N 家族愛))
 (P-ROLE の))
 (N 深さ))
 (P-OPTR は))
 (ADJI 尊い))
 (P-CONN が))
 (PU 、)
 (NP-ADV (IP-EMB (NP-SBJ *pro*)
 (PP-OB1 (NP (PRO 互い))
 (P-ROLE を))
 (VB 心配)
 (VB0 する))
 (N あまり))
 (PU 、)
 (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (N 津波避難))
 (P-ROLE が))
 (VB 遅れる))
 (N 場合))
 (P-OPTR も))
 (VB ある)
 (PU 。))
 (ID 45_news_KAHOKU_63))

(316) このいちごは甘くておいしいです。

((IP-MAT (PP-SBJ (NP (D; {STRAWBERRY_27} この)
 (N いちご))
 (P-OPTR は))
 (IP-ADV-CONJ (ADJI 甘く)
 (P-CONN て))
 (ADJI おいしい)
 (AX です)
 (PU 。))
 (ID 27_misc_BUFFALO))

- in an IP-SMC (See also examples (302) and (305)):

(317) 阪神大震災でも心の問題は3年目に多くなった。

((IP-MAT (PP (NP (NPR 阪神大震災))
 (P-ROLE で)
 (P-OPTR も))
 (PP-SBJ (NP (PP (NP (N 心))

```

(P-ROLE の))
(N 問題))
(P-OPTR は))
(P (NP (NUMCLP (NUM 3)
(CL 年目)))
(P-ROLE に))
(IP-SMC-OB1 (ADJI 多く))
(VB なっ)
(AXD た)
(PU 。))
(ID 25_news_KAHOKU_616))

```

When an イ-adjective appears with a subject (overt or null) and modifies a noun, it projects a relative clause (IP-REL) or a content/specificational clause (IP-EMB).

- in an IP-REL:

(318) ジョンは赤い車を持っている。
 ‘John owns a red car.’

```

( (IP-MAT (PP-SBJ (NP (NPR ジョン))
(P-OPTR は))
(PP-OB1 (NP (IP-REL (NP-SBJ *T*)
(ADJI 赤い))
(N 車))
(P-ROLE を))
(VB 持つ)
(P-CONN て)
(VB2 いる)
(PU 。))
(ID 1191_misc_JSeM_beta_150530))

```

- in an IP-EMB:

(319) おそらくすでに春が近いしるしだろう

```

( (IP-MAT (NP-SBJ *pro*)
(ADVP (ADV おそらく))
(NP-PRD (IP-EMB (ADVP (ADV すでに))
(PP-SBJ (NP (N 春))
(P-ROLE が))
(ADJI 近い))
(N しるし))
(AX *)
(MD だろう))
(ID 919_aozora_Harada-1960))

```

There are many イ-adjectives having specific senses that require a second argument. A partial list of 2-place イ-adjectives, together with the particle(s) that typically mark(s) the non-subject argument:

いっぱい(で), 睦まじい(と), 親しい(と), ふさわしい(に, と), につかわしい(に, と),
 ひとしい(に, と), 紛らわしい(に, と), 欲しい(が), 遠い(から), 近い(に), ない(に), 多
 い(に), 少ない(に), 乏しい(に), 厚い(に), 優しい(に), 冷たい(に), 甘い(に), よそよそ

しい(に), 厳しい(に), うるさい(に), くちやかましい(に), 恥ずかしい(に), 悪い(に), 弱い(に), 強い(に), 詳しい(に), 明るい(に), 暗い(に), 疎い(に, から), 鋭い(に), 鈍い(に), 忙しい(に, で)

Note how the *イ*-adjective 欲しい etc., takes two argument NPs, both of which can be marked with が. The second one is assigned the role OB1. A careful distinction must be made between this kind of sentences and the double subject sentences. If either of the が-marked NPs, to the exclusion of the other, can combine with the predicate to build up an appropriate sentential meaning with a context, they are either the subject or primary object of the same predicate. For example, suppose that a sentence 私がチョコレートが欲しい is given, both of the sentences below are semantically well-formed and can stand alone with a context.

1. 私が欲しい (I want (it).)
2. チョコレートが欲しい ((I) want chocolate.)

In this case, 私が is the subject and チョコレートが is the primary object of the sentence.

By contrast, given a sentence 象が鼻が長い (The elephant-SBJ the nose-SBJ2 is long), since in the sequence 象が長い the NP 象が cannot be interpreted as the subject of the *イ*-adjective 長い while preserving the meaning of the the original sentence (because it is not the elephant that is long), the whole is a double-subject sentence with 象が as SBJ; the second subject 鼻が is assigned the role SBJ2.

15.7 Special cases (ADJI)

The auxiliary *イ*-adjective ほしい takes an IP-SMC-OB1 complement with a controllee position that regularly has a non-subject controller. The IP-SMC is a (VB ...) (P-CONN て) or (VB0 ...) (P-CONN て) sequence.

- (320) 私に何をしてほしいの？
 ‘What do you want me to do?’

```
( (CP-QUE (IP-SUB (NP-SBJ *hearer*)
  (PP-DOB1 (NP (PRO 私))
    (P-ROLE に))
  (IP-SMC-OB1 (PP-OB1 (NP (WPRO 何))
    (P-ROLE を))
    (VB し)
    (P-CONN て))
  (ADJI ほしい)
  (FN の))
  (PU ?))
(ID 329_textbook_purple_intermediate))
```

15.8 Past tense (AXD)

The past tense and perfective aspect usages of た and だ are assigned to the category AXD. These follow the infinitive form of verbs. They are themselves finite inflections. The label AXD is also used for き/し, たり and り which are past tense and perfect aspect markers in Classical Japanese.

- (321) 本当に喜べる日はもう少し先となった。

```

( (IP-MAT (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
                                (ADVP (ADJN 本当)
                                         (AX に))
                                (VB 喜べる))
                        (N 日))
  (P-OPTR は))
  (IP-SMC-OB1 (ADVP (ADVP (ADV もう))
                    (ADV 少し))
              (NP-PRD (N 先))
              (AX と))
  (VB なっ)
  (AXD た)
  (PU 。))
(ID 9_news_KAHOKU_117))

```

- た/だ is labelled AX in the context of noun modifying clauses where the meaning is not past but stative (see section 15.10).

15.9 Auxiliary verbs (AX)

AX is used as a label for the following elements (see section 15.12 for more details on the last case).

- Derivational suffixes with the same inflection pattern as イ-adjectives: がたい, たい, やすい, らしい
- Derivational suffixes with the same inflection pattern as ナ-adjectives: がち, そう, っぱなし
- Derivational suffixes with the same inflection pattern as verbs: がる, ちまう, ます, まする, やがる, ごたる
- The auxiliary of comparison and illustration: ごとし (ごとく/ごとき)
- The auxiliary of volition and presumption which immediately follows predicates in the volitional form: う/よう
- Non-temporal/aspectual uses of た/だ
- Copulas: だ (で/な/の/に), です (でし/でしよ), じゃ・じゃあ, たる (たら/たり), なる (なら/なり), や (やつ/やん), だんし, でっしゃ

There are イ-adjectives that are formed with a verbal element but that end in the adjectival form づらい (e.g., しづらい, 分かりづらい, 見えづらい, etc.). These are treated as single words with the category ADJL.

15.10 Special cases for the auxiliary た/だ

Some verbal heads of IP-REL take an auxiliary た/だ, but ascribe a stative property to the modified N rather than (or aside from) participation in a past event. This only obtains in noun-modifying contexts, basically in property ascriptions. This use of た/だ is characterized by its replaceability with ている/でいる in non-adnominal contexts without affecting the original meaning. In such scenarios, た/だ is labelled not AXD, but AX.

- 折れ曲がった道 → 道が折れ曲がっている (≠ 道が折れ曲がった)

The following is the list of examples with た as AX.

安定した, 生きた, 落ち着いた, 思いあがった, 思い切った, 思い詰めた, 折れ曲がった, 限られた, 固めた, 勝ち誇った, 兼ねた, かぶった, 加味した, 冠った, 刈り込んだ, かわいた, 組み合わせた, 悟り切った, 覚ました, 従った, しぼった, 緊めた, 湿った, しゃれた, すぐれた, 背負った, 洗練された, 想定した, 相当した, そろった, 対応した, 体感した, たたえた, 立て切った, 立てた, 付いた, 使い古した, 使った, 突き上げた, 包まれた, 詰まった, 積もった, 吊るした, 説いた, ねじれた, 載せた, ばかげた, 離れた, はめた, 控えた, 含めた, 伏せた, 肥った, 古びた, 平然とした, 向いあった, 面した, 用いた, 持った, 盛り込んだ, やせ衰えた, 緩めた, 汚れた, 連携した

15.11 Modal elements (MD, ADJI-MD, ADJN-MD)

MD, ADJI-MD and ADJN-MD are special phrase categories directly dominating words that contribute to the specification of modality for a sentence (In the following, MD is meant to stand for any of the three categories). The practice of separating out these words from others under an MD node accomplishes several things:

1. it serves to identify at least some of the expressions that specify modality. — note that there are many other unidentified cases where modality is affected by elements in the corpus —
2. it obviates the need to generate dependency relationships where articulating the full argument structure is problematic (e.g., modal expressions which originate in complement-taking nouns or consist of particles and verbs but whose original meanings are hard to decipher),
3. it allows retrieval of morphological and semantic information crucial to a compositional account of some modal relations (e.g., negation).

Most items of the category MD attach to finite inflections of predicates. Common items are:

- かもしれない, そう (hearsay), だろう, ちがいない, べし, みたい, よう (conjecture), らしい

Some examples which deserve a mention are introduced below:

- The MD items かもしれない and かもしれません are parts of complex grammaticalizations, including the sentence final particles of an indirect question か with a negated potential verb form selecting that question しれ.

(322) 彼は飲み物を勧めるかもしれません。

‘He might offer you a drink.’

((IP-MAT (PP-SBJ (NP (PRO 彼))
(P-OPTR は))
(PP-OB1 (NP (N 飲み物))
(P-ROLE を))
(VB 勧める)
(MD かもしれません)
(PU 。))
(ID 359_textbook_djg_intermediate))

- The item そう following finite predicates has the evidential meaning of hearsay. It is obligatorily followed by a copula. For another use of そう as AX, which follows the *i*-stem of consonant base verbs, the *i*-/*e*- combining stems of vowel base verbs, the stems of *イ*-adjectives, and bare ADJNs, see section 15.9 .

(323) 大昔、火星に水があったそうだ。

‘They say that a long time ago, there was water on Mars.’

```
( (IP-MAT (NP-TMP (N 大昔))
  (PU 、)
  (PP (NP (N 火星))
    (P-ROLE に))
  (PP-SBJ (NP (N 水))
    (P-ROLE が))
  (VB あっ)
  (AXD た)
  (MD そう)
  (AX だ)
  (PU 。))
(ID 600_textbook_particles))
```

- The MDs dominating だろう, であろう, and でしょう are derived from copulas and add a presumptive modal meaning to predication.

(324) 先生でもわからないでしょう。

‘Even the teacher probably won’t be able to understand it.’

```
( (IP-MAT (PP-SBJ (NP (N 先生))
  (P-OPTR でも))
  (VB わから)
  (NEG ない)
  (MD でしょう)
  (PU 。))
(ID 132_textbook_particles))
```

- The MDs dominating 違い and ない and their variants are parts of a more complex construction denoting certainty.

(258) その国はたいへん美しいに違いない。

‘The country must be very beautiful.’

```
( (IP-MAT (PP-SBJ (NP (D その)
  (N 国))
  (P-OPTR は))
  (ADVP (ADV たいへん))
  (ADJI 美しい)
  (P-ROLE に)
  (MD 違いない)
  (PU 。))
(ID 210_textbook_TANAKA))
```

- For よう after a finite inflection, see section 25.3 for details; Another use of よう after predicates in the volitional form is labelled as AX.

As was hinted above, there are also expressions which have something to do with modality (and which are sometimes regarded as comprising units on their own) that are nevertheless not labelled with MD. *なければならない* and *はず* are representative among them: in NPCMJ, the former retains the original conditional structure and is characterized by VB2 dominating *なら*; the latter is tagged as FN. See section 15.4 and section 15.20 respectively for details.

ADJI-MD is a category which dominates an *イ*-adjective involved in two types of modal constructions: one involves the adjective *良い* and is used for expressing permission or desirability (e.g., *ても良い*, *たら良い*, *ば良い*, *と良い*) and the other is used for expressing unnecessary (e.g., *までもない*). By retaining their compositional structure, the corpus captures the variability of elements participating in the constructions.

(326) 窓を開けてもいい？

‘Can I open the window ?’

```
( (CP-QUE (IP-SUB (NP-SBJ *speaker*)
                  (PP-OB1 (NP (N 窓))
                          (P-ROLE を))
                  (VB 開け)
                  (P-CONN て)
                  (P-OPTR も)
                  (ADJI-MD いい))
  (PU ?))
(ID 594_textbook_purple_basic))
```

(327) どうしたらいいですか。

‘What should I do ?’

```
( (CP-QUE (IP-SUB (NP-SBJ *speaker*)
                  (ADVP-CMPL (WADV どう))
                  (VB し)
                  (P-CONN たら)
                  (ADJI-MD いい)
                  (AX です))
  (P-FINAL か)
  (PU 。))
(ID 556_textbook_purple_basic))
```

(328) 歴史は歴史家に任せて、小説家は小説を書けばよいのだ。

```
( (IP-MAT (IP-ADV-CONJ (NP-SBJ *pro*)
                      (PP-OB1 (NP (N 歴史))
                              (P-OPTR は))
                      (PP (NP (N 歴史家))
                          (P-ROLE に))
                      (VB 任せ)
                      (P-CONN て))
  (PU 、)
  (PP-SBJ (NP (N 小説家))
          (P-OPTR は))
  (PP-OB1 (NP (N 小説))
          (P-ROLE を))
  (VB 書け)
  (P-CONN ば))
```



```

      (AX で)
      (VB2 ござい)
      (AX ます)
      (PU 。))
(ID 17_diet_kaigiroku-8))

(332) ここで止めては駄目だ
( (IP-MAT (NP-SBJ *pro*)
  (PP (NP (PRO ここ))
    (P-ROLE で))
  (VB 止め)
  (P-CONN て)
  (P-OPTR は)
  (ADJN-MD 駄目)
  (AX だ))
(ID 127_dict_pth_r))

```

15.12 Copular expressions

Most copular expressions are formed by the combination [ナ-adjective/nominal expression + copula]. However, the copula can combine with PPs and ADVPs as well. Before going into detail about these types of expression, it is useful to consider the function of the copula, and to look at the forms and distribution of the copula. As also noted in the section 15.15, the copula functions semantically to associate a subject noun phrase with another noun in one of three basic ways:

- (i) identity (e.g., 遊び人の金さんは奉行の遠山景元だ)
- (ii) property ascription (e.g., 油揚げは狐色だ)
- (iii) specification (e.g., 勝つのは俺だ)

15.12.1 Copulas and copula drop

In this section the forms and distribution of the copula are described. *だ* and the various simple forms analogous to *だ* take the role of copula and are tagged AX. The analytic form *である* also functions like a copula. This form is analysed into

```

( ... (AX で)
      (VB2 ある))

```

The negated copula also is analyzed, and typically a *toritate* particle intervenes between components:

```

( ... (AX で)
      (P-OPTR は)
      (NEG ない))

```

In addition to attaching to nominal expressions (NP-PRDs) and ナ-adjectives (ADJNs), *だ* and its analogous forms also attach to a clausal constituent (FN の) and some MDs (*みたい*, *べき*, *そう*).

An affirmative non-past non-volitional simple copula *だ* cannot appear immediately before some MDs (e.g., *らしい*, *みたい*, *かもしれない*, *にちがいありません*, etc.) and the particle *なら*, whereas the complex form *である* can occur in this position. In the former case, a null copula (AX *) is inserted before the modal or the particle.

(333) 札は十円札らしい。

```
( (IP-MAT (PP-SBJ (NP (N 札))
                      (P-OPTR は))
  (NP-PRD (NUMCLP (NUM 十)
                  (CL 円))
          (N 札))
  (AX *)
  (MD らしい)
  (PU 。))
(ID 509_aozora_Natsume-1908))
```

Volitional/presumptive copulas are analyzed as consisting of a null copula (AX *) immediately followed by a modal (だろう, でしょう, であろう).

(334) これはあなたがたにとって、小さいことであろうか。

```
( (CP-QUE (IP-SUB (PP-SBJ (NP (PRO これ))
                              (P-OPTR は))
              (PP (NP (PRO あなたがた))
                  (P-ROLE にとって))
              (PU 、)
              (NP-PRD (IP-REL (NP-SBJ *T*)
                              (ADJI 小さい))
                      (N こと))
              (AX *)
              (MD であろう))
  (P-FINAL か)
  (PU 。))
(ID 551_bible_ot))
```

An affirmative non-past non-volitional simple copula *だ* is omitted immediately before some sentence-final particles (か, さ). Note that in embedded indirect questions, *だ* can be dropped, but the sequence *だか* is allowed.

(335) 「私は涙というものがどんなものかを知らなかった。

```
( (IP-MAT (PUL 「)
  (PP-SBJ (NP (PRO 私))
          (P-OPTR は))
  (PP-OB1 (CP-QUE (IP-SUB (PP-SBJ (NP (PP (NP (N 涙))
                                             (P-ROLE という))
                                             (N もの))
                                       (P-ROLE が))
              (NP-PRD (WD どんな)
                      (N もの))
              (AX *))
          (P-FINAL か))
          (P-ROLE を))
  (VB 知ら)
  (NEG なかつ)
  (AXD た)
  (PU 。))
(ID 78_aozora_Yuki-1-2000))
```

(336) なぜだかは分かりません。

```
( (IP-MAT (NP-SBJ *speaker*)
  (PP (CP-QUE (IP-SUB (NP-SBJ *pro*)
    (ADVP-PRD (WADV なぜ))
    (AX だ))
    (P-FINAL か))
    (P-OPTR は))
  (VB 分かり)
  (AX ませ)
  (NEG ん)
  (PU 。))
(ID 303_aozora_Hayashida-2015))
```

だ is also omitted immediately before the *toritate* particle なら.

(337) 「ハンドガンなら持ってるよ」

```
( (CP-FINAL (PUL 「)
  (IP-SUB (NP-SBJ *speaker+pro*)
    (PP-SCON-CND (IP-ADV (NP-SBJ *pro*)
      (NP-PRD;{HANDGUN} (N ハンドガン))
      (AX *))
      (P-OPTR なら))
    (NP-OB1;{HANDGUN} *pro*)
    (VB 持つ)
    (VB2 てる))
    (P-FINAL よ)
    (PUR 」))
(ID 268_fiction_DICK-1952))
```

だ is optional before some sentence-final particles: ね, よ. In all these cases of だ omission, a null copula need not be supplemented.

(338) あなたは女よ。
'You are a woman.'

```
( (CP-FINAL (IP-SUB (PP-SBJ (NP;{HEARER_1312} (PRO あなた))
  (P-OPTR は))
  (NP-PRD (N 女)))
  (P-FINAL よ)
  (PU 。))
(ID 1313_textbook_kisonihongo))
```

On the other hand, there are sentence-final particles before which だ cannot be omitted: ぞ, ぜ, わ, な, etc. There is a modal element after which だ cannot be omitted: hearsay そう. だ omission is also ruled out for many clause linkage particles: けれど, とも, から, し, が, etc.

Predicate extension (FN の) (AX だ) is sensitive to sentence-final particles in the same way that core copular predicates are: Long forms can appear, but the short form is regularly omitted. Compare

- のだ/*のだから/のか;
- んだ/*んだから/んか;

- のです/のですか;
- んです/んのですか; etc.

15.12.2 Shapes of copulas

Copulas have a variety of phonological shapes, as is shown in the following list.

- だ / だっ / だろ / だい / で / に / と / の / な
- です / でした / でしょ
- や / やっ / やん
- じゃ
- たる / たら / たり
- なる / なら / なり
- だんし
- でっしや

For example, the form で (in addition to supplying the stem for analytic copulas that get inflectional morphology from ある, いる, and ございます), can also appear on its own as a non-finite copula ending a non-final clause.

(339) <S L 銀河> 客車は 4 両編成で、定員 1 8 0 人を予定。

```
( (IP-MAT (PP-SBJ (NP (PRN (PUL <)
                        (NP (NPR S L 銀河))
                        (PUR >))
                        (N 客車))
      (P-OPTR は))
  (IP-ADV-CONJ (NP-PRD (NUMCLP (NUM 4)
                                (CL 両))
                        (N 編成))
    (AX で))
  (PU 、)
  (PP-OB1 (NP (N 定員)
              (NUMCLP (NUM 1 8 0)
                      (CL 人)))
    (P-ROLE を))
  (VB 予定)
  (PU 。))
(ID 30_news_KAHOKU_1917))
```

(340) 仙台は静かでとてもきれいでした。
'Sendai was quiet and so beautiful.'

```
( (IP-MAT (PP-SBJ (NP (NPR 仙台))
      (P-OPTR は))
  (IP-ADV-CONJ (ADJN 静か)
    (AX で))
```

(ADVP (ADV とても))
 (ADJN きれい)
 (AX だし)
 (AXD た)
 (PU 。))
 (ID 9_misc_EXAMPLE))

The short form of the copula (AX で) in (339) and in (340) can in principle be substituted with であって.

Note that there is a historically attested copula なり with a combining stem なら that is identical in pronunciation to the conjunctive or *toritate* particle なら.

The phonological forms に and と appear in contexts where infinitive copulas are expected. Form に frequently appears after ADJN, as in (341), but also with nominal predicates in small clause constructions (342). Form と appears in the same contexts: (343). These に and と are analyzed as (AX に) and (AX と) in those contexts (see sections 25.1.1–25.1.3 for a detailed discussion).

(341) 子供は一生懸命に手拭を見ていた。

((IP-MAT (PP-SBJ (NP (N 子供))
 (P-OPTR は))
 (ADVP (ADJN 一生懸命)
 (AX に))
 (PP-OB1 (NP (N 手拭))
 (P-ROLE を))
 (VB 見)
 (P-CONN て)
 (VB2 い)
 (AXD た)
 (PU 。))
 (ID 262_aozora_Natsume-1908))

(342) 全学級の大騒ぎになった。

((IP-MAT (NP-SBJ; {AKUN_AGITATING} *pro*)
 (IP-SMC-OB1 (NP-PRD (PP (NP (Q 全学級))
 (P-ROLE の))
 (N 大騒ぎ))
 (AX に))
 (VB なっ)
 (AXD た)
 (PU 。))
 (ID 60_aozora_Dazai-1-1940))

(343) 急に室の中が暗く陰気となった。

((IP-MAT (ADVP (ADJN 急)
 (AX に))
 (PP-SBJ (NP (PP (NP (N 室))
 (P-ROLE の))
 (N 中))
 (P-ROLE が))
 (IP-SMC-OB1 (IP-ADV-CONJ (ADJI 暗く))

(ADJN 陰気)
 (AX と))
 (VB なっ)
 (AXD た)
 (PU 。))
 (ID 52_aozora_Ogawa-1909))

Contractions of に and と with ある, なる and たる, can form adnominal copulas:

(344) あれは無意味なる沈鬱である。

((IP-MAT (PP-SBJ (NP (PRO あれ))
 (P-OPTR は))
 (NP-PRD (IP-REL (NP-SBJ *T*)
 (ADJN 無意味)
 (AX なる))
 (N 沈鬱))
 (AX で)
 (VB2 ある)
 (PU 。))
 (ID 13_aozora_Terada-1929))

(345) 彼には確固たる考えがある。

((IP-MAT (PP-SBJ (NP (PRO 彼))
 (P-ROLE に)
 (P-OPTR は))
 (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
 (ADJN 確固)
 (AX たる))
 (N 考え))
 (P-ROLE が))
 (VB ある)
 (PU 。))
 (ID 17_misc_EXAMPLE2))

15.13 ナ-adjectives (ADJN)

Included in the class of ナ-adjectives (ADJNs, also known as 形容動詞) are so-called たる-conjugation and と-conjugation adjectives (e.g., 鬱々たる/と, 閑散たる/と, 決然たる/と, 騒然たる/と, 漠然たる/と, 呆然と, 満々たる/と, 黙々たる/と, 隆々たる/と), and so-called *bungo* (classical language) adjectives (速やか-なる, 確固-たる). The root form of a ナ-adjective predicate is ADJN plus its inflecting suffix AX (copula). The sequence [ADJN + AX] forms a predicate, and when paired with a subject, projects an IP. There is no doubt that these expressions can form predicates, and there is plenty syntactic evidence to show that they can project clauses. They are assigned a separate part-of-speech due to (i) their ability to take a specialized form of the copula, な; (ii) their resistance to noun-modifying expressions; (iii) their resistance to direct marking by particles other than か and complementizers と, という, といった, etc.

Predicates formed on ADJNs project clauses in the same way as verbs and イ-adjectives:

- in a main clause:

(346) 父は娘が心配だ


```
( (IP-MAT (PP-SBJ (NP (N 父))
                     (P-OPTR は))
  (PP-SBJ2 (NP (N 娘))
            (P-ROLE が))
  (ADJN 心配)
  (AX だ))
(ID 103_dict_pth_q))
```

- in an IP-SUB under CP:

(347) 太郎と花子では、どちらが歌が上手ですか。
 ‘Who sings better, Taro or Hanako?’

```
( (CP-QUE (IP-SUB (PP-SBJ (NP (PP (NP (CONJP (NP;{TARO_335} (NPR 太郎))
                                           (P-CONN と))
                                           (NP;{HANAKO_335} (NPR 花子)))
                             (P-ROLE で)
                             (P-OPTR は))
  (PU 、)
  (WPRO どちら))
  (P-ROLE が))
  (PP-OB1 (NP (N 歌))
           (P-ROLE が))
  (ADJN 上手)
  (AX です))
  (P-FINAL か)
  (PU 。))
(ID 335_textbook_kisonihongo))
```

- in a subordinated IP-ADV:

(348) 家庭が不安定だと子どもの状態は良くならない。

```
( (IP-MAT (PP-SCON-CND (IP-ADV (PP-SBJ (NP (N 家庭))
                                         (P-ROLE が))
  (ADJN 不安定)
  (AX だ))
  (P-CONN と))
  (PP-SBJ (NP (PP (NP (N 子ども))
                    (P-ROLE の))
  (N 状態))
  (P-OPTR は))
  (IP-SMC-OB1 (ADJI 良く))
  (VB なら)
  (NEG ない)
  (PU 。))
(ID 39_news_KAHOKU_616))
```

- in a coordinated IP-ADV:

(340) 仙台は静かでとてもきれいでした。
 ‘Sendai was quiet and so beautiful.’

```
( (IP-MAT (PP-SBJ (NP (NPR 仙台))
                    (P-OPTR は))
  (IP-ADV-CONJ (ADJN 静か)
                (AX で))
  (ADVP (ADV とても))
  (ADJN きれい)
  (AX でし)
  (AXD た)
  (PU 。))
(ID 9_misc_EXAMPLE))
```

• in an IP-SMC:

(350) またも不思議に思って彼を見つめた。

```
( (IP-MAT (NP-SBJ *speaker*)
  (IP-ADV-CONJ (NP-DOB1 *pro*)
                (PP (ADVP (ADV また))
                    (P-OPTR も))
                (IP-SMC-OB1 (ADJN 不思議)
                            (AX に))
                (VB 思っ)
                (P-CONN て))
  (PP-OB1 (NP (PRO 彼))
           (P-ROLE を))
  (VB 見つめ)
  (AXD た)
  (PU 。))
(ID 93_aozora_Hayashida-2015))
```

• in an IP-REL:

(351) 『可哀そうな男だ。』

```
( (IP-MAT (PUL 『)
  (NP-SBJ *hearer*)
  (NP-PRD (IP-REL (NP-SBJ *T*)
                  (ADJN 可哀そう)
                  (AX な))
           (N 男))
  (AX だ)
  (PU 。))
(ID 156_aozora_Togawa-1937-1))
```

• in an IP-EMB

(352) 大衆が静かなことは日本人の特徴である。

```
( (IP-MAT (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (N 大衆))
                                         (P-ROLE が))
                                   (ADJN 静か)
                                   (AX な))
           (N こと))
  (P-OPTR は))
```

(NP-PRD (PP (NP (N 日本人))
(P-ROLE の))
(N 特徴))
(AX で)
(VB2 ある)
(PU 。))
(ID 40_aozora_Hayashida-2015))

Note that, as with イ-adjectives, when used adverbially, an ADJN followed by a copula in the *ren'yookei* form (に or と) projects an ADVP.

(353) カメラ付き携帯電話の普及などで、一般の人々が写真や映像を撮影し提供する機会が飛躍的に増えた。

((IP-MAT (PP (NP (PP (NP (N カメラ付き携帯電話))
(P-ROLE の))
(N 普及))
(P-OPTR など)
(P-ROLE で))
(PU 、)
(PP-SBJ (NP (IP-EMB (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
(ADJN 一般)
(AX の))
(N 人々))
(P-ROLE が))
(IP-ADV-CONJ (PP-OB1 (NP (CONJP (NP (N 写真))
(P-CONN や))
(NP (N 映像)))
(P-ROLE を))
(VB 撮影)
(VB0 し))
(NP-OB1 *pro*)
(VB 提供)
(VB0 する))
(N 機会))
(P-ROLE が))
(ADVP (ADJN 飛躍的)
(AX に))
(VB 増え)
(AXD た)
(PU 。))
(ID 24_news_KAHOKU_39))

(354) 彼は公然と語っているのに、人々はこれに対して何も言わない。

((IP-MAT (PP-SCON (IP-ADV (NP-OB1 *pro*)
(PP-SBJ (NP (PRO 彼))
(P-OPTR は))
(ADVP (ADJN 公然)
(AX と))
(VB 語っ)
(P-CONN て)
(VB2 いる))

```

(P-CONN のに))
(PU 、)
(PP-SBJ (NP (N 人々))
(P-OPTR は))
(PP (NP (PRO これ))
(P-ROLE に対して))
(NP-OB1 (WPRO 何)
(P-OPTR も))
(VB 言わ)
(NEG ない)
(PU 。))
(ID 560_bible_nt))

```

Some predicates formed on ADJNs such as 好きだ, 嫌いだ, and 上手だ take two が-marked NPs, one of which is analyzed as having a subject role. The second one is assigned the role OB1.

(355) 鈴木さんが一番英語が上手です。

‘Mr. Suzuki is the best at English among his peers.’

```

( (IP-MAT (PP-SBJ (NP (NPR 鈴木さん))
(P-ROLE が))
(ADVP (ADV 一番))
(PP-OB1 (NP (N 英語))
(P-ROLE が))
(ADJN 上手)
(AX です)
(PU 。))
(ID 493_textbook_purple_basic))

```

A careful distinction must be made between this kind of sentence and the so called double subject sentence. In the first kind, given sufficient context, after removing one of NPs marked with が or は, the remaining NP together with the predicate form an independently meaningful sentence. In short, when the NPs marked with が or は are either the subject or the OB1 argument of the predicate, the construction is not a double subject construction. In the example below 必要だ is a two-place predicate with 専用アプリのインストール as OB1, while 簡単 heads a double subject construction with スマホやタブレット端末 and 操作 as its subjects.

(356) スマホやタブレット端末は専用アプリのインストールが必要だが、操作は簡単。

```

( (IP-MAT (PP-SBJ (NP (CONJP (NP (N スマホ))
(P-CONN や))
(NP (N タブレット端末)))
(P-OPTR は))
(PP-CONJ (IP-ADV (PP-OB1 (NP (PP (NP (N 専用アプリ))
(P-ROLE の))
(N インストール))
(P-ROLE が))
(ADJN 必要)
(AX だ))
(P-CONN が))
(PU 、)
(PP-SBJ2 (NP (N 操作))
(P-OPTR は))

```

(ADJN 簡単)
 (PU 。))
 (ID 74_news_KAHOKU_97))

There are words similar in form to ナ-adjectives, but are traditionally put under the category of *rentaishi* because they only ever occur in an adnominal position, although some of them can project clauses: 大きな, 小さな, 可笑しな. In isolation, they are tagged as PNL. See section 16.4.2 for details.

15.14 Special cases and exceptions to ナ-adjectives

In addition to the typical ナ-adjectives defined above, there is also a set of words (e.g., 不思議な/の, 当たり前な/の, キレイ好きな/の, etc.) that, while having some of the basic characteristics set out above, can also take the short-form adnominal copula の as an inflecting suffix. The copula in expression pairs such as 別な食べ物/別の食べ物 and 特別な措置/特別の措置 can be seen to alternate in form between な and の without a change in meaning. These are also put in the class of ナ-adjectives unless there is a compelling reason to do otherwise.

However, there are instances where such items have a function other than that of property ascription. Comparing 元気な子供 with 元気の源, we assign ADJN to the former and N to the latter. Furthermore, when an element that shows な/の alternation is subject to the sort of modification applied to nouns (seen in both 鮮やかなピンクの花 and 鮮やかなピンクな花) the practice is to treat that element as a N.

Note that words like よう, はず, and ふう, while accepting noun modifiers and various role particles fairly freely, take the special な-form of the copula rather than の when heading a noun-modifying expression. These are analyzed as formal nouns (FN). See section 15.20 for details.

15.15 Nominal predicates (NP-PRD)

Nominal predicates are headed by N, NPR, Q, PRO, WPRO, etc. and are assigned the label NP-PRD. A nominal predicate combines with copula to either (i) denote a property of a subject NP, or (ii) predicate an identity relation with a subject NP, or (iii) specify a member of a group-denoting NP, or value of a property-denoting NP.

As with other predicates, when appearing with subjects, predicates formed on NP-PRD project clauses:

- in a main clause:

(357) 暗黒エネルギーの正体を探ることが現代宇宙論の最大のテーマです。

((IP-MAT (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
 (PP-OB1 (NP (PP (NP (N 暗黒エネルギー))
 (P-ROLE の))
 (N 正体))
 (P-ROLE を))
 (VB 探る))
 (N こと))
 (P-ROLE が))
 (NP-PRD (PP (NP (N 現代宇宙論))
 (P-ROLE の))
 (IP-REL (NP-SBJ *T*)
 (ADJN 最大)
 (AX の))

(N テーマ))
 (AX です)
 (PU 。))
 (ID 14_news_KAHOKU_11382))

- in an IP-SUB under CP:

(358) 一審査委員長一押しの提案は何ですか。

((CP-QUE (IP-SUB (SYM -)
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (NP-PRD (N 審査委員長一押し))
 (AX の))
 (N 提案))
 (P-OPTR は))
 (NP-PRD (WPRO 何))
 (AX です))
 (P-FINAL か)
 (PU 。))
 (ID 101_news_KAHOKU_52))

- in a subordinated IP-ADV:

(359) 自分は虜だから、腰をかける訳に行かない。

((IP-MAT (PP-SBJ (NP (PRO 自分))
 (P-OPTR は))
 (PP-SCON (IP-ADV (NP-PRD (N 虜))
 (AX だ))
 (P-CONN から))
 (PU 、)
 (PP-OB1 (NP (N 腰))
 (P-ROLE を))
 (VB かける)
 (FN 訳)
 (P-ROLE に)
 (VB2 行か)
 (NEG ない)
 (PU 。))
 (ID 297_aozora_Natsume-1908))

- in a coordinated IP-ADV:

(360) 藤原氏は小保内氏の側近で、昨年 3 月に退任。

((IP-MAT (PP-SBJ (NP; {PERSON} (NPR 藤原氏))
 (P-OPTR は))
 (IP-ADV-CONJ (NP-PRD (PP (NP; {PERSON} (NPR 小保内氏))
 (P-ROLE の))
 (N 側近))
 (AX で))
 (PU 、)
 (PP-TMP (NP (N 昨年)

(NUMCLP (NUM 3)
 (CL 月)))
 (P-ROLE に))
 (VB 退任)
 (PU 。))
 (ID 127_news_KAHOKU_28))

• in an IP-SMC:

(361) その間が、たっぷり一時間はあった様に思われます。

((IP-MAT (NP-SBJ *speaker*)
 (PP-DOB1 (NP (D その)
 (N 間))
 (P-ROLE が))
 (PU 、)
 (IP-SMC-OB1 (NP-PRD (IP-EMB (PP;*SBJ* (NP (ADVP (ADV たっぷり))
 (NUMCLP (NUM 一)
 (CL 時間)))
 (P-OPTR は))
 (VB あっ)
 (AXD た))
 (N 様))
 (AX に))
 (VB 思わ)
 (VB2 れ)
 (AX ます)
 (PU 。))
 (ID 249_aozora_Edogawa-1929))

• in an IP-REL:

(362) 国際学術コンペの審査委員長で、フロリダ大西洋大教授のフランク・シュニッドマンさんに聞いた。

((IP-MAT (NP-SBJ *speaker*)
 (NP-OB1 *pro*)
 (PP (NP;{PERSON} (IP-REL (NP-SBJ *T*)
 (IP-ADV-CONJ (NP-PRD (PP (NP (N 国際学
 術コンペ))
 (P-ROLE の))
 (N 審査委員長))
 (AX で))
 (PU 、)
 (NP-PRD (N フロリダ大西洋大教授))
 (AX の))
 (NPR フランク・シュニッドマンさん))
 (P-ROLE に))
 (VB 聞い)
 (AXD た)
 (PU 。))
 (ID 82_news_KAHOKU_52))

- in an IP-EMB

(363) だとすると、彼が犯人である可能性は低い。

‘If that is the case, the possibility that he is the criminal is low.’

((IP-MAT (CONJ だとすると)
 (PU 、)
 (PP-SBJ (NP (IP-EMB (PP-SBJ (NP; {TANAKA_175} (PRO 彼))
 (P-ROLE が))
 (NP-PRD (N 犯人))
 (AX で)
 (VB2 ある))
 (N 可能性))
 (P-OPTR は))
 (ADJI 低い)
 (PU 。))
 (ID 176_textbook_kisonihongo))

(364) 「先生、この人が生れつき盲人なのは、だれが罪を犯したためですか。

((CP-QUE (PUL 「)
 (IP-SUB (NP-VOC (N 先生))
 (PU 、)
 (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (D この)
 (N 人))
 (P-ROLE が))
 (NP-ADV (N 生れつき))
 (NP-PRD (N 盲人))
 (AX な))
 (N の))
 (P-OPTR は))
 (PU 、)
 (NP-PRD (IP-EMB (PP-SBJ (NP (WPRO だれ))
 (P-ROLE が))
 (PP-OB1 (NP (N 罪))
 (P-ROLE を))
 (VB 犯し)
 (AXD た))
 (N ため))
 (AX です))
 (P-FINAL か)
 (PU 。))
 (ID 749_bible_nt))

15.16 PPs as copular complements (PP-PRD)

NPs and ADVPs marked by role particles (P-ROLE) and/or *toritate* particles (P-OPTR) can form copular expressions, typically in pseudoclefts. In this scenario, the PP projected by the particle gets the extension PRD to form PP-PRD.

(365) 第二は、本法改正の遡及適用についてであります。


```

( (IP-MAT (PP-SBJ (NP (NUMCLP (NUM 第二)))
                    (P-OPTR は))
  (PU 、)
  (PP-PRD (NP (PP (NP (N 本法改正))
                    (P-ROLE の))
            (N 遡及適用))
          (P-ROLE について))
  (AX で)
  (VB2 あり)
  (AX ます)
  (PU 。))
(ID 19_diet_kaigiroku-4))

```

(366) 私が持っているのは本だけです。
 ‘This is the only book I have.’

```

( (IP-MAT (PP-SBJ (NP (IP-REL (NP-OB1 *T*)
                              (PP-SBJ (NP (PRO 私))
                              (P-ROLE が))
                              (VB 持つ)
                              (P-CONN て)
                              (VB2 いる))
                    (N の))
          (P-OPTR は))
  (PP-PRD (NP (N 本))
          (P-OPTR だけ))
  (AX です)
  (PU 。))
(ID 420_textbook_TANAKA))

```

15.17 ADVPs as copular complements (ADV-P-PRD)

ADVPs headed by adverbs can be a predicate followed by a copula. In this scenario, the ADVP projected by the adverb gets the extension PRD to form ADV-P-PRD. Typically, demonstrative adverbs such as *そう* are involved in this kind of construction.

(367) ルールはこうだ。

```

( (IP-MAT (PP-SBJ (NP (N ルール))
                    (P-OPTR は))
  (ADV-P-PRD (ADV こう))
  (AX だ)
  (PU 。))
(ID 40_news_KAHOKU_179))

```

15.18 IPs as copular complements (IP-ADV-PRD, IP-NMZ-PRD)

In a few cases, IP-ADVs and IP-NMZs appear as complements of copulas. Such IPs, too, get the extension PRD to form IP-ADV-PRD and IP-NMZ-PRD. In particular, the latter cases typically involve parallelism or contrast expressed with *だけでなく*, *ではなく* etc.

(368) 視覚的だったり聴覚からであったり、感触からであったり抽象的な捉え方もし
 ますし、動きながらだったり

((FRAG (IP-ADV-CONJ (PP-CONJ (IP-ADV (IP-ADV-CONJ (NP-SBJ;{THINK_ABOUT_WORLD}
 pro))
 (IP-ADV-CONJ (IP-ADV-CONJ
 (ADJN 視覚的)
 (AX
 だっ)
 (P-CONN
 たり))
 (PP-PRD (NP
 (N 聴覚))
 (P-ROLE
 から))
 (AX で)
 (VB2 あっ)
 (P-CONN た
 り))
 (PU 、)
 (PP-PRD (NP (N 感触))
 (P-ROLE から))
 (AX で)
 (VB2 あっ)
 (P-CONN たり))
 (NP-SBJ *arb*)
 (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
 (ADJN 抽象的)
 (AX な))
 (N 捉え方))
 (P-OPTR も))
 (VB し)
 (AX ます))
 (P-CONN し))
 (PU 、)
 (IP-ADV-PRD (VB 動き)
 (P-CONN ながら))
 (AX だっ)
 (P-CONN たり)))
 (ID 196_ted_talk_11))

(369) 今後は2グループの構想だけでなく、地元自治体も新設医学部を支援するよう
 な施策づくりが望まれる。

((IP-MAT (PP-TMP (NP (N 今後))
 (P-OPTR は))
 (IP-ADV-CONJ (IP-NMZ-PRD (NP-SBJ (PP (NP (NUMCLP (NUM 2)
 (CL グループ))
 (P-ROLE の))
 (N 構想))
 (VB *))
 (P-OPTR だけ)
 (AX で)
 (NEG なく))
 (PU 、)

```

      (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
        (NP-PRD (IP-EMB (PP-SBJ (NP (N 地元自治体))
          (P-OPTR も))
            (PP-OB1 (NP (N 新設医学部))
              (P-ROLE を))
                (VB 支援)
                (VB0 する))
                  (N よう))
                    (AX な))
                      (N 施策づくり))
                        (P-ROLE が))
                          (VB 望ま)
                          (VB2 れる)
                          (PU 。))
        (ID 89_news_KAHOKU_93))

```

15.19 CPs as copular complements (CP-THT-PRD, CP-QUE-PRD)

CP-THTs and CP-QUEs can be a predciate followed by a copula. See section 24.17.6 and section 24.16.4 respectively.

15.20 Formal noun (FN) plus copula (AX)

Expressions headed by a [formal noun + copula] have the following grammatical functions: At the ends of main clauses they indicate various orientations of aspect, information structure, modality, evidentiality, etc. The basic members of this type are *はず* (plausibility); *わけ* (grounds, conclusion); *もの* (habituality, inevitability); To these can be added others that appear in a variety of contexts: *ふう* (mode, manner); *つもり*, *気*, *魂胆* (intention); *ところ* (pre-onset, perfective, hypothetical); *ため* (purpose, cause); *せい*, *おかげ* (cause); *ほう* (alternative); *まま* (current state) etc. Most of these do not allow *が/の* alternation in subject marking of a preceding adnominal clause (unless the copula following them is itself adnominal). They are labelled FN in the corpus. Ending main clauses, they are placed directly under the IP.

(370) こう感じている酔客は多いはずだ。

```

( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
  (ADVP (ADV こう))
    (VB 感じ)
    (P-CONN て)
    (VB2 いる))
      (N 酔客))
        (P-OPTR は))
          (ADJI 多い)
          (FN はず)
          (AX だ)
          (PU 。))
  (ID 52_news_KAHOKU_107))

```

Note that for some formal nouns (e.g., *はず*, *わけ*), when they extend a nominal predicate, the copula of the predicate is the *な*-variant of the adnominal copula.

- (371) この計画は、実現不可能なわけでもない。
 ‘This plan isn’t impossible to carry out.’

```
( (IP-MAT (PP-SBJ (NP (D この)
                      (N 計画))
                (P-OPTR は))
  (PU 、)
  (ADJN 実現不可能)
  (AX な)
  (FN わけ)
  (AX で)
  (P-OPTR も)
  (NEG ない)
  (PU 。))
(ID 142_textbook_particles))
```

15.21 のだ construction

The element の that forms the のだ construction is also labelled as a formal noun (FN), and occupies the position directly dominated by IP, at the same level as the head and other constituents of IP. The primary motivations for annotating with this flat structure are (i) to avoid the difficulties in specifying scope effects that an embedding would entail, (ii) the lack of が/の alternation in のだ constructions that would be present in an embedding.

- (372) 田中が会いに来たのではない。
 ‘It is not that Tanaka came to see him.’

```
( (IP-MAT (PP-SBJ (NP; {TANAKA_730} (NPR 田中))
                (P-ROLE が))
  (PP-PRP (IP-NMZ (VB 会い))
          (P-ROLE に))
  (VB 来)
  (AXD た)
  (FN の)
  (AX で)
  (P-OPTR は)
  (NEG ない)
  (PU 。))
(ID 730_textbook_kisonihongo))
```

Note that present tense nominal predicates heading のだ constructions are formed on the な-variant of the adnominal copula.

- (373) この猫は、いわば、我が家の一員なのです。
 ‘This cat is , so to speak , a member of our family .’

```
( (IP-MAT (PP-SBJ (NP (D この)
                      (N 猫))
                (P-OPTR は))
  (PU 、)
  (ADVP (ADV いわば))
  (PU 、)
  (NP-PRD (PP (NP (NP-POS (PRO 我が))
                  (N 家))
```

```

(P-ROLE の))
(N 一員))
(AX な)
(FN の)
(AX です)
(PU 。))
(ID 713_textbook_TANAKA))

```

15.22 Criteria for analyzing の as a copula

The distinction between the copular use of the form の and its use as a particle is difficult to make. The annotation practice here is, in principle, to view instances where [NP₁ の N₂] can be restated as [[_{NP} N₂] は NP₁ である] or [NP₁ である N₂] as unproblematically copular, including instances where の indicates an identity relation between NP₁ and N₂. Here the form is labelled AX, with [NP₁ の] heading either an IP-REL or IP-EMB modifying N₂.

(374) 「そこに小さなマッチ売りの少女がいる。

```

( (IP-MAT (PUL 「)
  (PP (NP (PRO そこ))
    (P-ROLE に))
  (PP-SBJ (NP (PNL 小さな)
    (IP-REL (NP-SBJ *T*)
      (NP-PRD (N マッチ売り))
      (AX の))
    (N 少女))
    (P-ROLE が))
  (VB いる)
  (PU 。))
(ID 225_aozora_Yuki-1-2000))

```

However, the principle above leaves room for some uncertainty. Below is an explanation of policies to resolve instances where uncertainty may arise.

- Construction [NP₁ のため] (reason, cause): When [NP₁ のため] is used to refer to a reason or cause, の is tagged as AX and the entire modifying phrase is analysed as an IP-EMB. In this usage, の can be replaced either by である to form [NP₁ であるため] without a change in propositional meaning.

(375) 被災地ではまだ、保護者が大変な時期のため、子どもがうまく甘えられない面もある。

```

( (IP-MAT (PP (NP (N 被災地))
  (P-ROLE で)
  (P-OPTR は))
  (NP-ADV (IP-EMB (ADVP (ADV まだ))
    (PU 、)
    (PP-SBJ (NP (N 保護者))
      (P-ROLE が))
    (NP-PRD (IP-EMB (ADJN 大変)
      (AX な))
      (N 時期))
    (AX の))
  (PU 。))

```

(N ため))
 (PU 、)
 (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (N 子ども))
 (P-ROLE が))
 (ADVP (ADJI うまく))
 (VB 甘え)
 (VB2 られ)
 (NEG ない))
 (N 面))
 (P-OPTR も))
 (VB ある)
 (PU 。))
 (ID 99_news_KAHOKU_55))

- Construction [NP₁ のため] (beneficiary, purpose): When [NP₁のため] is used to refer to a beneficiary or purpose, の cannot be replaced with である. This の is tagged as P-ROLE.

(376) 彼女は彼のために口添えした。
 ‘She spoke up for him .’

((IP-MAT (PP-SBJ (NP (PRO 彼女))
 (P-OPTR は))
 (PP (NP (PP (NP (PRO 彼))
 (P-ROLE の))
 (N ため))
 (P-ROLE に))
 (VB 口添え)
 (VB0 し)
 (AXD た)
 (PU 。))
 (ID 532_textbook_TANAKA))

(377) この「毒殺未遂事件」の正体は、反政宗派一掃のための自作自演説もある。

((IP-MAT (PP-SBJ (NP (PP (NP; {MASAMUNE_ASSASSINATE_THEORY} (D この)
 (PUL 「)
 (N 毒殺未遂事
 件)
 (PUR 」))
 (P-ROLE の))
 (N 正体))
 (P-OPTR は))
 (PU 、)
 (PP-OB1 (NP (NML (PP (NP (PP (NP (N 反政宗派一掃))
 (P-ROLE の))
 (N ため))
 (P-ROLE の))
 (N 自作自演))
 (N 説))
 (P-OPTR も))
 (VB ある)

(PU 。))
 (ID 46_wikipedia_Datemasamune))

- Construction [NP₁ のせい] (cause, reason): For the expression [NP₁ のせい], there are instances where の can be replaced by である and instances where it cannot be so replaced. The practice is to tag の in the former case as AX, and in the latter case as P-ROLE.

(378) 彼女はガンのせいで死んだ。
 ‘She died of cancer.’

((IP-MAT (PP-SBJ (NP (PRO 彼女))
 (P-OPTR は))
 (PP (NP (PP (NP (N ガン))
 (P-ROLE の))
 (N せい))
 (P-ROLE で))
 (VB 死ん)
 (AXD だ)
 (PU 。))
 (ID 443_textbook_TANAKA))

(379) あなたのせいで、こんなことになったんです。
 ‘It is your fault that caused these things.’

((IP-MAT (NP-SBJ; {SITUATION_87} *pro*)
 (PP (NP (PP (NP; {HEARER_87} (PRO あなた))
 (P-ROLE の))
 (N せい))
 (P-ROLE で))
 (PU 、)
 (ADVP-CMPL (NP-PRD; {AFTERMATH_87} (D こんな)
 (N こと))
 (AX に))
 (VB なっ)
 (AXD た)
 (FN ん)
 (AX です)
 (PU 。))
 (ID 87_textbook_kisonihongo))

- Construction [NP₁ のこと]: In [NP₁ のこと], の usually cannot be replaced by である and is analyzed as P-ROLE. However, be aware that in cases where [NP₁ の] denotes a property, it is possible to annotate it is an IP-REL modifying こと.

(380) 旦那さんが本当のことを言わないんですか。
 ‘Your husband does not tell the truth?’

((CP-QUE (IP-SUB (PP-SBJ (NP (N 旦那さん))
 (P-ROLE が))
 (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
 (ADJN 本当)
 (AX の))

(N こと))
 (P-ROLE を))
 (VB 言わ)
 (NEG ない)
 (FN ん)
 (AX です))
 (P-FINAL か)
 (PU 。))
 (ID 688_textbook_kisonihongo))

- Construction [NP₁ のよう]: When の can be replaced by である, it is tagged as AX and the entire modifying phrase is treated as an IP-EMB (as in (381) below). When it can't (as in (382) below) it is marked P-ROLE.

(381) どうやら全員ご賛成のようですので、そのように決めさせていただきます。
 'I think everyone agrees with this so I would like to decide as such.'

((IP-MAT (NP-SBJ *speaker*)
 (NP-DOB1 *hearer*)
 (PP-SCON (IP-ADV (NP-SBJ *exp*)
 (NP-PRD (IP-EMB (NP-OB1;{SOLUTION_613} *pro*)
 (ADVP (ADV どうやら))
 (NP-SBJ (Q 全員))
 (VB ご賛成)
 (AX の))
 (N よう))
 (AX です))
 (P-CONN ので))
 (PU 、)
 (IP-SMC-OB1 (NP-CZZ *speaker*)
 (NP-OB1;{ISSUE_613} *pro*)
 (PP (NP;{SOLUTION_613} (D その)
 (N よう))
 (P-ROLE に))
 (VB 決め)
 (VB2 させ)
 (P-CONN て))
 (VB いただき)
 (AX ます)
 (PU 。))
 (ID 614_textbook_kisonihongo))

(382) ブラウンさんは日本人のような考え方をする。
 'Mr. Brown thinks like the Japanese.'

((IP-MAT (PP-SBJ (NP (NPR ブラウンさん))
 (P-OPTR は))
 (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
 (NP-PRD (PP (NP (N 日本人))
 (P-ROLE の))
 (N よう))
 (AX な))

(N 考え方))
 (P-ROLE を))
 (VB する)
 (PU 。))
 (ID 104_textbook_djg_intermediate))

- In some constructions of the form [NP₁ の NP₂], it is possible to add a role particle between NP₁ and の. For example, 物理の本 and 母のプレゼント might be rephrased by adding particles について and へ/から, respectively, to form 物理についての本 and 母へのプレゼント/母からのプレゼント. Depending on the context it may indeed be possible to form utterances like (この) 本は物理だ or (この) プレゼントは母だ, but the present policy is to analyze の as P-ROLE in instances such as these.

(383) ジャックはどうしても私の手紙に返事を書こうとしない。
 ‘Jack will not answer my letters.’

((IP-MAT (PP-SBJ (NP (NPR ジャック))
 (P-OPTR は))
 (PP-SCON-CND (IP-ADV (ADVP-CMPL (WADV どう))
 (VB し)
 (P-CONN て))
 (P-OPTR も))
 (PP (NP (PP (NP (PRO 私))
 (P-ROLE の))
 (N 手紙))
 (P-ROLE に))
 (PP-OB1 (NP (N 返事))
 (P-ROLE を))
 (VB 書こ)
 (AX う)
 (AX と)
 (VB2 し)
 (NEG ない)
 (PU 。))
 (ID 873_textbook_TANAKA))

- Constructions such as those in じゃがいもの皮むき, or 佐藤の参加, or 酒の酔い (がまわってきた), or 明日の開催, etc., in which NP₂ denotes a situation and NP₁ denotes a complement with respect to that situation, are annotated with の labelled as P-ROLE.

(384) 近代的な官僚制の誕生と産業革命の開始とともに始まったのです

((IP-MAT (NP-SBJ *pro*)
 (PP (NP (CONJP (NP (PP (NP (IP-REL (NP-SBJ *T*)
 (ADJN 近代的)
 (AX な))
 (N 官僚制))
 (P-ROLE の))
 (N 誕生))
 (P-CONN と))
 (NP (PP (NP (N 産業革命))
 (P-ROLE の))

```

(N 開始)))
(P-ROLE とともに))
(VB 始まっ)
(AXD た)
(FN の)
(AX です))
(ID 83_ted_talk_8))

```

- In constructions such as those in 多くの意見, or 二人の学生, or 幅2センチの紐, etc., in which a quantifier or numeral classifier is the head of NP₁ and the complex [NP₁ の] either quantifies or ascribes a property to N₂, の is analyzed as AX. In these instances, if NP₁ functions as a quantificational element, the symbols ; * are added to the IP-REL headed by [NP₁ の] (see section 20 for details).

(385) 洪水で 3 人の人が行方不明だ。
 ‘Three persons are missing with the flood .’

```

( (IP-MAT (PP (NP (N 洪水))
(P-ROLE で))
(PP-SBJ (NP (IP-REL ; * (NP-SBJ *T*)
(NP-PRD (NUMCLP (NUM 3)
(CL 人))))
(AX の))
(N 人))
(P-ROLE が))
(NP-PRD (N 行方不明))
(AX だ)
(PU 。))
(ID 470_textbook_TANAKA))

```

However, if the complex [NP₁ の] neither quantifies nor ascribes a property to N₂, then NP₁ is treated as any other noun phrase, and の is analyzed as P-ROLE.

(386) 彼は二人の結婚に立ち会った。

```

( (IP-MAT (PP-SBJ (NP (PRO 彼))
(P-OPTR は))
(PP (NP (PP (NP (NUMCLP (NUM 二人)))
(P-ROLE の))
(N 結婚))
(P-ROLE に))
(VB 立ち会っ)
(AXD た)
(PU . ))
(ID 1529_dict_vv-lexicon))

```

15.22.1 Coordination test for adnominal の

Substitution with である as a test for the status of の as an adnominal copula does not identify all the instances where a copula analysis is appropriate. Applying this test to 昔、子供の頃 yields *昔、子供である頃 which fails the test But as can be seen by 子供であった頃, the copula analysis is appropriate. An alternative test involves coordination of noun modifying clauses, where a non-final coordinated clause will end in で. Whether the target is in the

non-final clause (まだ子供でウブだった頃) or the final clause (まだウブで子供の頃), by virtue of being coordinated to another copular clause, the nature of the expression in question is clear. Below is an example of this type of structure:

(362) 国際学術コンペの審査委員長で、フロリダ大西洋大教授のフランク・シュニッドマンさんに聞いた。

```
( (IP-MAT (NP-SBJ *speaker*)
      (NP-OB1 *pro*)
      (PP (NP;{PERSON} (IP-REL (NP-SBJ *T*)
                                (IP-ADV-CONJ (NP-PRD (PP (NP (N 国際学
術コンペ))
                                                    (P-ROLE の))
                                                    (N 審査委員長))
                                                (AX で))
                                (PU 、)
                                (NP-PRD (N フロリダ大西洋大教授))
                                (AX の))
                                (NPR フランク・シュニッドマンさん))
      (P-ROLE に))
      (VB 聞い)
      (AXD た)
      (PU 。))
  (ID 82_news_KAHOKU_52))
```

16 Noun phrases (NP)

Noun phrases (NPs) are canonically headed by a nominal element (e.g., N, NPR, PRO, WPRO, etc.). Q, and NUMCLP also head NPs.

All noun phrases immediately dominated by IP are marked for function. Such noun phrases are discussed in sections 9.1.2 and 9.2.2. See also 15.15 on predicate NPs.

16.1 Heads of noun phrases

An NP without an overt head is assumed to have an empty nominal head. This situation is seen with what is sometimes referred to as N-bar deletion (or “truncated possessive phrase”, see 24.2), where the empty head is not explicitly included in the annotation, but is implicit in the NP that it projects.

(388) 三番目のにも仁王はいなかった。

```
( (IP-MAT (PP (NP (IP-REL (NP-SBJ *T*)
                        (NP-PRD (NUMCLP (NUM 三)
                                         (CL 番目)))
                        (AX の)))
      (P-ROLE に)
      (P-OPTR も))
      (PP-SBJ (NP (NPR 仁王))
              (P-OPTR は))
      (VB い)
      (NEG なかつ)
      (AXD た))
```

(PU 。))
(ID 388_aozora_Natsume-1908))

The class of common nouns (N) is the largest in the language. Here is a list of a few of the most frequently attested nouns. Note that many are “formal nouns” and “relational nouns”.

こと, の, よう, もと, 人, 中, ため, 方, 今, ところ, 前, ほう, 時, 家, 後, 子供, とが, 上, 部屋, 先生, うち, 父

Note also that formal nouns that follow core predicates, extending those predicates are labelled not as Ns, but as FNs (see section 15.2 and 15.20).

Proper nouns (NPR) are the second largest class. Here is a list of a few of the most common proper nouns in the corpus:

日本, 太郎, ヘプバーン, ヨーロッパ, グレゴール, イエス, 花子, スミス, 東京, ジョン, アメリカ, 大阪, 政宗, 中国, ジョーンズ, 仙台, 京都, 東北

NPs headed by overt pronouns (PRO) (and by the under-specified null element *pro*) are sometimes supplied with sort information. See section ?? for details. Here is a list of common pronouns (PRO):

ここ, そこ, あそこ, こちら, そちら, あちら, こっち, そっち, あっち, これ, それ, あれ, これら, それら, あれら私, 私たち, おれ, 我々, 僕, うち, あなた, 君, おまえ, 彼, 彼ら, あいつ,

Reflexive pronouns are not differentiated from other pronouns in the annotation and labelled PRO. The list of principal items is not too long, as is shown below. When a reflexive pronoun is used appositively to another noun or pronoun (as in 彼ら自身), the reflexive pronoun (PRO) projects a NP, which is placed under PRN, which in turn is sister to the noun or pronoun to form an NP (See section 19 for details on PRN). In addition, the possessive pronoun わが(我が) gets a special treatment (See section ??).

己, おのれ, 自分, ご自分, 自身, ご自身, 自ら, みずから, 自体, そのもの, その物

(389) 「彼ら自身の民族。

((FRAG (PUL 「)
 (NP (PP (NP (PRO 彼ら)
 (PRN (NP (PRO 自身))))
 (P-ROLE の))
 (N 民族))
 (PU 。))
(ID 415_fiction_DICK-1952))

WPROs are typically used in interrogative sentences. Here is a list of common WH-pronouns (WPRO):

いくつ, いくら, いずれ, いつ, おいくら, だれ, どこ, どちら, どちら様, どっち, どなた, どれ, なに, なん, 何, 何れ, 誰

Wh-pronouns can head NPs suffixed by a P-OPTR か, も, or でも, to form a constituent with a quantified meaning, for example an indefinite meaning such as だれか (somebody), a universally quantified meaning such as どれも (every one), or a free-choice meaning such as いつでも (whenever). See section 20.1.3 for details. In general, for any indeterminate element (WPRO, WD, WADV, WNUM), a phrase that contains that element can either receive question focus or be quantified in the same way as with NPs headed by WPRO.

(390) 誰が買ったチョコレートもおいしい。

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-OB1 *T*)
                             (PP-SBJ (NP (WPRO 誰))
                             (P-ROLE が))
                             (VB 買った)
                             (AXD た))
                             (N チョコレート))
                             (P-OPTR も))
    (ADJ1 おいしい)
    (PU 。))
  (ID 6_misc_BUFFALO))
```

An item Q can appear heading a noun complement, a floating quantifier, a referring expression, etc. For a discussion of quantifying expressions, see section 20. Here are examples of some common quantifiers (Qs):

いっぱい, いろいろ, 大勢, 多く, 数多く, かなり, 十分, 少し, すべて, 全(員), 全体, 全部, それぞれ, たくさん, 多少, 多数, 一人一人, 複数, ほとんど, みんな, 毎日, 全国, 全員, 両手, 各地, 毎年, 各々, 毎朝, 全体, 各号

Quantifying expressions containing a numeral (NUM) or indeterminate numeral (WNUM) are labelled NUMCLPs. NUMCLPs are typically composed of a NUM or WNUM paired with a classifier (CL), but there are examples having only NUM or only WNUM. See section 20.1.2 for details.

16.2 Intermediate nominal layers (NML)

Outside of the non-clausal coordination scenario (see section 18 for details), NPs do not stack up in this annotation scheme. When there is an absolute need of having an intermediate noun phrase, NML is used. This only occurs when either (i) there is a modifier which modifies a coordinated element, or (ii) when a coordinated element is followed by an appositive quantificational phrase. Below is an example of the first scenario.

(391) /意思表示の時期・方法探る

```
( (IP-MAT (NP-SBJ; {REGION} *pro*)
    (PU /)
    (NP-OB1 (PP (NP (N 意思表示))
                (P-ROLE の))
            (NML (CONJP (NP (N 時期)))
                (PU ・)
                (NP (N 方法))))
    (VB 探る))
  (ID 11_news_KAHOKU_89))
```

The second scenario is exemplified below:

(392) 中立的な立場の素粒子物理学者や経済学者ら 10 人程度で構成し計画を検証する。

```
( (IP-MAT (PP-SBJ (NP (PP (NP (IP-REL (NP-SBJ *T*)
                             (ADJN 中立的)
                             (AX な))
                             (N 立場))
    (ID 11_news_KAHOKU_89))
```

```

(P-ROLE の))
(NML (CONJP (NP (N 素粒子物理学者))
(P-CONN や))
(NP (N 経済学者)))
(N ら)
(PRN (NP;* (NUMCLP (NUM 1 0)
(CL 人))
(N 程度))))
(P-ROLE で))
(IP-ADV-CONJ (NP-OB1;{WORKINGGROUP} *pro*)
(VB 構成)
(VB0 し))
(PP-OB1 (NP (N 計画))
(P-ROLE を))
(VB 検証)
(VB0 する)
(PU 。))
(ID 24_news_KAHOKU_89))

```

16.3 Possessive NPs (NP-POS)

Possessive NPs (NP-POS) are NPs projected by the pronoun *わが*(我が). Since it combines directly with the following noun, without an intervening particle, (NP-POS (PRO *わが*)) is sister to the noun.

(393) 母親は我が子に駆け寄った。

```

( (IP-MAT (PP-SBJ (NP (N 母親))
(P-OPTR は))
(PP (NP (NP-POS (PRO 我が))
(N 子))
(P-ROLE に))
(VB 駆け寄っ)
(AXD た)
(PU . ))
(ID 736_dict_vv-lexicon))

```

16.4 Noun modifiers

16.4.1 Determiners (D) and WH-Determiners (WD)

Simple expressions that specify the denotation of an NP by relating that NP to the discourse domain are called determiners. Determiners are labelled D, while indeterminate determiners are labelled WD. Determiners do not head phrasal categories, but rather appear directly alongside the head that they modify. Here is a list of some common determiners, some of which are attested in the corpus:

この, その, あの, こんな, そんな, あんな, こういう, そういう, ああいう, こういった, そういった, ああいった, こうした, そうした, ある, いわゆる, あらゆる, さらなる, 例の

Here is a list of some common WH-determiners (WD):

どの, どんな, どういう, どういった, どのような, いかなる

A determiner D or WD is not normally a head of an NP, but appears directly under an NP as a single-word modifier of its head.

(269) この点は何の作物についても言えることでもあります。

```
( (IP-MAT (PP-SBJ (NP (D この)
                      (N 点))
                (P-OPTR は))
  (NP-PRD (IP-EMB (NP-SBJ *pro*)
                  (PP (NP (WD どの)
                        (N 作物))
                    (P-ROLE について)
                    (P-OPTR も))
                (VB 言える))
      (N こと))
  (AX で)
  (VB2 あり)
  (AX ます)
  (PU 。))
(ID 36_diet_kaigiroku-7))
```

However, there are some cases where a D or WD is annotated as the NP head. This analysis is applied for この/その/あの/どの in このくらい/そのくらい/あのくらい/どのくらい. As can be seen in (395), the NP headed by the WD どの is followed by the P-OPTR くらい.

(395) ロンドンではどのくらい雪が降りますか。
‘How frequently does it snow in London?’

```
( (CP-QUE (IP-SUB (PP (NP (NPR ロンドン))
                      (P-ROLE で)
                      (P-OPTR は))
  (PP-MSR (NP (WD どの))
          (P-OPTR くらい))
  (PP-SBJ (NP (N 雪))
          (P-ROLE が))
  (VB 降り)
  (AX ます))
  (P-FINAL か)
  (PU 。))
(ID 464_textbook_purple_basic))
```

In (396), the NP headed by the D その is the subject of the VB 取り扱う.

(396) 五その取り扱う個人情報の量及び利用方法からみて個人の権利利益を害するおそれが少ないものとして政令で定める者
‘-LRB- v -RRB- Entities specified by a Cabinet Order as having a little likelihood to harm the rights and interests of individuals considering the volume and the manner of utilization of personal information they handle.’

```
( (FRAG (LST (LS 五))
  (NP (IP-REL (NP-OB1 *T*)
              (NP-SBJ *pro*)
              (PP (NP (IP-REL (NP-SBJ *T*)
```

(IP-ADV-SCON (NP-SBJ *pro*)
 (PP (NP (PP (NP (IP-REL
 (NP-OB1 *T*)
 (NP-SBJ
 (D その))
 (VB
 取り扱う))
 (N 個人
 情報))
 (P-ROLE の))
 (NML (CONJP (NP
 (N 量))
 (CONJ
 及び))
 (NP (N 利用
 方法))))
 (P-ROLE から))
 (VB み)
 (P-CONN て))
 (PP-OB1 (NP (IP-EMB (PP-OB1 (NP (PP (NP
 (N 個人))
 (P-ROLE
 の))
 (NML
 (CONJP (NP (N 権利))
 (NP
 (N 利益))))
 (P-ROLE を))
 (VB 害する))
 (N おそれ))
 (P-ROLE が))
 (ADJI 少ない))
 (N もの))
 (P-ROLE として))
 (PP (NP (N 政令))
 (P-ROLE で))
 (VB 定める))
 (N 者)))
 (ID 18_law_h15A119))

Note that constituents containing WDs behave similarly to those containing WPROs with respect to question focus and to quantification.

16.4.2 Prenominals (PNL)

The class of prenominals (PNL) is comprised of those *rentaisi* that don't function as determiners. These do not normally head phrasal categories, but rather appear directly under NP. Here is a list of some common prenominals, some of which are attested in the corpus:

ただの, ずぶの, まったくの, まるっきりの, たいした, とんだ, れっきとした, ふとした, だいそれた, いろんな, ひよんな, いわゆる, たんなる, なだたる, あらぬ, よか

らぬ, おもわぬ, みちならぬ, あるまじき, きたるべき, あしき, よき, くしき, はずべき, おおきな, ちいさな, おかしな, ちょっとした

Although none of the items above can be used as predicates in a main or adverbial clause, some PNLs (notably おおきな, ちいさな, おかしな) can be modified by adverbial phrases or can themselves head relative clauses modifying a noun corresponding to the NP-SBJ in a double-subject construction: 目が大きな子犬. In these cases PNL is placed directly below IP-REL.

(397) 自分でも驚くほど大きな声が出ました。

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                              (PP-SCON (IP-ADV (NP-SBJ *speaker*)
                                                (PP (NP (PRO 自分))
              (P-ROLE で)
              (P-OPTR も))
              (VB 驚く))
              (P-OPTR ほど))
              (PNL 大きな))
              (N 声))
              (P-ROLE が))
              (VB 出)
              (AX まし)
              (AXD た)
              (PU 。))
  (ID 104_news_KAHOKU_34))
```

For details about the phrasal category PNLP, see section 16.5.6.

16.5 Adnominal clauses

Adnominal clauses are headed by adnominal predicates, and modify a following N, PRO, WPRO, Q, or NPR. With the exception of the short forms of the copula and some fossilized forms, adnominal predicates are indistinguishable from the past and non-past conclusive forms of predicates. Adnominal clauses are divided into three types: gapped, gapless, and complementizer clauses. The first type comprises adnominal clauses containing a gap (or “trace”) which corresponds to the head noun (i.e., the modified noun). By introducing the modified noun into the gapped position of its modifying clause (and adding any needed functional elements), a complete sentence can be “reconstructed”. This type of “gapped” adnominal clause is called a relative clause and is tagged IP-REL. The second type comprises adnominal clauses with respect to which the directly modified noun does not correspond to any grammatical role. This type of adnominal clause is called a “gapless” clause and is tagged IP-EMB. The third type comprises adnominal clauses that modify a following N, PRO, WPRO, Q, or NPR through the mediation of complex complementizers such as という, との, etc. This type of clause typically takes the form of an IP-SUB under CP-THT.

16.5.1 Adnominal clauses with traces (IP-REL)

In an IP-REL clause a trace *T* occupies a constituent-initial position (see section 8 for details) and is accompanied by information to specify a grammatical role. In (398), the trace has subject grammatical role (NP-SBJ *T*):

(398) 彼は紙であふれた机にもたれている。

```

( (IP-MAT (PP-SBJ (NP (PRO 彼))
                    (P-OPTR は))
  (PP (NP (IP-REL (NP-SBJ *T*)
                  (PP (NP (N 紙))
                      (P-ROLE で))
                  (VB あふれ)
                  (AX た))
      (N 机))
      (P-ROLE に))
  (VB もたれ)
  (P-CONN て)
  (VB2 いる)
  (PU 。))
(ID 173_aozora_Yuki-1-2000))

```

An example in which the trace has the grammatical role of primary object:

(399) 何か欲しいものはないの？

```

( (CP-QUE (IP-SUB (NP-SBJ *hearer*)
                  (NP; *OB1* (WPRO 何)
                              (P-OPTR か))
                  (PP-OB1 (NP (IP-REL (NP-OB1 *T*)
                                      (NP-SBJ *hearer*)
                                      (ADJI 欲しい))
                          (N もの))
                          (P-OPTR は))
                  (ADJI ない)
                  (FN の))
  (PU ?)
  (PUR 」))
(ID 93_aozora_Harada-1960))

```

An example of a long distance dependency, where the trace has the grammatical role of primary object in a clause embedded inside the relative clause.

(400) おばあさんに作ってもらった「きび団子」を持って出発しました。

```

( (IP-MAT (NP-SBJ; {MOMOTARO} *pro*)
  (IP-ADV-CONJ (PP-OB1 (NP; {KIBIDANGO_TEN_MADE_BY_GRANDMOTHER} (IP-REL
(NP-SBJ; {MOMOTARO} *pro*)
                                                    (PP-DOE
(NP; {GRANDMOTHER} (N おばあさん))
                                                    (IP-SMO
に))
                                                    (NP-OB1 *T*)
作っ)
て))
もらっ)
た))

```

「) (PUL
 きび団子) (NPR
 」)) (PUR

(P-ROLE を))
 (VB 持つ)
 (P-CONN て))
 (VB 出発)
 (VB0 し)
 (AX まし)
 (AXD た)
 (PU 。))
 (ID 12_misc_momotaro))

Here is an example of a relative clause in a noun phrase embedded in a second relative clause
 in a noun phrase embedded in a third relative clause:

(401) これは、ジャックが建てた家に置かれた麦芽を食べたねずみです。

‘This is the Rat , That ate the Malt , That lay in the House that Jack built .’

((IP-MAT (PP-SBJ (NP;{REF3} (PRO これ))
 (P-OPTR は))
 (PU 、)
 (NP-PRD;{RAT} (IP-REL (NP-SBJ *T*)
 (PP-OB1 (NP;{MALT} (IP-REL (NP-SBJ *T*)
 (NP-LGS *pro*)
 (PP (NP;{HOUSE}
 (IP-REL (NP-OB1 *T*)
 (NP;{JACK} (NPR ジャック))
 が))
 建て)
 た))
 家)) (N

(P-ROLE に))
 (VB 置か)
 (PASS れ)
 (AXD た))
 (N 麦芽))
 (P-ROLE を))
 (VB 食べ)
 (AXD た))
 (N ねずみ))
 (AX です)
 (PU 。))
 (ID 4_misc_CALDECOTT-1878))

Two relative clauses each modifying a nominal element independently of the other:

(402) 最も貧しい10億人を表した向こうにある箱が見えますか？

```
( (CP-QUE (IP-SUB (NP-SBJ *hearer*)
  (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
    (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
      (ADVP (ADV 最も))
      (ADJI 貧しい))
      (NUMCLP (NUM 10億)
        (CL 人)))
      (P-ROLE を))
      (VB 表し)
      (AX た))
      (IP-REL (NP-SBJ *T*)
        (PP (NP (N 向こう))
          (P-ROLE に))
          (VB ある))
        (N 箱))
        (P-ROLE が))
        (VB 見え)
        (AX ます))
        (P-FINAL か)
        (PU ?))
        (ID 101_ted_talk_7))
```

An example where the modified noun corresponds to positions in each of two coordinated clauses. In this annotation, the superordinate IP-REL is given a trace, and this is inherited by the subordinate clause through ATB extraction.

(403) 彼女はピアノが弾けそして絵もかける人です。

```
( (IP-MAT (PP-SBJ (NP; {WOMAN_27} (PRO 彼女))
  (P-OPTR は))
  (NP-PRD (IP-REL (NP-SBJ *T*)
    (IP-ADV-CONJ (PP-OB1 (NP (N ピアノ))
      (P-ROLE が))
      (VB 弾け))
    (CONJ そして)
    (PP-OB1 (NP (N 絵))
      (P-OPTR も))
      (VB かける))
    (N 人))
    (AX です)
    (PU 。))
    (ID 27_misc_EXAMPLE))
```

16.5.2 Adnominal clauses without traces (IP-EMB)

In the second group of adnominal clauses, the modified noun has no direct grammatical role with respect to the predicate of the directly modifying clause, which itself is a saturated structure. This type of “gapless” adnominal clause is assigned the label IP-EMB.

One common type of IP-EMB construction involves the modification of unsaturated nouns. Given that many unsaturated nouns (こと, ため, の, よう, etc.) rarely appear in unmodified form, and then only with particular meanings (為になる話; 事が運ばない; モノを言うのは

金だ; etc.) it is clear that in a usage as an unsaturated noun, an element cannot “reconstruct” into its modifying clause and is modified by IP-EMB.

(404) かけぶとんをはねのけるのは、まったく簡単だった。

```
( (IP-MAT (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
                                (PP-OB1 (NP (N かけぶとん))
                                             (P-ROLE を))
                                (VB はねのける))
                                (N の))
                                (P-OPTR は))
    (PU 、)
    (ADVP (ADV まったく))
    (ADJN 簡単)
    (AX だっ)
    (AXD た)
    (PU 。))
  (ID 107_aozora_Harada-1960))
```

(405) 沿線には大学が多いため学生利用が多い。

‘There are many colleges along this line, so many students use it.’

```
( (IP-MAT (NP-ADV (IP-EMB (PP (NP (N 沿線))
                                   (P-ROLE に)
                                   (P-OPTR は))
    (PP-SBJ (NP (N 大学))
              (P-ROLE が))
    (ADJI 多い))
    (N ため))
    (PP-SBJ (NP (N 学生利用))
              (P-ROLE が))
    (ADJI 多い)
    (PU 。))
  (ID 7_wikipedia_KYOTO_19))
```

(406) 私がするようにやってみてください。

‘Try doing as I do.’

```
( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
                  (PP (NP (IP-EMB (PP-SBJ (NP;{SPEAKER_1168} (PRO 私))
                                           (P-ROLE が))
                  (VB する))
                  (N よう))
                  (P-ROLE に))
    (VB やっ)
    (P-CONN て)
    (VB2 み)
    (P-CONN て)
    (VB2 ください))
    (PU 。))
  (ID 1168_textbook_kisonihongo))
```

In general, nouns that can bear propositional content all can take saturated adnominal clauses: Such clauses modifying nouns denoting forms of speech, writing, thought, perception, sense, event, activity, disposition, cause, outcome, manner, depiction, etc. are labelled IP-EMB. The class of “picture nouns” is included here.

(407) 子供が笑っている写真が置いてあった。

‘A photo of a smiling child was put there.’

```
( (IP-MAT (NP-LGS *pro*)
  (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (N 子供))
    (P-ROLE が))
    (VB 笑っ)
    (P-CONN て)
    (VB2 いる))
    (N 写真))
    (P-ROLE が))
    (VB 置き)
    (P-CONN て)
    (PASS *)
    (VB2 あっ)
    (AXD た)
    (PU 。)))
  (ID 1218_textbook_kisonihongo))
```

Additionally, when a “relative” noun (Teramura 1984, *Nihongo Kijutsu Bunpou Kenkyuukai* 2009a) (e.g., 時, 間, 前, 後, etc.) is being used as an unsaturated noun and takes a saturated adnominal clause, that clause is also tagged as an IP-EMB.

(408) 画面が見えなくなる前に

```
( (FRAG (PP (NP (IP-EMB (PP-SBJ (NP (N 画面))
  (P-ROLE が))
  (IP-SMC-OB1 (VB 見え)
    (NEG なく))
    (VB なる))
    (N 前))
    (P-ROLE に)))
  (ID 37_misc_KNB))
```

Clauses preceding and modifying 以来 and 以降 are headed by verbal predicates in the テ-form, but these are labelled IP-EMB as well.

(409) 肝臓を患って以来、酒はやめている。

‘I’ve stopped drinking since I had my liver problem.’

```
( (IP-MAT (NP-SBJ *speaker*)
  (NP-TMP (IP-EMB (PP-OB1 (NP (N 肝臓))
    (P-ROLE を))
    (VB 患っ)
    (P-CONN て))
    (N 以来))
    (PU 、)
    (PP-OB1 (NP (N 酒))
    (P-OPTR は))
    (VB やめ)
```

```

(P-CONN て)
(VB2 いる)
(PU 。))
(ID 142_textbook_djg_advanced))

```

It is possible to consider a noun like 時, 際 or 場合 appearing with a modifying clause as having some sort of adjunct-like role within that clause, warranting the use of IP-REL, but the annotation policy here emphasizes the continuity these words have with relative nouns such as like 前 or 後, and adopts the IP-EMB analysis for the modifying clause, in principle.

- (410) 今度彼に会ったときにこれを渡して下さい。
 ‘Please pass this to him next time you meet him.’

```

( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
  (PP-TMP (NP (IP-EMB (NP-TMP (N 今度))
    (PP (NP;{MAN_1273} (PRO 彼))
      (P-ROLE に))
    (VB 会っ)
    (AXD た))
    (N とき))
    (P-ROLE に))
    (NP-OB2;{MAN_1273} *pro*)
    (PP-OB1 (NP;{STUFF_1273} (PRO これ))
      (P-ROLE を))
    (VB 渡し)
    (P-CONN て)
    (VB2 下さい))
    (PU 。))
  (ID 1273_textbook_kisonihongo))

```

Of course, when a grammatical role is clearly involved, an IP-REL is adopted:

- (411) そして意外な時に出て来て外界をのぞく事がある。

```

( (IP-MAT (CONJ そして)
  (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
    (IP-ADV-CONJ (PP-TMP (NP (IP-REL (NP-SBJ *T*)
      (ADJN 意外)
      (AX な))
      (N 時))
      (P-ROLE に))
      (VB 出)
      (P-CONN て)
      (VB2 来)
      (P-CONN て))
      (PP-OB1 (NP (N 外界))
        (P-ROLE を))
      (VB のぞく))
      (N 事))
      (P-ROLE が))
      (VB ある)
      (PU 。))
    (ID 67_aozora_Terada-1921))

```

Conversely, when there is no clear grammatical relation between a modified noun and the clause that modifies it, the clause is treated as an IP-EMB.

- (412) 魚が焼けるにおいがする。
 ‘I can smell a fish being grilled.’

((IP-MAT (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (N 魚))
 (P-ROLE が))
 (VB 焼ける))
 (N におい))
 (P-ROLE が))
 (VB する)
 (PU 。))
 (ID 1216_textbook_kisonihongo))

16.5.3 Adnominally used complementizer clauses (CP-THT)

A CP-THT headed by a complementizer (P-COMP) such as という or との can also modify a noun.

- (413) 外国人に日本語を教えるという仕事は容易な仕事ではない。
 ‘It is not an easy job to teach Japanese to foreigners.’

((IP-MAT (PP-SBJ (NP (CP-THT (IP-SUB (NP-SBJ *arb*)
 (PP-OB2 (NP (N 外国人))
 (P-ROLE に))
 (PP-OB1 (NP (N 日本語))
 (P-ROLE を))
 (VB 教える))
 (P-COMP という))
 (N 仕事))
 (P-OPTR は))
 (NP-PRD (IP-REL (NP-SBJ *T*)
 (ADJN 容易)
 (AX な))
 (N 仕事))
 (AX で)
 (P-OPTR は)
 (NEG ない)
 (PU 。))
 (ID 1221_textbook_kisonihongo))

- (414) この計画の狙いはいかとの質問があった。
 ‘There was a question as to what was the aim of this plan.’

((IP-MAT (PP-SBJ (NP (CP-THT (CP-QUE (IP-SUB (PP-SBJ (NP (PP (NP; {PLAN_1210}
 (D この
 (N
 計画))
 (P-ROLE の))
 (N 狙い))
 (P-OPTR は))
 (NP-PRD (WPRO 何))
 (AX *))
 (P-FINAL か))
 (P-COMP との))


```

                (N 質問))
            (P-ROLE が))
        (VB あっ)
        (AXD た)
        (PU 。))
    (ID 1210_textbook_kisonihongo))

```

16.5.4 Internally headed relative clauses

Internally headed relative clause constructions are not very common, but when they are found, the annotation practice is to add (PP (NP *T*) (P-ROLE *.e*)) immediately to the left of the constituent (either NP or PP) that is co-referent with the modified head の:

(415) 財布が落ちているのを拾った。

‘I picked up a wallet that had dropped.’

```

    ( (IP-MAT (NP-SBJ; {SPEAKER_34} *speaker*)
      (PP-OB1 (NP (IP-REL (PP (NP *T*)
                            (P-ROLE *.e*))
                          (PP-SBJ (NP (N 財布))
                            (P-ROLE が))
                          (VB 落ち)
                          (P-CONN て)
                          (VB2 いる))
                        (N の))
                        (P-ROLE を))
      (VB 拾っ)
      (AXD た)
      (PU 。))
    (ID 34_misc_EXAMPLE))

```

(416) それから星の破片の落ちたのを拾って来て、かろく土の上へ乗せた。

```

    ( (IP-MAT (NP-SBJ *speaker*)
      (CONJ それから)
      (PP-OB1 (NP (IP-REL (PP (NP *T*)
                            (P-ROLE *.e*))
                          (PP-SBJ (NP (PP (NP (N 星))
                            (P-ROLE の))
                          (N 破片))
                          (P-ROLE の))
                          (VB 落ち)
                          (AXD た))
                        (N の))
                        (P-ROLE を))
      (IP-ADV-CONJ (VB 拾っ)
        (P-CONN て)
        (VB2 来)
        (P-CONN て))
      (PU 、)
      (ADV (ADJI かろく))
      (PP (NP (PP (NP (N 土))

```

```

(P-ROLE の))
(N 上))
(P-ROLE へ))
(VB 乗せ)
(AXD た)
(PU 。))
(ID 50_aozora_Natsume-1908))

```

16.5.5 Resumptive pronouns

When a modified N has a peripheral grammatical role with respect to the predicate heading an immediately modifying IP or is moved from an adnominal constituent (e.g., a possessive PP, a relative clause etc.) within an NP with a grammatical role, a pronoun or referring expression co-referential with the head can sometimes appear. This is a special case where the modifying IP is marked as IP-REL and the trace is put into a bare PP headed by (P-ROLE ***). Situations such as these are annotated with identical sort information on the co-referential items:

```

(28) 有間皇子がどうしてもそこから逃れることのできなかった悲運
( (FRAG (NP; {MISFORTUNE} (IP-REL (PP-SBJ (NP (NPR 有間皇子))
(P-ROLE が))
(P-SCON-CND (IP-ADV (ADVP-CMPL (WADV どう))
(VB し)
(P-CONN て))
(P-OPTR も))
(P-OB1 (NP (IP-EMB (PP (NP *T*)
(P-ROLE ***))
(PP (NP; {MISFORTUNE}
(PRO そこ))
(P-ROLE から))
(VB 逃れる))
(N こと))
(P-ROLE の))
(VB でき)
(NEG なかつ)
(AXD た))
(N 悲運)))
(ID 7_misc_EXAMPLE2))

```

```

(418) 自分の兄弟だけがその中で苦しんでいる壕のなか
( (FRAG (NP (PP (NP; {FOXHOLE_45} (IP-REL (PP (NP *T*)
(P-ROLE ***))
(PP-SBJ (NP (PP (NP; {SELF} (PRO
自分))
(P-ROLE の))
(N 兄弟))
(P-OPTR だけ)
(P-ROLE が))
(PP (NP (D; {FOXHOLE_45} その)

```

(N 中))
(P-ROLE で))
(VB 苦しん)
(P-CONN で)
(VB2 いる))
(N 壕))
(P-ROLE の))
(N なか))
(ID 8_misc_EXAMPLE2))

16.5.6 Prenominal phrases (PNLP)

The category of PNLP is reserved for noun modification which cannot be adequately described according to any of the following scenarios:

1. (NP (D ...) (N ...))
2. (NP (PNL ...) (N ...))
3. (NP (PP (NP ...) (P-ROLE の)) (N ...))
4. (NP (IP-REL ...) (N ...))
5. (NP (IP-EMB ...) (N ...))
6. (NP (CP-THT (IP-SUB ...) (P-COMP という)) (N ...))

For example, there are uses of one-place ｲ-adjectives in noun-modifying contexts where the target of modification N is not the subject of the ｲ-adjective in any direct sense, and the modifying element does not denote the propositional content of N.

(419) 昨晚古い友人が訪ねて来た

((IP-MAT (NP-TMP (N 昨晚))
(P-ROLE が))
(P-CONN て)
(VB2 来)
(AXD た))
(ID 2_misc_EXAMPLE2))

Note that PNLs are not headed by PNLs. PNLs are items that are not themselves modified, and do not appear in predicate position in main clauses or adverbial clauses, but, except for some cases, modify a given N by directly attaching to the NP which N projects (See section 16.4.2).

16.6 Vocative NPs (NP-VOC)

Vocative expressions are labelled NP-VOC.

(25) 「先生、もうお忘れですか？」

((CP-QUE (PUL 「)
 (IP-SUB (NP-VOC;{ADDRESSEE} (N 先生))
 (CLEAN *VOC*)
 (NP-SBJ;{ADDRESSEE} *hearer*)
 (PU 、)
 (NP-OB1 *pro*)
 (ADVP (ADV もう))
 (VB お忘れ)
 (AX です))
 (P-FINAL か)
 (PU ?)
 (PUR 」))
 (ID 92_aozora_Hayashida-2015))

(421) 『芳一 』

((FRAG (PUL 『)
 (NP-VOC (NPR 芳一))
 (PU !)
 (PUR 』))
 (ID 42_aozora_Togawa-1937-1))

(422) ……芳一、まア喜べ！——

((CP-IMP (PU ……)
 (IP-SUB (NP-VOC;{HOICHI} (NPR 芳一))
 (CLEAN *VOC*)
 (NP-SBJ;{HOICHI} *hearer*)
 (PU 、)
 (INTJ まア)
 (VB 喜べ))
 (PU !——))
 (ID 227_aozora_Togawa-1937-1))

See also 11.3 for discussion on NP-VOC in imperative sentences.

17 Adverb phrases (ADVP)

ADVPs usually function to modify predicates. They can also directly modify nouns that denote amount, degree, extent, etc.

(423) けれども耕助のいかりはなかなか解けませんでした。

((IP-MAT (CONJ けれども)
 (PP-SBJ (NP (PP (NP (NPR 耕助))
 (P-ROLE の))
 (N いかり))
 (P-OPTR は))
 (ADVP (ADV なかなか))
 (VB 解け)
 (AX ませ)
 (NEG ん)
 (AX だし)
 (AXD た))

(PU 。))
(ID 674_aozora_Miyazawa-1934))

(424) 学校の最も近くに住んでいるのは佐藤さんです。

((IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
(PP (NP (PP (NP (N 学校))
(P-ROLE の))
(ADVP (ADV 最も))
(N 近く))
(P-ROLE に))
(VB 住ん)
(P-CONN で)
(VB2 いる))
(N の))
(P-OPTR は))
(NP-PRD (NPR 佐藤さん))
(AX です)
(PU 。))
(ID 18_misc_EXAMPLE2))

Adverb phrases (ADVP) usually consist of an adverb head, possibly accompanied by modifiers and/or complements. Here are a few of the more common adverbs (ADV) in the corpus. There are also many lexicalised ADVs that have been derived from [VB + (P-CONN て)] sequences.

もう, そう, ちょっと, まだ, また, すぐ, とても, 少し, まず, もし, やはり, 一番, こう, ただ, あまり, 特に, もっときわめて, 次いで, 追って, 初めて, 総じて, 改めて, 時として, etc.

Here are examples for WH-adverbs (WADV):

いかが, いか, いくら, どう, どうして, どのように, どんなに, なぜ, 何故, なんて

ADV is sometimes used with a P-ROLE. The representatives of such P-ROLES are と, に and の (there are also examples of として, という, で, etc.). They are sister to ADVPs projected by ADVs and themselves project PPs.

(425) すぐに決着するわ。」

((CP-FINAL (IP-SUB (NP-SBJ *pro*)
(PP (ADVP (ADV すぐ))
(P-ROLE に))
(VB 決着)
(VB0 する))
(P-FINAL わ)
(PU 。)
(PUR 」))
(ID 402_fiction_DICK-1952))

(426) 彼はあまりの悲しみに泣き叫んだ。

```
( (IP-MAT (PP-SBJ (NP (PRO 彼))
                     (P-OPTR は))
  (PP (NP (IP-REL (NP-SBJ *T*)
                  (ADJN あまり)
                  (AX の))
      (N 悲しみ))
    (P-ROLE に))
  (VB 泣き叫ん)
  (AXD だ)
  (PU . ))
(ID 2029_dict_vv-lexicon))
```

There are adverbial expressions which end with と or に. They are treated as one word which is labelled ADV as long as they cannot stand on their own as words without と or に.

きつと, やつと, ちよつと, ずつと, じつと, そつと, とつとと, さつと, さっさと, ふわつと, etc.

特に, さらに, ついに, 現に, 主に, すでに, おおいに, ただちに, etc.

On the other hand, there are adverbials ending with と which drops optionally. In such cases, と is analyzed as an independent word and labelled AX, although the maximal projection remains to be ADVP.

(427) ドールはゆっくりと携帯武器をはずした。

```
( (IP-MAT (PP-SBJ (NP (NPR ドール))
                     (P-OPTR は))
  (ADVP (ADV ゆっくり)
        (AX と))
  (PP-OB1 (NP (N 携帯武器))
          (P-ROLE を))
  (VB はずし)
  (AXD た)
  (PU . ))
(ID 351_fiction_DICK-1952))
```

(428) 息切れが早くもはっきりと表われ始めた。

```
( (IP-MAT (PP-SBJ (NP (N 息切れ))
                     (P-ROLE が))
  (PP (ADVP (ADJI 早く))
      (P-OPTR も))
  (ADVP (ADV はっきり)
        (AX と))
  (VB 表われ)
  (VB2 始め)
  (AXD た)
  (PU . ))
(ID 814_aozora_Harada-1960))
```

イ-adjectives (ADJIs) in the infinitive inflection can head ADVPs.

(429) 僕の友だちは優しく、寛大に微笑んだ。

((IP-MAT (PP-SBJ (NP;{PRINCE} (PP (NP;{BOKU} (PRO 僕))
(P-ROLE の))
(N 友だち))
(P-OPTR は))
(ADVP (ADJI 優しく))
(PU 、)
(ADVP (ADJN 寛大)
(AX に))
(VB 微笑ん)
(AXD だ)
(PU 。))
(ID 97_fiction_SAINTE-EXUPERY-1943))

The copula (AX に) or (AX と) preceded by ADJNs can also head ADVPs.

(430) ドールは不機嫌に言った。

((IP-MAT (NP-OB1 *pro*)
(PP-SBJ (NP (NPR ドール))
(P-OPTR は))
(ADVP (ADJN 不機嫌)
(AX に))
(VB 言っ)
(AXD た)
(PU 。))
(ID 179_fiction_DICK-1952))

(431) 彼は茫然と、立ちすくんだ。

((IP-MAT (PP-SBJ (NP (PRO 彼))
(P-OPTR は))
(ADVP (ADJN 茫然)
(AX と))
(PU 、)
(VB 立ちすくん)
(AXD だ)
(PU 。))
(ID 204_aozora_Dazai-2-1940))

ADVPs can be followed by *toritate* particles.

(432) たまにはおごれよ。

‘Pay for me sometimes.’

((CP-IMP (IP-SUB (NP-SBJ *hearer*)
(PP (ADVP (ADV たまに))
(P-OPTR は))
(VB おごれ))
(P-FINAL よ)
(PU 。))
(ID 288_textbook_purple_intermediate))

ADVPs appear sometimes in conjunctive structures. In many cases, conjoined adverb phrases are connected by means of conjunctive adverbs such as *そして*, *かつ*, and *あるいは*.

(433) 彼らは狙いをうまく、そして完全に定めた。

```

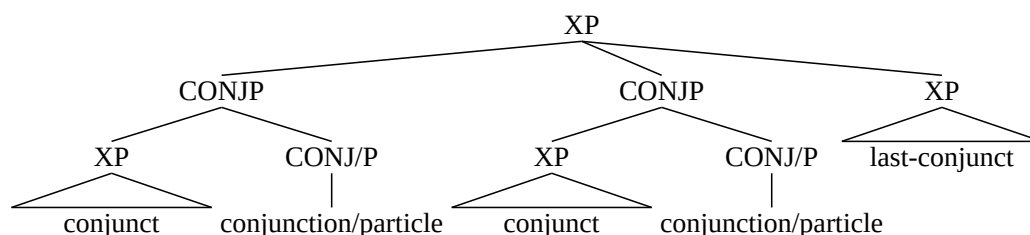
( (IP-MAT (PP-SBJ (NP (PRO 彼ら))
                     (P-OPTR は))
  (PP-OB1 (NP (N 狙い))
           (P-ROLE を))
  (ADVP (CONJP (ADVP (ADJI うまく))
              (PU 、)
              (CONJ そして))
        (ADVP (ADJN 完全)
              (AX に)))
  (VB 定め)
  (AXD た)
  (PU 。))
(ID 138_fiction_DICK-1952))

```

18 Coordination of elements other than IP-ADVs (CONJP)

This section considers coordination between constituents that are not adverbial clauses. Such genuine coordination can occur between two or more ADVPs, PPs, NPs, CP-QUEs, etc.

When phrases are connected with conjunction, all but the last conjuncts are labelled as CONJPs, headed by CONJ or P, and adjoined to the last conjunct at the phrasal level, as illustrated in the following schema:



In bracketed notation this is:

```

(XP (CONJP (XP conjunct)
            (CONJ/P particle/conjunction))
  (CONJP (XP conjunct)
          (CONJ/P particle/conjunction))
  (XP last-conjunct))

```

There are many particles that appear in patterns to form non-clausal coordinations. See section 14.4 for more discussion.

There are a number of set constructions with a coordinating function, e.g.,

～も～も, ～か～か, ～なり～なり, ～とか～とか, ～など～など, ～だの～だの, ～だとか～だとか, ～やら～やら

18.1 Coordinated NPs

A conjunctive particle (P-CONN) or coordinating conjunction (CONJ) can head a CONJP dominating a non-final conjunct NP.

(434) 昔々、ある所におじいさんとおばあさんがおりました。

```

( (IP-MAT (NP-TMP (N 昔々))
  (PU 、)
  (PP (NP; {GRANDPARENT_INHABITANCE} (D ある)

```


(N 所))

(P-ROLE に))

(PP-SBJ (NP (CONJP (NP;{GRANDFATHER} (N おじいさん))
(P-CONN と))
(NP;{GRANDMOTHER} (N おばあさん)))
(P-ROLE が))

(VB おり)

(AX まし)

(AXD た)

(PU 。))

(ID 2_misc_momotaro))

(435) まず、租税及び印紙収入について申し上げます。

((IP-MAT (NP-SBJ *speaker*)
(ADVP (ADV まず))
(PU 、)
(PP (NP (CONJP (NP (N 租税))
(CONJ 及び))
(NP (N 印紙収入)))
(P-ROLE について))
(VB 申し上げ)
(AX ます)
(PU 。))

(ID 38_diet_kaigiroku-13))

A P-CONN and CONJ can cooccur under a CONJP.

(436) この申込書は本人か、もしくは保証人が記入しなければならない。
‘This application has to be filled in by the applicant or by his/her guarantor.’

((IP-MAT (PP-OB1 (NP (D この)
(N 申込書))
(P-OPTR は))
(PP-SBJ (NP (CONJP (NP (N 本人))
(P-CONN か)
(PU 、)
(CONJ もしくは))
(NP (N 保証人)))
(P-ROLE が))
(VB 記入)
(VB0 し)
(NEG なけれ)
(P-CONN ば)
(VB2 なら)
(NEG ない)
(PU 。))

(ID 249_textbook_djg_advanced))

A conjunctive particle is frequently paired with the same particle that marks the entire coordination, forming a set construction of the type mentioned above. The particle that marks the entire coordination indicates the nature of the coordination as either an exhaustive list or an inexhaustive list. These list-ending particles are “buried” under the superordinate NP (see section 14.11 for more discussion).

(437) こうして天と地と、その万象とが完成した。

```
( (IP-MAT (CONJ こうして)
  (PP-SBJ (NP (CONJP (NP (N 天))
    (P-CONN と))
    (CONJP (NP (N 地))
    (P-CONN と))
    (PU 、)
    (NP (D その)
    (N 万象))
    (P-CONN と))
    (P-ROLE が))
  (VB 完成)
  (VB0 し)
  (AXD た)
  (PU 。))
(ID 72_bible_ot))
```

(438) 私は電車かバスかで行きます。
‘I will go either by train or by bus.’

```
( (IP-MAT (PP-SBJ (NP (PRO 私))
  (P-OPTR は))
  (PP (NP (CONJP (NP (N 電車))
    (P-CONN か))
    (NP (N バス))
    (P-CONN か))
    (P-ROLE で))
  (VB 行き)
  (AX ます)
  (PU 。))
(ID 74_textbook_djg_basic))
```

18.2 Coordinated PPs

PPs can also form the non-clausal coordination structure. Note that particles marking the above-mentioned set constructions do not project PPs on their own, as in (437) and (211).

(439) 終日近鉄線内のみ、もしくは地下鉄烏丸線内のみ運用もある。
‘Some trains run only within the Kintetsu Line or only within the Karasuma Line all day long.’

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
  (NP-MSR (N 終日))
  (PP-PRD (CONJP (PP (NP (N 近鉄線内))
    (P-OPTR のみ))
    (PU 、)
    (CONJ もしくは))
    (PP (NP (N 地下鉄烏丸線内))
    (P-OPTR のみ)))
  (AX の))
  (N 運用))
  (P-OPTR も))
```

(VB ある)
 (PU 。))
 (ID 33_wikipedia_KYOTO_19))

(211) 捕り方衆の叫び声があっちからもこっちからも聞こえて来る。

((IP-MAT (PP-SBJ (NP (PP (NP (N 捕り方衆))
 (P-ROLE の))
 (N 叫び声))
 (P-ROLE が))
 (PP (CONJP (PP (NP (PRO あっち))
 (P-ROLE から))
 (P-CONN も))
 (PP (NP (PRO こっち))
 (P-ROLE から))
 (P-CONN も))
 (VB 聞こえ)
 (P-CONN て)
 (VB2 来る)
 (PU 。))
 (ID 5_aozora_Kunieda-1925))

18.3 Coordinated ADVPs

Coordinated ADVPs usually involve an overt coordinating conjunction such as また, かつ, しかも, しかし, etc.

(441) 涼しさの生じるためには、どうも時間的にまた空間的に温度の短週期的変化の
 あることが必要条件であるらしい。

((IP-MAT (PP (NP (IP-EMB (PP-SBJ (NP (N 涼しさ))
 (P-ROLE の))
 (VB 生じる))
 (N ため))
 (P-ROLE に)
 (P-OPTR は))
 (PU 、)
 (ADVP (WADV どう)
 (P-OPTR も))
 (PP-SBJ (NP (IP-EMB (ADVP (CONJP (ADVP (ADJN 時間的)
 (AX に))
 (CONJ また))
 (ADVP (ADJN 空間的)
 (AX に)))
 (PP-SBJ (NP (PP (NP (N 温度))
 (P-ROLE の))
 (N 短週期的変化))
 (P-ROLE の))
 (VB ある))
 (N こと))
 (P-ROLE が))
 (NP-PRD (N 必要条件))

(AX で)
 (VB2 ある)
 (MD らしい)
 (PU 。))
 (ID 14_aozora_Terada-1929))

(442) そんな服を着たまま、この老人はひどく窮屈に、しかし安らかに眠っているのだった。

((IP-MAT (NP-ADV (IP-EMB (PP-OB1 (NP (D そんな
 (N 服))
 (P-ROLE を))
 (VB 着)
 (AXD た))
 (N まま))
 (PU 、)
 (PP-SBJ (NP;{FATHER} (D この
 (N 老人))
 (P-OPTR は))
 (ADVP (CONJP (ADVP (ADVP (ADJI ひどく))
 (ADJN 窮屈)
 (AX に))
 (PU 、)
 (CONJ しかし))
 (ADVP (ADJN 安らか)
 (AX に)))
 (VB 眠っ)
 (P-CONN て)
 (VB2 いる)
 (FN の)
 (AX だっ)
 (AXD た)
 (PU 。))
 (ID 855_aozora_Harada-1960))

18.4 Coordinated CP-QUEs

CP-QUEs can sometimes be coordinated, both with or without overt conjunctions. When each conjunct is followed by the same particle such as か, there are two possible ways of annotation: One is to regard か as P-FINAL which projects the CP-QUE; The other is to treat it as P-CONN which forms the structure mentioned in section 18.1. The choice depends on the nature of coordination. When CP-QUEs are merely conjoined, the former strategy is adopted, as in (443). When they are alternatives to each other, the latter is applied, as in (444).

(443) それは、わたしがどこからきたのか、また、どこへ行くのかを知っているからである。

((IP-MAT (PP-SBJ (NP (PRO それ))
 (P-OPTR は))
 (PU 、)
 (PP-PRD (IP-ADV (NP-SBJ *speaker*)
 (PP-OB1 (CP-QUE (CONJP (CP-QUE (IP-SUB (PP-SBJ

(NP;{JESUS} (PRO わたし))
 が)) (P-ROLE
 (PP (NP
 (WPRO どこ)) (P-ROLE
 から))
 (VB き)
 (AXD た)
 (FN の))
 (P-FINAL か)
 (PU 、))
 (CONJ また)
 (PU 、))
 (CP-QUE (IP-SUB (NP-SBJ *speaker*)
 (PP (NP (WPRO ど
 こ)) (P-ROLE へ))
 (VB 行く)
 (FN の))
 (P-FINAL か)))
 (P-ROLE を))
 (VB 知っ)
 (P-CONN て)
 (VB2 いる))
 (P-CONN から))
 (AX で)
 (VB2 ある)
 (PU 。))
 (ID 635_bible_nt))

(444) 傘を駅に置き忘れたのか事務所に忘れたのか、はっきり覚えていません。
 'I don't remember well whether I left my umbrella at the station or in my office.'

((IP-MAT (NP-SBJ *speaker*)
 (CP-QUE-OB1 (CONJP (CP-QUE (IP-SUB (NP-SBJ *speaker*)
 (PP-OB1 (NP;{UMBRELLA} (N 傘))
 (P-ROLE を))
 (PP (NP (N 駅))
 (P-ROLE に))
 (VB 置き)
 (VB2 忘れ)
 (AXD た)
 (FN の)))
 (P-CONN か))
 (CP-QUE (IP-SUB (NP-SBJ *speaker*)
 (NP-OB1;{UMBRELLA} *pro*)
 (PP (NP (N 事務所))
 (P-ROLE に))
 (VB 忘れ)
 (AXD た)

(FN の)))

(P-CONN か))

(PU 、)
(ADVP (ADV はっきり))
(VB 覚え)
(P-CONN て)
(VB2 い)
(AX ませ)
(NEG ん)
(PU 。))

(ID 87_textbook_djg_intermediate))

Note that in cases where multiple utterances of interrogative sentences are quoted, the tag multi-sentence is used (see section 24.5 for details).

(445) え？ どの医者がそんな便利な診断書をくれるんですか、と伊沢が仰天して訊ねると、仕立屋の方が呆気にとられた面持で、なんですか、よそじゃ、そうじゃないんですか、と訊いた。

((IP-MAT (PP-SCON (IP-ADV (CP-THT-OB1 (multi-sentence (INTJP (INTJ え)
(PU ?))
(CP-QUE (IP-SUB (PP-SBJ
(NP (WD どの)
(N
医者))
(P-ROLE
が))
(PP-OB1
(NP (D そんな)
(IP
(NP-SBJ *T*))
便利)
な))
(N
診断書))
(P-ROLE
を))
(VB
くれる)
(FN
ん)
(AX
です))
(P-FINAL か)))

(PU 、)
(P-COMP と))
(PP-SBJ (NP (NPR 伊沢))
(P-ROLE が))
(IP-ADV-CONJ (VB 仰天)
(VB0 し)

```

(P-CONN て))
(VB 訊ねる))
(P-CONN と))
(PU 、)
(PP-SBJ (NP (PP (NP (N 仕立屋))
(P-ROLE の))
(N 方))
(P-ROLE が))
(PP (NP (IP-EMB (VB 呆気にとられ)
(AXD た))
(N 面持))
(P-ROLE で))
(PU 、)
(CP-THT-OB1 (multi-sentence (CP-QUE (IP-SUB (NP-PRD (WPRO なん))
(AX です))
(P-FINAL か))
(PU 、)
(CP-QUE (IP-SUB (NP-SBJ *pro*)
(PP (NP (N よそ))
(P-ROLE じゃ))
(PU 、)
(ADVP-PRD (ADV そう))
(AX じゃ)
(NEG ない)
(FN ん)
(AX です))
(P-FINAL か)))
(PU 、)
(P-COMP と))
(VB 訊い)
(AXD た)
(PU 。))
(ID 19_aozora_Sakaguchi-1947))

```

19 Parenthetical layers (PRN)

The node label PRN is used for elements bounded by brackets or for an element in an appositive relationship with another element. Dashes and parentheses (PUL and PUR) that set off a PRN will be contained within the PRN node.

PRNs contain a variety of different projections and cover a wide range of various functions some of which are, contrary to their parenthetical nature, semantically significant. In particular, they can be mere side remarks to, functional equivalents of, or even quantifiers of, those which they modify.

(446) ○国務大臣 (三塚博君)

```

( (FRAG (SYM ○)
(NP (N 国務大臣)
(PRN (PUL (
(NP (NPR 三塚博君))

```

(PUR))))
 (ID 18_diet_kaigiroku-13))

(447) 津波を防御した仙台東部道路の内陸側に立地する＝仙台市若林区荒井東

((IP-MAT (NP-SBJ *pro*)
 (PP (NP (PP (NP (IP-REL (NP-SBJ *T*)
 (PP-OB1 (NP (N 津波))
 (P-ROLE を))
 (VB 防御)
 (VB0 し)
 (AXD た))
 (NPR 仙台東部道路))
 (P-ROLE の))
 (N 内陸側))
 (P-ROLE に))
 (VB 立地)
 (VB0 する)
 (META (SYM =)
 (NP;{LOC} (NPR 仙台市)
 (NPR 若林区)
 (NPR 荒井東))))))

(ID 34_news_KAHOKU_78))

Among appositive PRNs, the following sorts can be seen:

- Frequently a PRN will be next to either a common noun (N), a proper noun (NPR) or a pronoun (PRO), adding supplementary information to the head of the NP dominating them both.

(448) 東北の空の玄関口・仙台空港は、16年3月の民営化方針が正式決定した。

((IP-MAT (PP-SBJ (NP;{FAC} (PRN (NP (PP (NP (PP (NP;{NORP} (NPR 東北))
 (P-ROLE の))
 (N 空))
 (P-ROLE の))
 (N 玄関口)))
 (PU ・)
 (NPR 仙台空港))
 (P-OPTR は))
 (PU 、)
 (PP-SBJ2 (NP (PP (NP (NUMCLP (NUM 16)
 (CL 年))
 (NUMCLP (NUM 3)
 (CL 月)))
 (P-ROLE の))
 (N 民営化方針))
 (P-ROLE が))
 (VB 正式決定)
 (VB0 し)
 (AXD た)
 (PU 。。))

(ID 86_news_KAHOKU_78))

(449) 我々が——我々日本帝国人民が偉いか、

```
( (CP-QUE (IP-SUB (FS (PP (NP (PRO 我々))
                             (P-ROLE が)))
      (PU —)
      (PP-SBJ (NP (PRO 我々)
                  (PRN (NP (N 日本帝国人民))))
              (P-ROLE が))
      (ADJI 偉い))
  (P-FINAL か)
  (PU 、))
(ID 190_aozora_Kobayashi-1929))
```

- A PRN can also break into speech acts, containing an insertive sentence (an IP-MAT or a CP) and then being an element of another clause.

(450) 答えるべき質問は—もう時間ですね—毎日の生活の中でどうすればより多くの時間をフローの状態にできるか

```
( (IP-MAT (PP-SBJ (NP (IP-REL (PP (NP *T*)
                                   (P-ROLE *に*))
                                   (NP-SBJ *speaker+pro*)
                                   (VB 答える)
                                   (MD べき))
                     (N 質問))
      (P-OPTR は))
  (PRN (PU --)
    (CP-FINAL (IP-SUB (ADVP (ADV もう))
                      (NP-PRD (N 時間))
                      (AX です))
      (P-FINAL ね))
    (PU --))
  (CP-QUE-PRD (IP-SUB (NP-SBJ *arb*)
                    (PP (NP (PP (NP (PP (NP (Q 毎日))
                                   (P-ROLE の))
                                   (N 生活))
                                   (P-ROLE の))
                                   (N 中))
                                   (P-ROLE で))
                    (IP-ADV-SCON-CND (ADVP-CMPL (WADV どう))
                                      (VB すれ)
                                      (P-CONN ば))
                    (PP-OB1 (NP (IP-REL;* (NP-SBJ *T*)
                                   (NP-PRD (ADV より)
                                   (Q 多く))
                                   (AX の))
                          (N 時間))
                        (P-ROLE を))
                    (IP-SMC-CNT (NP-PRD (PP (NP (N フロー))
                                   (P-ROLE の))
                                   (N 状態))
                              (AX に))
```

(VB できる))
(P-FINAL か))
(AX *))
(ID 136_ted_talk_3))

- A PRN immediately following common noun (N), a proper noun (NPR) or a pronoun (PRO) may contain an NP headed by a reflexive pronoun (for details about reflexive pronouns, see section 16.1).

(451) ——それは支配人自身だった。

((IP-MAT (PU —)
(PP-SBJ (NP (PRO それ))
(P-OPTR は))
(NP-PRD; {MANAGER} (N 支配人)
(PRN (NP (PRO 自身))))
(AX だっ)
(AXD た)
(PU 。))
(ID 158_aozora_Harada-1960))

(452) そして私はその中に現実の私自身を見失うのを楽しんだ。

((IP-MAT (CONJ そして)
(PP-SBJ (NP (PRO 私))
(P-OPTR は))
(PP (NP (D その)
(N 中))
(P-ROLE に))
(PP-OB1 (NP (IP-EMB (PP-OB1 (NP (PP (NP (N 現実))
(P-ROLE の))
(PRO 私)
(PRN (NP (PRO 自身))))
(P-ROLE を))
(VB 見失う))
(N の))
(P-ROLE を))
(VB 楽しん)
(AXD だ)
(PU 。))
(ID 27_aozora_Kajii-1925))

- A PRN immediately following a common noun (N), a proper noun (NPR) or a pronoun (PRO) may contain a quantificational NP headed by a numeral classifier phrase (NUMCLP), a quantifier (Q), or a noun/quantifier word (QN), which quantifies those preceding nominal head. In this case, the quantificational NP inside the PRN must be marked by ;*, as in (453) below. (see section 20.5.2 for details).

(453) 社員全員が昇進を目指している。

((IP-MAT (PP-SBJ (NP (N 社員)
(PRN (NP;* (Q 全員))))
(P-ROLE が))

(PP-OB1 (NP (N 昇進))
(P-ROLE を))
(VB 目指し)
(P-CONN て)
(VB2 いる)
(PU 。))
(ID 71_misc_JSeM_beta_150530))

(454) うち多賀城市は対象の農地 9 7 ヘクタールの工事が全て完了した。

((IP-MAT (ADVP (ADV うち))
(PP-SBJ (NP (NPR 多賀城市))
(P-OPTR は))
(PP-SBJ2 (NP (PP (NP (IP-REL (NP-SBJ *T*)
(NP-PRD (N 対象))
(AX の))
(N 農地)
(PRN (NP; * (NUMCLP (NUM 9 7)
(CL ヘクタール))))))
(P-ROLE の))
(N 工事))
(P-ROLE が))
(NP; *SBJ* (Q 全て))
(VB 完了)
(VB0 し)
(AXD た)
(PU 。))
(ID 46_news_KAHOKU_84))

- A PRN can embrace a CP-THT or a CP-QUE which complements some postceding NP (e.g., headed by 発言, 質問, 答え, 動機, 傾向, etc.) which semantically requires a statement or a question and is allegedly drifted apart from that NP. In this case, the PRN and its trace will be *ICH*-marked (section 8.2). For details see section 24.17.3 and 24.16.2.

(455) 芸術界で今何が起こっているか動向が分かるとされるものでした

((IP-MAT (NP-SBJ *pro*)
(NP-PRD (IP-EMB (NP-LGS *arb*)
(CP-THT-SBJ (IP-SUB (PRN-1 (CP-QUE (IP-SUB (PP
(NP (N 芸術界))
(P-ROLE
で))
(NP-TMP
(N 今))
(PP-SBJ
(NP (WPRO 何))
(P-ROLE
が))
(VB
起こっ)
(P-CONN

て)
 (VB2
 いる))
 (P-FINAL か))
 (PP-SBJ (NP (N 動向)
 (PRN *ICH*-1))
 (P-ROLE が))
 (VB 分かる))
 (P-COMP と))
 (VB さ)
 (PASS れる))
 (N もの))
 (AX でし)
 (AXD た))
 (ID 20_ted_talk_10))

(456) 真宗の寺院建築には他にも内陣に比べて外陣が広いなど、他宗に見られない特徴がある。

‘Additionally, the architecture of Shinshu temples has unique features rarely seen in other sects, such as wider Gejin (nave) compared to Naijin (chancel).’

((IP-MAT (PP (NP (PP (NP (NPR 真宗))
 (P-ROLE の))
 (N 寺院建築))
 (P-ROLE に)
 (P-OPTR は))
 (PP (NP (N 他))
 (P-ROLE に)
 (P-OPTR も))
 (PRN-1 (CP-THT (IP-SUB (PP (NP (N 内陣))
 (P-ROLE に比べて))
 (PP-SBJ (NP (N 外陣))
 (P-ROLE が))
 (ADJI 広い))
 (P-OPTR など)))
 (PU 、)
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (NP-LGS *arb*)
 (PP (NP (N 他宗))
 (P-ROLE に))
 (VB 見)
 (PASS られ)
 (NEG ない))
 (N 特徴)
 (PRN *ICH*-1))
 (P-ROLE が))
 (VB ある)
 (PU 。))
 (ID 31_wikipedia_KYOTO_3))

20 Quantifiers

This section looks at the family of expressions that are headed by elements used for quantification. These elements are broadly divided into three categories: (i) elements that are quantifiers in their own right and do not contain numerals, (ii) elements that involve numerals, and (iii) indeterminate (wh-) words that function quantificationally when paired with the particles も and か. These preliminary elements are henceforth named “quantifier radicals”. Quantifier radicals immediately project NPs, sometimes with modifiers included inside. These NP projections will be called “quantificational NPs”. Quantificational NPs can be either independent or further take host nominals as their quantificational restrictors.

20.1 Three kinds of quantifier radical

20.1.1 Quantifiers (Q)

Words that form quantifier radicals without numerals (NUM or WNUM) are labelled Q (quantifier). Qs always project an NP.

(457) 泥棒は店から宝石をすべて奪い去った。

```
( (IP-MAT (PP-SBJ (NP (N 泥棒))
                      (P-OPTR は))
  (PP-OB2 (NP (N 店))
          (P-ROLE から))
  (PP-OB1 (NP (N 宝石))
          (P-ROLE を))
  (NP;*OB1* (Q すべて))
  (VB 奪い去っ)
  (AXD た)
  (PU . ))
(ID 338_dict_vv-lexicon))
```

Below is a list of frequent Qs in the corpus:

全て, ことごとく, よろず, 一同, 一切, 全部, 皆, 全, 全員, 全額, 全体, 全量, 全般, 全域, 全長, 全国, 全世帯, 全世界, 等

おのおの (各々), それぞれ, めいめい, 各, 各位, 各国, 各地, 各駅, 各戸, 各所, 各要素, 各紙, 各自, 各項目

毎回, 毎夜, 毎年, 毎年度, 毎度, 毎日, 毎時, 毎晩, 毎月, 毎朝, 毎秒, 毎試合, 毎週, 毎号

両方, 双方, 兩人, 両件, 両側, 両国, 両手, 両日, 両案, 両者, 両親, 両論, 両足, 両郡, 両陣営, 両面, 両駅, 同士, 共

多く, 多勢, 多少, 多数, 多額, かなり, ぎょうさん, 大半, 大抵, 大方, たくさん, たっぷり, 誰一人, すこし, ちょっと, なにひとつ, ほとんど, もろもろ, 一杯, 一部, 半分, 半数, 大部分, 大量, 定量, 小量, 少量, 少し, 少数, 幾分, 幾多, 悉く, 数々, 数多, 数多く, 殆ど, 倍, 倍量, 若干

20.1.2 Numeral-classifier phrases (NUMCLP)

Quantifying expressions which contain a numeral (NUM) or indeterminate numeral (WNUM), are labelled NUMCLPs regardless of whether it is ordinal or cardinal.

(458) その学会にはおよそ 1 5 0 0 人の会員がいる。

‘That academic association has approximately 1,500 members.’

```
( (IP-MAT (PP (NP (D その)
                  (N 学会))
              (P-ROLE に)
              (P-OPTR は))
  (PP-SBJ (NP (IP-REL;* (NP-SBJ *T*)
                      (NP-PRD (ADV およそ)
                              (NUMCLP (NUM 1 5 0 0)
                                        (CL 人)))
                      (AX の))
          (N 会員))
        (P-ROLE が))
  (VB いる)
  (PU 。))
(ID 454_textbook_djg_advanced))
```

(459) このアートは何百年も続いているのです

```
( (IP-MAT (PP-SBJ (NP (D この)
                    (N アート))
          (P-OPTR は))
  (PP-MSR (NP (NUMCLP (WNUM 何百)
                      (CL 年))
              (P-OPTR も))
  (VB 続い)
  (P-CONN て)
  (VB2 いる)
  (FN の)
  (AX です))
(ID 18_ted_talk_1))
```

(460) 第一章総則

‘Chapter I General Provisions’

```
( (FRAG (NP (NUMCLP (NUM 第一)
                   (CL 章))
          (N 総則)))
(ID 2_law_h15A119))
```

NUMCLPs are typically composed of a NUM or WNUM paired with a classifier (CL). However, there are two exceptional kinds of NUMCLPs which lack CL. One is such that they are solely projected by (W)NUMs.

(461) 私はまだ十八ですわ。

‘I am still eighteen.’

((CP-FINAL (IP-SUB (PP-SBJ (NP (PRO 私))
(P-OPTR は))
(ADVP (ADV まだ))
(NP-PRD (NUMCLP (NUM 十八)))
(AX です))
(P-FINAL わ)
(PU 。))
(ID 213_textbook_djg_gram_terms))

(462) もう六時半で、針は落ちつき払って進んでいく。

((IP-MAT (IP-ADV-CONJ (NP-SBJ *pro*)
(ADVP (ADV もう))
(NP-PRD (NUMCLP (NUM 六)
(CL 時))
(NUMCLP (NUM 半)))
(AX で))
(PU 、)
(PP-SBJ (NP (N 針))
(P-OPTR は))
(IP-ADV-CONJ (VB 落ちつき払っ)
(P-CONN て))
(VB 進ん)
(P-CONN で)
(VB2 いく)
(PU 。))
(ID 51_aozora_Harada-1960))

The other cases involve conventional phonological idiomaticity (juku-ji-kun, 熟字訓). 一人 (hitori, one person) and 二人 (futari, two persons) are typical examples.

(463) 第2テノールの一人はパヴァロッティだ。
‘One of the leading tenors is Pavarotti.’

((IP-MAT (PP-SBJ (NP (PP (NP (N 第2テノール))
(P-ROLE の))
(NUMCLP (NUM 一人)))
(P-OPTR は))
(NP-PRD (NPR パヴァロッティ))
(AX だ)
(PU 。))
(ID 229_misc_JSeM_beta_150530))

The immediate conclusion is that it is the NUM that obligatory appears in a NUMCLP as a head.

Classifiers are basically nominal in nature. Here are selective examples of typical CLs:

円, 回, 階, 階建て, ケ月, ケ国, 項, 号, 時, 時間, 時間目, セット, 足, (いく)つ, 月, 度, 名, 日, 人, 年, 年間, パーセント, 杯, 匹, 分, 本, 枚, 面

CLs, in fact, do not form a closed set; Japanese exhibits a flexibility that ordinary nominal expressions can also pretend to be CLs, as is shown by the following example (464) (That 特別委員会 is an ordinary noun can be verified by its possible occurrence in an argument position. Compare *個が開かれた with 特別委員会が開かれた).

(464) 次に、ただいま決定いたしました特別委員会を除く四特別委員会につきまして
は、理事会で合意いたしましたとおり設置することとし、本日の本会議において
議決するに御異議ありませんか。

((CP-QUE (IP-SUB (NP-SBJ *hearer*)
(PP (NP (N 次))
(P-ROLE に))
(PU 、)
(PP (IP-NMZ (IP-ADV-CONJ (PP (NP (IP-EMB (NP-ADV (IP-EMB
(PP (NP (IP-EMB (NP-SBJ *exp*)

(NP (IP-REL (NP-SBJ *T*)

(N ただいま))

決定)

いたし)

まし)

た))

特別委員会))

を))

除く))

(NUMCLP (NUM 四)

特別委員会))))

につきまして)

は))

、)

(NP (N 理事会))

で))

合意)

いたし)

まし)

た))

(N と

おり))

(VB 設置)
(VB0 する))
(N こと))
(P-ROLE と))
(VB し))
(PU 、)
(PP (NP (PP (NP (N 本日))
(P-ROLE の))
(N 本会議))
(P-ROLE において))
(VB 議決)
(VB0 する))
(P-ROLE に))
(NP-OB1 (N 御異議))
(VB あり)
(AX ませ)
(NEG ん))
(P-FINAL か)
(PU 。))
(ID 28_diet_kaigiroku-14))

Despite their inner complexity, NUMCLPs behave as atomic Ns. They further project an NP just as do quantifiers (Qs). Modifications on numeral expressions are done in between the NUMCLP and the higher NP projections.

(465) この店は朝7時から営業している。
'This shop is open from seven in the morning.'

((IP-MAT (PP-SBJ (NP;{SHOP_219} (D この)
(N 店))
(P-OPTR は))
(PP-TMP (NP (N 朝)
(NUMCLP (NUM 7)
(CL 時)))
(P-ROLE から))
(VB 営業)
(VB0 し)
(P-CONN て)
(VB2 いる)
(PU 。))
(ID 219_textbook_kisonihongo))

(466) この3年間は消費が冷え込んでいる。

((IP-MAT (PP-TMP (NP (D この)
(NUMCLP (NUM 3)
(CL 年間)))
(P-OPTR は))
(PP-SBJ (NP (N 消費))
(P-ROLE が))
(VB 冷え込ん)
(P-CONN で)

(VB2 いる)
 (PU .))
 (ID 2499_dict_vv-lexicon))

(467) がらんとした旅館の一室。

((FRAG (NP (IP-REL (NP-SBJ *T*)
 (ADVP-CMPL (ADV がらんと))
 (VB し)
 (AX た))
 (PP (NP (N 旅館))
 (P-ROLE の))
 (NUMCLP (NUM 一)
 (CL 室)))
 (PU .))
 (ID 20_aozora_Kajii-1925))

(468) 各店も対策に追われる1年になるだろう。

((IP-MAT (NP-SBJ *exp*)
 (IP-SMC-OB1 (NP-PRD (IP-EMB (PP-SBJ (NP (Q 各店))
 (P-OPTR も))
 (PP-LGS (NP (N 対策))
 (P-ROLE に))
 (VB 追わ)
 (PASS れる))
 (NUMCLP (NUM 1)
 (CL 年)))
 (AX に))
 (VB なる)
 (MD だろう)
 (PU .))
 (ID 62_news_KAHOKU_113))

20.1.3 WH-Quantification Radicals (w-expressions)

Expressions containing indeterminate words (including WPRO, WD, WADV and WNUM) are quantifier radicals when they are accompanied by particles か and も. For convenience we refer to these as “w-expressions”.

If a w-expression is under a category marked by も the whole quantificational NP takes on a quantificational force of concession (free choice).

(469) 試験に通りさえすれば、何も問題はない。
 ‘If you pass the exam, there will be no problem.’

((IP-MAT (IP-ADV-SCON-CND (NP-SBJ; {MAN_830} *pro*)
 (PP (NP (N 試験))
 (P-ROLE に))
 (VB 通り)
 (P-OPTR さえ)
 (VB2 すれ)
 (P-CONN ば))
 (PU 、)

(NP;*SBJ* (WPRO 何)
 (P-OPTR も))
 (PP-SBJ (NP (N 問題))
 (P-OPTR は))
 (ADJI ない)
 (PU 。))
 (ID 830_textbook_kisonihongo))

(470) 会計士は誰も会議に出席しなかった。
 ‘No accountant attended the meeting.’

((IP-MAT (PP-SBJ (NP (N 会計士))
 (P-OPTR は))
 (NP;*SBJ* (WPRO 誰)
 (P-OPTR も))
 (PP (NP (N 会議))
 (P-ROLE に))
 (VB 出席)
 (VB0 し)
 (NEG なかつ)
 (AXD た)
 (PU 。))
 (ID 1024_misc_JSeM_beta_150530))

(471) 津波は誰にも止められない。

((IP-MAT (PP-OB1 (NP (N 津波))
 (P-OPTR は))
 (PP-SBJ (NP (WPRO 誰))
 (P-ROLE に)
 (P-OPTR も))
 (VB 止め)
 (VB2 られ)
 (NEG ない)
 (PU 。))
 (ID 57_news_KAHOKU_63))

If a w-expression is under a category marked by か the whole category takes on an indefinite reference with existential quantificational force.

(472) 社員が誰か移動を希望している。

((IP-MAT (PP-SBJ (NP (N 社員))
 (P-ROLE が))
 (NP;*SBJ* (WPRO 誰)
 (P-OPTR か))
 (PP-OB1 (NP (N 移動))
 (P-ROLE を))
 (VB 希望)
 (VB0 し)
 (P-CONN て)
 (VB2 いる)
 (PU 。))
 (ID 27_misc_JSeM_beta_150530))

There are also particle combinations such as 何もかも which receive the free choice interpretation. In NPCMJ, such complex expressions are treated as one word and labelled Q.

(473) 「何もかもが失敗だ、ワトスン

```
( (IP-MAT (PUL 「)
  (PP-SBJ (NP (Q 何もかも))
    (P-ROLE が))
  (NP-PRD (N 失敗))
  (AX だ)
  (PU 、)
  (NP-VOC;{WATSON} (NPR ワトスン)))
(ID 329_aozora_Doyle-1905))
```

20.2 Genuine Conjunctions and Fake Conjunctions of Quantificational NPs

Quantificational NPs sometimes get coordinated, the whole being CONJPs (see section 18). In the example below, the disjunctive coordinative particle (P-CONN) か connects the first numeral NP 二晩 and the second 三晩.

(474) たとえばこのあいだも二晩か三晩かかって小さな額ぶちをつくりました。

```
( (IP-MAT (NP-SBJ;{GREGOR} *pro*)
  (ADVP (ADV たとえば))
  (PP-TMP (NP (D この)
    (N あいだ))
    (P-OPTR も))
  (IP-ADV-SCON (NP-SBJ *exp*)
    (NP-OB1 *pro*)
    (NP-MSR (CONJP (NP (NUMCLP (NUM 二)
      (CL 晩)))
      (P-CONN か))
      (NP (NUMCLP (NUM 三)
        (CL 晩))))
      (VB かかっ)
      (P-CONN て))
    (PP-OB1 (NP;{FRAME} (PNL 小さな)
      (N 額ぶち))
      (P-ROLE を))
    (VB つくり)
    (AX まし)
    (AXD た)
    (PU 。))
  (ID 196_aozora_Harada-1960))
```

The example below is another coordination of numeral quantificational NPs, which is done without an overt heading P-CONN.

(475) つづいて和尚は、第二、第三、第四の抽斗を開けた

```
( (IP-MAT (IP-ADV-CONJ (NP-SBJ *exp*)
  (VB つづい)
  (P-CONN て))
  (PP-SBJ (NP (N 和尚))
```

(P-OPTR は))
(PU 、)
(PP-OB1 (NP (IP-REL (NP-SBJ *T*)
(NP-PRD (CONJP (NP (NUMCLP (NUM 第二))))
(PU 、)
(CONJP (NP (NUMCLP (NUM 第三))))
(PU 、)
(NP (NUMCLP (NUM 第四))))
(AX の))
(N 抽斗))
(P-ROLE を))
(VB 開け)
(AXD た))
(ID 45_aozora_Togawa-1937-3))

The cases listed above make genuine coordinations from the viewpoint of semantics.

On the other hand, sequences of quantifier radicles that can't be analyzed as genuine coordinations are juxtaposed as they are. They will share a single NP projection together. Dates and time make typical cases of this.

(476) さわやかな九月一日の朝でした。

((IP-MAT (NP-SBJ *pro*)
(NP-PRD (IP-REL (NP-SBJ *T*)
(ADJN さわやか)
(AX な))
(PP (NP (NUMCLP (NUM 九)
(CL 月))
(NUMCLP (NUM 一)
(CL 日)))
(P-ROLE の))
(N 朝))
(AX でした)
(AXD た)
(PU 。))
(ID 16_aozora_Miyazawa-1934))

(477) 六時半にW君が来た。

((IP-MAT (PP-TMP (NP (NUMCLP (NUM 六)
(CL 時))
(NUMCLP (NUM 半)))
(P-ROLE に))
(PP-SBJ (NP (NPR W君))
(P-ROLE が))
(VB 来)
(AXD た)
(PU 。))
(ID 111_aozora_Dazai-1-1940))

Below is another case of non-genuine coordinations in which a numeral NP consists of a duplicated NUMCLP, duplication of which emphasizes distributivity and totality.

(478) 「それを一枚一枚はがして、貧しい人にあげなさい。

```

( (CP-IMP (PUL 「)
  (IP-SUB (NP-SBJ *hearer*)
    (PP-OB1 (NP (PRO それ))
      (P-ROLE を))
    (IP-ADV-CONJ (NP;*OB1* (NUMCLP (NUM 一)
                                      (CL 枚))
                                (NUMCLP (NUM 一)
                                      (CL 枚))))
      (VB はがし)
      (P-CONN て))
    (PU 、)
    (PP (NP (IP-REL (NP-SBJ *T*)
                    (ADJI 貧しい))
      (N 人))
      (P-ROLE に))
    (VB あげ)
    (VB2 なさい))
  (PU 。))
(ID 271_aozora_Yuki-1-2000))

```

20.3 Relating quantificational NPs and their hosts

A quantificational relation between a quantificational NP and another NP is said to be established if and only if the quantificational NP specifies either the quantity or the proportion of the other NP (i.e., the other NP makes a quantificational domain). The other NP is called the “host NP”. For example, in (479), the host NP of the quantificational NP 多く is 人. 多く specifies the quantity of people that 人 denotes as large.

(479) 多くの人がその本を褒めちぎっている。

```

( (IP-MAT (PP-SBJ (NP (IP-REL;* (NP-SBJ *T*)
                          (NP-PRD (Q 多く))
                          (AX の))
        (N 人))
      (P-ROLE が))
  (PP-OB1 (NP (D その)
    (N 本))
    (P-ROLE を))
  (VB 褒めちぎっ)
  (P-CONN て)
  (VB2 いる)
  (PU . ))
(ID 2898_dict_vv-lexicon))

```

Not all quantificational NPs have quantificational relations with their adjacent NPs. (480) is a clear example of a non-quantificational relation: 両腕 (a pair of arms) does not specify the quantity of 父親 (the father).

(480) それを見て母親は改めて大きな叫び声を上げ、テーブルから逃げ出し、かけていった父親の両腕のなかに倒れてしまった。

```

( (IP-MAT (IP-ADV-SCON (PP-OB1 (NP (PRO それ))
                                (P-ROLE を))
  (VB 見)

```

(P-CONN て))
 (PP-SBJ (NP; {MOTHER} (N 母親))
 (P-OPTR は))
 (IP-ADV-CONJ (IP-ADV-CONJ (ADVP (ADV 改めて))
 (PP-OB1 (NP (PNL 大きな
 (N 叫び声))
 (P-ROLE を))
 (VB 上げ))
 (PU 、)
 (PP (NP (N テーブル))
 (P-ROLE から))
 (VB 逃げ出し))
 (PU 、)
 (PP (NP (PP (NP (PP (NP; {FATHER} (IP-REL (NP-SBJ *T*)
 (VB かけ)
 (P-CONN て)
 (VB2 いっ)
 (AXD た))
 (N 父親))
 (P-ROLE の))
 (Q 両腕))
 (P-ROLE の))
 (N なか))
 (P-ROLE に))
 (VB 倒れ)
 (P-CONN て)
 (VB2 しまっ)
 (AXD た)
 (PU 。))
 (ID 414_aozora_Harada-1960))

To make matters worse, as will be revealed in section 20.5.3, the types of these relations are not always tractable from the syntactic configurations. For this reason, when there is a quantificational relation between a quantificational NP and another NP, sort information is added to make the relation explicit (see section ??). The general rules are:

- If a quantificational NP is within the projection of its host noun, ;* is added to the IP-REL the NP projects;

(481) すべての日本人研究者がノーベル賞を欲しがっている。

((IP-MAT (PP-SBJ (NP; {PERSON} (IP-REL;* (NP-SBJ *T*)
 (NP-PRD (Q すべて))
 (AX の))
 (N 日本人研究者))
 (P-ROLE が))
 (PP-OB1 (NP (N ノーベル賞))
 (P-ROLE を))
 (ADJI 欲し)
 (AX がっ)
 (P-CONN て)
 (VB2 いる)


```

(P-ROLE が))
(NP-PRD (N 水))
(AX *)
(PU 、))
(ID 332_textbook_djg_advanced))

```

20.4 Flat annotation for adnominal w-expressions

There are two attested constructions for WH-quantifier radicals:

- w-expression + particle (e.g., だれ+も, 何+か) (e.g., (485))
- w-expression + noun + particle (e.g., どの+人+も) (e.g., (486))

(485) 振り返って後ろを見たが、誰もいなかった。

```

( (IP-MAT (PP-CONJ (IP-ADV (NP-SBJ *pro*)
                             (IP-ADV-CONJ (VB 振り返っ)
                                             (P-CONN て))
                             (PP-OB1 (NP (N 後ろ))
                                       (P-ROLE を))
                             (VB 見)
                             (AXD た))
                        (P-CONN が))
  (PU 、)
  (NP-SBJ (WPRO 誰)
          (P-OPTR も))
  (VB い)
  (NEG なかつ)
  (AXD た)
  (PU . ))
(ID 2817_dict_vv-lexicon))

```

(486) どの社員も異動を希望していない。

```

( (IP-MAT (NP-SBJ (WD どの)
                  (N 社員)
                  (P-OPTR も))
  (PP-OB1 (NP (N 異動))
          (P-ROLE を))
  (VB 希望)
  (VB0 し)
  (P-CONN て)
  (VB2 い)
  (NEG ない)
  (PU 。))
(ID 127_misc_JSeM_beta_150530))

```

A w-expression together followed by a particular particle makes a quantificational NP, which may optionally be linked to another external NP as its host. In (487), the quantificational NP *だれも* is hosted by the NP-SBJ *会計士たち*.

(487) 会計士たちは誰も会議に出席しなかった。

‘No accountants attended the meeting.’

```
( (IP-MAT (PP-SBJ (NP (N 会計士たち))
                     (P-OPTR は))
  (NP;*SBJ* (WPRO 誰)
             (P-OPTR も))
  (PP (NP (N 会議))
       (P-ROLE に))
  (VB 出席)
  (VB0 し)
  (NEG なかつ)
  (AXD た)
  (PU 。))
(ID 1020_misc_JSeM_beta_150530))
```

On the other hand, The sequence [w-expression + noun + particle] contains its quantificational host inside; in fact, the N in that sequence always functions as the domain of the quantification. In this regard, the N, being inside of the quantificational NP, qualifies as the host nominal. However, for the sake of easy queries for this construction, this treebank annotates it flatly, with no resort to sort information.

(488) 私たちには何の問題もないわ。

```
( (CP-FINAL (IP-SUB (PP-SBJ (NP (PRO 私たち))
                                (P-ROLE に)
                                (P-OPTR は))
  (PP-OB1 (NP (PP (NP (WPRO 何))
                    (P-ROLE の))
              (N 問題))
           (P-OPTR も))
  (ADJI ない))
  (P-FINAL わ)
  (PU 。))
(ID 608_fiction_DICK-1952))
```

(489) どの取引先からも注文が来ました。
‘Merchandise orders came from every client.’

```
( (IP-MAT (PP (NP (WD どの)
                  (N 取引先))
             (P-ROLE から)
             (P-OPTR も))
  (PP-SBJ (NP (N 注文))
           (P-ROLE が))
  (VB 来)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 4_textbook_purple_intermediate))
```

In a practical sense, host NPs of quantificational NPs induced by w-expressions are all such that drift apart, as is exemplified by (487).

20.5 Various constructions with quantificational NPs

There are ample constructions involving quantificational NPs in Japanese:

- [N の] Q/NUMCLP/w-expr (e.g., 学生の全員が / 学生の3人が / 学生のだれもが)
- N Q/NUMCLP (e.g., 学生全員が / 学生3人が)
- [Q/NUMCLP/w-expr の] N (e.g., 全員の学生が / 3人の学生が / どれかの学生が)
- N ... [Q/NUMCLP/w-expr] (or the inverse) (e.g., 学生が全員 (逮捕された) / 学生が3人 (逮捕された) / 学生はだれも (逮捕されなかった))
- [Q/NUMCLP/w-expr] (standalone, argumental) (e.g., 全員が / 3人が / だれもが)
- [Q/NUMCLP/w-expr] (standalone, adverbial) (e.g., 数日 (休んだ) / 3日 (休んだ) / 何日も (休んだ))

These constructions are each explained in this section:

20.5.1 Qs / NUMCLPs / W-expressions as heads that get modified: [N の] Q/NUMCLP/w-expr

Those quantificational NPs whose domain of quantification is indicated by their adnominal modifiers (typically genitive PPs) are no different from ordinary NPs modified by PPs or IP-RELS. No sort information is needed.

- (490) ヨーロッパ人の全員がヨーロッパの中を自由に移動できる。
 ‘All Europeans can travel freely within Europe.’

```
( (IP-MAT (PP-SBJ (NP (PP (NP (N ヨーロッパ人))
                           (P-ROLE の))
                          (Q 全員))
                        (P-ROLE が))
  (PP-OB1 (NP (PP (NP (NPR ヨーロッパ))
                    (P-ROLE の))
          (N 中))
        (P-ROLE を))
  (ADVP (ADJN 自由)
        (AX に))
  (VB 移動)
  (VB0 できる)
  (PU 。))
(ID 311_misc_JSeM_beta_150530))
```

20.5.2 Appositive Qs / NUMCLPs: N Q/NUMCLP

In the appositive construction N Q/NUMCLP, the quantificational NP is covered with a PRN, which in turn is sister to the host noun head ((NP (N host) (PRN (NP (Q/NUMCLP quantificational expression))))).

- (491) 初の仙台公演ではビゼーの華麗な音楽に彩られた名作「カルメン」全4幕を上演します。

```
( (IP-MAT (NP-SBJ *pro*)
  (PP (NP (IP-REL (NP-SBJ *T*)
                  (ADJN 初)
                  (AX の))
```

(N 仙台公演))
 (P-ROLE で)
 (P-OPTR は))
 (PP-OB1 (NP (PRN (NP (IP-REL (NP-SBJ *T*)
 (PP-LGS (NP (PP (NP (NPR ビゼー))
 (P-ROLE の))
 (IP-REL (NP-SBJ *T*)
 (ADJN 華麗)
 (AX な))
 (N 音楽))
 (P-ROLE に))
 (VB 彩ら)
 (PASS れ)
 (AX た))
 (N 名作))))
 (PUL 「)
 (NPR カルメン)
 (PUR 」)
 (PRN (NP (Q 全)
 (NUMCLP (NUM 4)
 (CL 幕))))))
 (P-ROLE を))
 (VB 上演)
 (VB0 し)
 (AX ます)
 (PU 。))
 (ID 51_news_KAHOKU_61))

If the quantificational NP quantifies over what the host denotes, a minimum sort information ; * is added to the quantificational NP to mark this quantificational relation: (NP (N host) (PRN (NP; * (Q/NUMCLP quantificational expression)))). In most cases, the host nominal are referentially specific, and the outer NP either is further marked by postpositions or forms an NP-PRD.

(492) 社員全員が書庫の鍵を持っている。

((IP-MAT (PP-SBJ (NP (N 社員)
 (PRN (NP; * (Q 全員))))
 (P-ROLE が))
 (PP-OB1 (NP (PP (NP (N 書庫))
 (P-ROLE の))
 (N 鍵))
 (P-ROLE を))
 (VB 持つ)
 (P-CONN て)
 (VB2 いる)
 (PU 。))
 (ID 320_misc_JSeM_beta_150530))

(493) 宮城県内外の自治体職員や企業の防災担当者ら 40 人が参加。

((IP-MAT (PP-SBJ (NP (PP (NP (N 宮城県内外))
 (P-ROLE の))

(NML (CONJP (NP (N 自治体職員))
 (P-CONN や))
 (NP (PP (NP (N 企業))
 (P-ROLE の))
 (N 防災担当者)))
 (N ら)
 (PRN (NP;* (NUMCLP (NUM 40)
 (CL 人))))))
 (P-ROLE が))
 (VB 参加)
 (PU 。))
 (ID 12_news_KAHOKU_34))

(494) ナニーが先頭になって、僕たち三人はベッドの足元にひざまずいた。

((IP-MAT (IP-ADV-CONJ (PP-SBJ (NP;{NANNIE} (NPR ナニー))
 (P-ROLE が))
 (IP-SMC-OB1 (NP-PRD (N 先頭))
 (AX に))
 (VB なっ)
 (P-CONN て))
 (PU 、)
 (PP-SBJ (NP;{SPEAKER+AUNT+NANNIE} (PRO 僕たち)
 (PRN (NP (NUMCLP (NUM 三)
 (CL 人))))))
 (P-OPTR は))
 (PP (NP (PP (NP (N ベッド))
 (P-ROLE の))
 (N 足元))
 (P-ROLE に))
 (VB ひざまずい)
 (AXD た)
 (PU 。))
 (ID 121_aozora_Joyce-1914))

When a NUMCLP is followed by another bracketed NUMCLP, the latter is analysed as a parenthetical and thus projects a NP which further projects PRN.

(495) 1926年（大正15年）に仙台市電が開業した。

((IP-MAT (PP (NP (NUMCLP (NUM 1926)
 (CL 年)
 (PRN (PUL ()
 (NP (NPR 大正)
 (NUMCLP (NUM 15)
 (CL 年)))
 (PUR)))))
 (P-ROLE に))
 (PP-SBJ (NP (NPR 仙台市電))
 (P-ROLE が))
 (VB 開業)
 (VB0 し)
 (AXD た)

```
(PU 。))
(ID 157_wikipedia_Sendai_City))
```

20.5.3 Qs as adnominals: [Q の] N

Adnominal expressions of the form [Q + の] present the need to choose one of two different analyses, depending on whether they are quantifying or referring. A good example is the expression 両方のチーム in (496), which is ambiguous by itself. In one possible interpretation, the NP refers to two teams (e.g., the Giants and the Tigers), in which case the quantifier radical is quantifying. In the other interpretation, the NP refers to a (single) team of two individuals (e.g., the team managed by Masayoshi Son and Sadaharu Oh), where the quantifier radical is referring (to two persons). In most cases, one needs the help of the context to make a decision. For (496), the predicate 攻め合う ‘attack each other’ provides enough context to establish that the Q expression 両方 quantifies over what the host noun チーム denotes. [Q + の] forms an IP-REL; * structure:

(496) 両方のチームが攻め合った。

```
( (IP-MAT (PP-SBJ (NP (IP-REL; * (NP-SBJ *T*)
                                (NP-PRD (Q 両方))
                                (AX の))
                                (N チーム))
      (P-ROLE が))
  (VB 攻め)
  (VB2 合っ)
  (AXD た)
  (PU . ))
(ID 1413_dict_vv-lexicon))
```

Below are additional examples of NPs that are genuinely quantifying:

(497) この音楽は一部の人々に熱狂的に支持されている。

```
( (IP-MAT (PP-SBJ (NP (D この)
                        (N 音楽))
      (P-OPTR は))
  (PP-LGS (NP (IP-REL; * (NP-SBJ *T*)
                        (NP-PRD (Q 一部))
                        (AX の))
            (N 人々))
    (P-ROLE に))
  (ADVP (ADJN 熱狂的)
    (AX に))
  (VB 支持)
  (VB0 さ)
  (PASS れ)
  (P-CONN て)
  (VB2 いる)
  (PU 。))
(ID 20_misc_EXAMPLE2))
```

(498) 空には無数の星がきらめいていた。
 ‘Countless stars were twinkling in the sky.’

```

( (IP-MAT (PP (NP (N 空))
                (P-ROLE に)
                (P-OPTR は))
  (PP-SBJ (NP (IP-REL;* (NP-SBJ *T*)
                        (NP-PRD (Q 無数))
                        (AX の))
            (N 星))
    (P-ROLE が))
  (VB きらめい)
  (P-CONN て)
  (VB2 い)
  (AXD た)
  (PU 。))
(ID 640_textbook_TANAKA))

```

On the other hand, referring Q-expressions are mere PPs (rather than an IP-REL structure, see section 15.22) with no ‘;’-markings (e.g., (NP (PP (NP (Q 両方) の) (N チーム))). Below is an additional example:

(499) 津波の爪痕を目に焼き付け、体験談をそれぞれの地元に持ち帰る

```

( (IP-MAT (NP-SBJ *pro*)
  (IP-ADV-SCON (PP-OB1 (NP (PP (NP (N 津波))
                                (P-ROLE の))
                              (N 爪痕))
                  (P-ROLE を))
                (PP (NP (N 目))
                    (P-ROLE に))
                (VB 焼き付け))
  (PU 、)
  (PP-OB1 (NP (N 体験談))
          (P-ROLE を))
  (PP (NP (PP (NP (Q それぞれ))
                (P-ROLE の))
        (N 地元))
      (P-ROLE に))
  (VB 持ち帰る))
(ID 65_news_KAHOKU_39))

```

20.5.4 Adnominal NUMCLPs: [NUMCLP の] N

When an NP projected by an NUMCLP is followed by の and a nominal, there are three possible analyses, depending on the relationship between the quantificational NP and the nominal following it.

The first scenario is one where the NP projected by NUMCLP functions as a genuine quantifier. In this scenario, [NUMCLP + の] forms a IP-REL;* structure:

(500) 二人の剣豪はお互いに剣を突き返した。

```

( (IP-MAT (PP-SBJ (NP (IP-REL;* (NP-SBJ *T*)
                        (NP-PRD (NUMCLP (NUM 二人)))
                        (AX の))
            (N 剣豪))
    (P-OPTR は))

```

```

      (PP (NP (PRO お互い))
        (P-ROLE に))
      (PP-OB1 (NP (N 剣))
        (P-ROLE を))
      (VB 突き返し)
      (AXD た)
      (PU . ))
    (ID 1660_dict_vv-lexicon))

```

(501) is an example where the quantifying NUMCLP expression denotes proportion rather than cardinality. It is annotated in the same way as above.

(501) この1956年にアメリカで行われた調査では30%の人が人生が非常に幸せだと答えています

```

( (IP-MAT (PP (NP (D この)
  (IP-REL (NP-SBJ *T*)
    (NP-LGS *pro*)
    (PP (NP (NUMCLP (NUM 1956)
      (CL 年)))
      (P-ROLE に))
    (PP (NP (NPR アメリカ)
      (P-ROLE で))
    (VB 行わ)
    (PASS れ)
    (AXD た))
    (N 調査))
    (P-ROLE で)
    (P-OPTR は))
  (PP-SBJ (NP (IP-REL;* (NP-SBJ *T*)
    (NP-PRD (NUMCLP (NUM 30)
      (CL %)))
    (AX の))
    (N 人))
    (P-ROLE が))
  (CP-THT-OB1 (IP-SUB (PP-SBJ (NP (N 人生)
    (P-ROLE が))
    (ADVP (ADJN 非常)
      (AX に))
    (ADJN 幸せ)
    (AX だ))
    (P-COMP と))
  (VB 答え)
  (P-CONN て)
  (VB2 い)
  (AX ます))
  (ID 21_ted_talk_3))

```

The second scenario is one where the NP projected by the NUMCLP attributes a property to N such as size, order in a series, etc. In this scenario [NUMCLP + の] forms a IP-REL or IP-EMB without any sort information.

(502) すべての四本足の哺乳類は四本足の動物だ。
 ‘Every four-legged mammal is a four-legged animal.’

((IP-MAT (PP-SBJ (NP (IP-REL;* (NP-SBJ *T*)
 (NP-PRD (Q すべて))
 (AX の))
 (IP-REL (NP-SBJ *T*)
 (NP-PRD (NUMCLP (NUM 四)
 (CL 本))
 (N 足))
 (AX の))
 (N 哺乳類))
 (P-OPTR は))
 (NP-PRD (IP-REL (NP-SBJ *T*)
 (NP-PRD (NUMCLP (NUM 四)
 (CL 本))
 (N 足))
 (AX の))
 (N 動物))
 (AX だ)
 (PU 。))
 (ID 1323_misc_JSeM_beta_150530))

(503) 不意に第二のアイディアが起こった。

((IP-MAT (ADVP (ADJN 不意)
 (AX に))
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (NP-PRD (NUMCLP (NUM 第二)))
 (AX の))
 (N アイディア))
 (P-ROLE が))
 (VB 起こっ)
 (AXD た)
 (PU 。))
 (ID 134_aozora_Kajii-1925))

(504) 「ハイ、あれが二十五歳の時のお話でございますよ」

((CP-FINAL (PUL 「)
 (IP-SUB (NP-SBJ *pro*)
 (INTJ ハイ)
 (PU 、)
 (NP-PRD (PP (NP (IP-EMB (PP-SBJ (NP (PRO あれ))
 (P-ROLE が))
 (NP-PRD (NUMCLP (NUM 二十五)
 (CL 歳)))
 (AX の))
 (N 時))
 (P-ROLE の))
 (N お話))
 (AX で)
 (VB2 ござい)
 (AX ます))
 (P-FINAL よ)

(PUR 』))
 (ID 146_aozora_Edogawa-1929))

In the third scenario, the NP projected by NUMCLP is a referring expression. It is put under a plain PP without sort information:

(505) 運命が二人の仲を引き裂いた。
 ((IP-MAT (PP-SBJ (NP (N 運命))
 (P-ROLE が))
 (PP-OB1 (NP (PP (NP (NUMCLP (NUM 二人)))
 (P-ROLE の))
 (N 仲))
 (P-ROLE を))
 (VB 引き裂い)
 (AXD た)
 (PU .))
 (ID 2537_dict_vv-lexicon))

(506) 二月十七日の晩であった。
 ((IP-MAT (NP-SBJ *pro*)
 (NP-PRD (PP (NP (NUMCLP (NUM 二)
 (CL 月))
 (NUMCLP (NUM 十七)
 (CL 日)))
 (P-ROLE の))
 (N 晩))
 (AX で)
 (VB2 あっ)
 (AXD た)
 (PU 。))
 (ID 28_aozora_Mori-1912))

20.5.5 Floating expressions with Q / NUMCLP / W-expressions

Floating quantifiers are so called because they form clause-level constituents by themselves while at the same time quantifying a clause-level host NP. They are always quantifying and always specified as such by sort information with explicit designation of grammatical roles like ;*SBJ*, ;*OB1*, etc. to indicate which NP they are associated with. In general they are associated with arguments, and they themselves are never marked with case particles.

(507) 店には、人がいっぱいいる。
 ‘In the shop, there are a lot of people.’

((IP-MAT (PP (NP (N 店))
 (P-ROLE に)
 (P-OPTR は))
 (PU 、)
 (PP-SBJ (NP (N 人))
 (P-ROLE が))
 (NP;*SBJ* (Q いっぱい))
 (VB いる)
 (PU 。))
 (ID 103_textbook_kisonihongo))

(508) 彼女は夫の欠点をひとつひとつ言い立てた。

```
( (IP-MAT (PP-SBJ (NP (PRO 彼女))
                    (P-OPTR は))
  (PP-OB1 (NP (PP (NP (N 夫))
                    (P-ROLE の))
              (N 欠点))
          (P-ROLE を))
  (NP;*OB1* (NUMCLP (NUM ひとつ)
                    (CL つ))
            (NUMCLP (NUM ひとつ)
                    (CL つ)))
  (VB 言い立て)
  (AXD た)
  (PU . ))
(ID 93_dict_vv-lexicon))
```

When the host nominal does not appear overtly in the sentence, its presence is indicated by a zero pronoun, as in the example below. Note that there is an alternative analysis to floating quantifiers hosted by covert NPs, namely, marking those apparently independent quantifiers as argumental NPs which are case-less. This corpus prefers the floating quantifier analysis.

(509) 部長が、すべてうまく行くように取り計らってくれた。

```
( (IP-MAT (NP-OB1 *pro*)
  (PP-SBJ (NP (N 部長))
          (P-ROLE が))
  (PU 、)
  (PP (NP (IP-EMB (NP-SBJ *pro*)
                  (NP;*SBJ* (Q すべて))
                  (ADVP (ADJI うまく))
                  (VB 行く))
      (N よう))
      (P-ROLE に))
  (VB 取り計らっ)
  (P-CONN て)
  (VB2 くれ)
  (AXD た)
  (PU . ))
(ID 1977_dict_vv-lexicon))
```

(510) 『みな私の手落ちだ！——』

```
( (IP-MAT (PUL 『)
  (NP-SBJ *pro*)
  (NP;*SBJ* (Q みな))
  (NP-PRD (PP (NP (PRO 私))
              (P-ROLE の))
          (N 手落ち))
  (AX だ)
  (PU !——))
(ID 220_aozora_Togawa-1937-1))
```

Numeral classifier expressions can also float.

(511) 台所にお酒が二升あった。

```
( (IP-MAT (PP (NP (N 台所))
                (P-ROLE に))
  (PP-SBJ (NP;{DAZAI_LIQUOR_2_SHO} (N お酒))
          (P-ROLE が))
  (NP;*SBJ* (NUMCLP (NUM 二)
                    (CL 升)))
  (VB あっ)
  (AXD た)
  (PU 。))
(ID 103_aozora_Dazai-1-1940))
```

(512) 彼女はブーツを一足買った。
'She bought a pair of boots.'

```
( (IP-MAT (PP-SBJ (NP (PRO 彼女))
                  (P-OPTR は))
  (PP-OB1 (NP (N ブーツ))
          (P-ROLE を))
  (NP;*OB1* (NUMCLP (NUM 一)
                    (CL 足)))
  (VB 買った)
  (AXD た)
  (PU 。))
(ID 789_textbook_TANAKA))
```

An example of floating NUMCLP quantificational NPs with its host being covert:

(513) するとまた一匹あらわれた。

```
( (IP-MAT (NP-SBJ *pro*)
  (CONJ すると)
  (ADVP (ADV また))
  (NP;*SBJ* (NUMCLP (NUM 一)
                    (CL 匹)))
  (VB あられ)
  (AXD た)
  (PU 。))
(ID 620_aozora_Natsume-1908))
```

W-expressions can also float.

(514) 「ここには、生きているものはだれもないよ、

```
( (CP-FINAL (PUL 「)
  (IP-SUB (PP (NP (PRO ここ))
            (P-ROLE に)
            (P-OPTR は))
  (PU 、)
  (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
                    (VB 生き)
                    (P-CONN て)
                    (VB2 いる))
          (N もの))
```

(P-OPTR は))
 (NP;*SBJ* (WPRO だれ)
 (P-OPTR も))
 (VB い)
 (NEG ない))
 (P-FINAL よ)
 (PU 、))
 (ID 405_fiction_DICK-1952))

An example of floating w-expressions with its host being covert:

(515) 巴里の有名な貿易商、山田和市氏の夫人と令嬢で、どちらも相当に日本語を話す。

((IP-MAT (NP-SBJ *pro*)
 (IP-ADV-CONJ (NP-PRD (PP (NP (PRN (NP (PP (NP (NPR 巴里))
 (P-ROLE の))
 (IP-REL (NP-SBJ *T*)
 (ADJN 有名)
 (AX な))
 (N 貿易商))))
 (PU 、)
 (NPR 山田和市氏))
 (P-ROLE の))
 (NML (CONJP (NP (N 夫人))
 (P-CONN と))
 (NP (N 令嬢))))
 (AX で))
 (PU 、)
 (NP;*SBJ* (WPRO どちら)
 (P-OPTR も))
 (ADVP (ADJN 相当)
 (AX に))
 (PP-OB1 (NP (N 日本語))
 (P-ROLE を))
 (VB 話す)
 (PU 。))
 (ID 11_aozora_Hisao-1939))

Floating quantifiers, numerals and w-expressions can, though not so frequently, precede their hosts:

(516) しかしその海岸一帯には、たくさん不思議な事が見聞きされる。

((IP-MAT (NP-LGS *arb*)
 (CONJ しかし)
 (PP (NP (D その)
 (N 海岸一帯))
 (P-ROLE に)
 (P-OPTR は))
 (PU 、)
 (NP;*SBJ* (Q たくさん))
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (ADJN 不思議)

(AX な))
 (N 事))
 (P-ROLE が))
 (VB 見聞き)
 (VB0 さ)
 (PASS れる)
 (PU 。))
 (ID 9_aozora_Togawa-1937-1))

(517) 「もう一つルビーを持っていきましょうか」

((CP-QUE (PUL 「)
 (IP-SUB (NP-SBJ *speaker*)
 (NP;*OB1* (ADV もう)
 (NUMCLP (NUM 一)
 (CL つ)))
 (PP-OB1 (NP (N ルビー))
 (P-ROLE を))
 (VB 持つ)
 (P-CONN て)
 (VB2 いき)
 (AX ましょ)
 (AX う))
 (P-FINAL か)
 (PUR 」))
 (ID 181_aozora_Yuki-1-2000))

(518) 彼ら三人しか客が乗っていない電車には、暖かい陽がふり注いでいた。

((IP-MAT (PP (NP (IP-REL (PP (NP *T*)
 (P-ROLE *に*))
 (PP;*SBJ* (NP;{FATHER+MOTHER+GRETE} (PRO 彼ら)
 (PRN (NP (NUMCLP
 (NUM 三)
 人)))))) (CL

(P-OPTR しか))
 (PP-SBJ (NP (N 客))
 (P-ROLE が))
 (VB 乗っ)
 (P-CONN て)
 (VB2 い)
 (NEG ない))
 (N 電車))
 (P-ROLE に)
 (P-OPTR は))
 (PU 、)
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (ADJI 暖かい))
 (N 陽))
 (P-ROLE が))
 (VB ふり注い)

(P-CONN で)
 (VB2 い)
 (AXD た)
 (PU 。))
 (ID 1224_aozora_Harada-1960))

(519) 誰も消火に手伝う者はいなかった。

((IP-MAT (NP;*SBJ* (WPRO 誰)
 (P-OPTR も))
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (PP (NP (N 消火))
 (P-ROLE に))
 (VB 手伝う))
 (N 者))
 (P-OPTR は))
 (VB い)
 (NEG なかつ)
 (AXD た)
 (PU 。))
 (ID 442_aozora_Sakaguchi-1947))

20.5.6 Referring expressions with Q / NUMCLP

When a Q or NUMCLP is paired with a specific host and at the same time particle-marked for a core grammatical role, unlike bare floating quantifiers discussed in section 20.5.5, its relation with the host is a partitive one. In this case, the Q or NUMCLP is treated in the same way as any other sort of argument, i.e., as a referring expression. The host NP is placed in a sister position to (P-ROLE ***) and marked with sort information. A null pronoun with the same sort information is then introduced in the complement position to the Q or NUMCLP: (NP (PP (NP;{WHOLE} *pro*) (P *の*)) (Q ...)).

(520) 自分たちはほとんどが次男坊ばかりですから」

((FRAG (PP (IP-ADV (PP-TPC (NP;{WHOLE} (PRO 自分たち))
 (P-OPTR は)
 (P-ROLE ***)
 (PP-SBJ (NP (PP (NP;{WHOLE} *pro*)
 (P-ROLE *の*))
 (Q ほとんど))
 (P-ROLE が))
 (PP-PRD (NP (N 次男坊))
 (P-OPTR ばかり))
 (AX です))
 (P-CONN から)
 (PUR 」)))
 (ID 247_aozora_Hayashida-2015))

(521) 県内で48店舗を持つ同生協は、被害が大きかった2店が閉店した。

((IP-MAT (PP-TPC (NP;{COOP} (IP-REL (NP-SBJ *T*)
 (PP (NP (N 県内))
 (P-ROLE で))

(PP-OB1 (NP (NUMCLP (NUM 4 8)
 (CL 店舗)))
 (P-ROLE を))
 (VB 持つ))
 (N 同生協))
 (P-OPTR は)
 (P-ROLE ***)
 (PU 、)
 (PP-SBJ (NP (PP (NP;{COOP} *pro*)
 (P-ROLE *の*))
 (IP-REL (NP-SBJ *T*)
 (PP-SBJ2 (NP (N 被害))
 (P-ROLE が))
 (ADJI 大きかつ)
 (AXD た))
 (NUMCLP (NUM 2)
 (CL 店)))
 (P-ROLE が))
 (VB 閉店)
 (VB0 し)
 (AXD た)
 (PU 。))
 (ID 19_news_KAHOKU_39))

(522) 製造業は 1 4 業種のうち 1 1 業種、非製造業は 1 2 業種のうち 9 業種が上向いた。

((IP-MAT (IP-ADV-CONJ (PP-TPC (NP;{MANUFACTURING_INDUSTY} (N 製造業))
 (P-OPTR は)
 (P-ROLE ***)
 (NP-ADV (PP (NP (PP (NP;{MANUFACTURING_INDUSTY} *pro*)
 (P-ROLE *の*))
 (NUMCLP (NUM 1 4)
 (CL 業種)))
 (P-ROLE の))
 (N うち))
 (NP-SBJ (NUMCLP (NUM 1 1)
 (CL 業種))))))
 (PU 、)
 (PP-TPC (NP;{NON_MANUFACTURING_INDUSTY} (N 非製造業))
 (P-OPTR は)
 (P-ROLE ***)
 (NP-ADV (PP (NP (PP (NP;{NON_MANUFACTURING_INDUSTY} *pro*)
 (P-ROLE *の*))
 (NUMCLP (NUM 1 2)
 (CL 業種)))
 (P-ROLE の))
 (N うち))
 (PP-SBJ (NP (NUMCLP (NUM 9)
 (CL 業種)))
 (P-ROLE が))

(VB 上向い)
(AXD た)
(PU 。))
(ID 15_news_KAHOKU_113))

Context by itself can be sufficient grounds for treating a Q expression as independently referring rather than as quantifying, as has been briefly discussed in 20.5.3. However, some Q expressions are interpreted as referring by virtue of elements in the expressions themselves. In some expressions, for example, a Q or NUMCLP heads a clausal constituent and takes a D modifier or a definite NP complement that makes the reference definite (see section 20.1.2). Such expressions can be treated as referring, and they are not linked to any hosts with sort information, as is already mentioned in section 20.5.1. For instance, in (523) below, the quantifier *すべて* takes a *の*-marked NP complement that serves to make the whole Q expression definite. There is a strong tendency for these referring expressions to be marked with particles to be sentential arguments:

(523) 国内企業のすべてが週休二日制を導入している。

(((IP-MAT (PP-SBJ (NP (PP (N 国内企業))
(P-ROLE の))
(Q すべて))
(P-ROLE が))
(PP-OB1 (NP (N 週休二日制))
(P-ROLE を))
(VB 導入)
(VB0 し)
(P-CONN て)
(VB2 いる)
(PU 。))
(ID 48_misc_JSeM_beta_150530))

(524) アンケートは県内の沿岸自治体15市町の245校を対象に実施した。

((IP-MAT (NP-SBJ *pro*)
 (PP-OB1 (NP (N アンケート))
 (P-OPTR は))
 (IP-ADV2-SCON (PP-DOB1 (NP (PP (NP (PP (NP (N 県内))
 (P-ROLE の))
 (N 沿岸自治体)
 (NUMCLP (NUM 1 5)
 (CL 市町)))
 (P-ROLE の))
 (NUMCLP (NUM 2 4 5)
 (CL 校)))
 (P-ROLE を))
 (IP-SMC-OB1 (NP-PRD (N 対象))
 (AX に)))
 (VB 実施)
 (VB0 し)
 (AXD た)
 (PU 。))
 (ID 24_news_KAHOKU_2275))

(525) 本年度は2月1日から3月10日まで計約1800人が参加した。

```
( (IP-MAT (PP-TMP (NP (N 本年度))
  (P-OPTR は))
  (PP (NP (NUMCLP (NUM 2)
    (CL 月))
    (NUMCLP (NUM 1)
    (CL 日)))
    (P-ROLE から))
  (PP (NP (NUMCLP (NUM 3)
    (CL 月))
    (NUMCLP (NUM 10)
    (CL 日)))
    (P-ROLE まで))
  (PP-SBJ (NP (N 計)
    (NUMCLP (NUM 約1800)
    (CL 人)))
    (P-ROLE が))
  (VB 参加)
  (VB0 し)
  (AXD た)
  (PU 。))
(ID 64_news_KAHOKU_39))
```

20.5.7 Host-less adverbial expressions with Q / NUMCLP

Quantificational NPs originated from Qs (or, more frequently, NUMCLPs) sometimes function as adverbs that don't quantify any host nominals. Among the typical cases are adverbs which express time, duration, distance, or degree. No sort information is given to these adverbs. Rather, these adverbs are identified as either an NP-TMP, NP-ADV or NP-MSR (see section 9.2.2 for the discussion on the extensions TMP, ADV, and MSR):

(526) 尿道をつくる工程と似ていますがもう少し複雑です

```
( (IP-MAT (NP-SBJ *pro*)
  (PP-CONJ (IP-ADV (PP-OB1 (NP (IP-EMB (NP-SBJ *speaker+pro*)
    (PP-OB1 (NP (N 尿道))
    (P-ROLE を))
    (VB つくる))
    (N 工程))
    (P-ROLE と))
    (VB 似)
    (P-CONN て)
    (VB2 い)
    (AX ます))
    (P-CONN が))
  (NP-ADV (ADV もう)
    (ADV 少し))
  (ADJN 複雑)
  (AX です))
(ID 86_ted_talk_9))
```

(527) 全国平均を5.3ポイント下回った。

```
( (IP-MAT (NP-SBJ *pro*)
  (PP-OB1 (NP (N 全国平均))
    (P-ROLE を))
  (NP-ADV (NUMCLP (NUM 5.3)
    (CL ポイント)))
  (VB 下回っ)
  (AXD た)
  (PU 。))
(ID 22_news_KAHOKU_113))
```

(528) 私は、もう少しここで待とう、と考えていた。

‘I was thinking I would wait here a little longer.’

```
( (IP-MAT (PP-SBJ (NP;{SPEAKER_1088} (PRO 私))
  (P-OPTR は))
  (PU 、)
  (CP-THT-OB1 (IP-SUB (NP-SBJ *speaker*)
    (ADVP (ADVP (ADV もう))
      (ADV 少し))
    (PP (NP;{CURRENT_PLACE_1088} (PRO ここ))
      (P-ROLE で))
    (VB 待と)
    (AX う))
    (PU 、)
    (P-COMP と))
  (VB 考え)
  (P-CONN て)
  (VB2 い)
  (AXD た)
  (PU 。))
(ID 1088_textbook_kisonihongo))
```

(529) スミスは2年間バーミンガムに住んだ。

‘Smith lived in Birmingham for two years.’

```
( (IP-MAT (PP-SBJ (NP (NPR スミス))
  (P-OPTR は))
  (NP-MSR (NUMCLP (NUM 2)
    (CL 年間)))
  (PP (NP (NPR バーミンガム))
    (P-ROLE に))
  (VB 住ん)
  (AXD だ)
  (PU 。))
(ID 1724_misc_JSeM_beta_150530))
```

21 Punctuation

As a general rule, punctuation is attached at the highest possible level, with the exception of multi-sentence.

- (530) 希望者は、住所、氏名、および、電話番号を記入して下さい。
 ‘Applicants should write their address, name, and telephone number.’

```
( (CP-IMP (IP-SUB (PP-SBJ (NP (N 希望者))
                               (P-OPTR は))
              (PU 、)
              (PP-OB1 (NP (CONJP (NP (N 住所)))
                               (PU 、)
                               (CONJP (NP (N 氏名))
                                       (PU 、)
                                       (CONJ および))
                               (PU 、)
                               (NP (N 電話番号)))
              (P-ROLE を))
      (VB 記入)
      (VB0 し)
      (P-CONN て)
      (VB2 下さい))
  (PU 。))
(ID 882_textbook_kisonihongo))
```

Note especially that when an overt coordinating conjunction follows an IP-ADV, punctuation intervening between the IP-ADV and the following coordinating conjunction is allowed.

- (531) 彼女は一流のピアニストで、かつ優れた随筆家だ。
 ‘She is a first-class pianist, as well as a fine essayist.’

```
( (IP-MAT (PP-SBJ (NP (PRO 彼女))
                    (P-OPTR は))
      (IP-ADV-CONJ (NP-PRD (IP-REL (NP-SBJ *T*)
                                     (ADJN 一流)
                                     (AX の))
                        (N ピアニスト))
                  (AX で))
      (PU 、)
      (CONJ かつ)
      (NP-PRD (IP-REL (NP-SBJ *T*)
                      (VB 優れ)
                      (AX た))
              (N 随筆家))
      (AX だ)
      (PU 。))
(ID 192_textbook_djg_advanced))
```

As is already mentioned in section 19, another exception is dashes and parentheses (PUL and PUR) setting off a parenthetical element (PRN). They are contained within the PRN node.

22 Metadata (META)

Occasionally texts include metadata such as stage directions or identification of the person speaking. This kind of marginalium is placed under the tag META.

- (532) 週末は人並みが絶えない＝昨年 1 1 月

```
( (IP-MAT (PP-TMP (NP (N 週末))
                    (P-OPTR は))
  (PP-SBJ (NP (N 人並み))
          (P-ROLE が))
  (VB 絶え)
  (NEG ない)
  (META (SYM =)
        (NP (N 昨年)
              (NUMCLP (NUM 1 1)
                       (CL 月))))))
(ID 22_news_KAHOKU_457))
```

23 Colloquial forms

This section explains how expressions specific to the colloquial style are annotated.

23.1 Interjection phrases (INTJP)

The part-of-speech tag INTJ is for interjectives.

Standalone INTJs in clauses do not project INTJPs.

(533) 「ああ、王は惻巧だ。

```
( (IP-MAT (PUL 「)
  (INTJ ああ)
  (PU 、)
  (PP-SBJ (NP (N 王))
          (P-OPTR は))
  (ADJN 惻巧)
  (AX だ)
  (PU 。))
(ID 84_aozora_Dazai-2-1940))
```

Only in the following cases do INTJPs appear:

- When INTJs make up complete utterances, as is commonly the case with もしもし, はい, etc. Such INTJPs can be either matrix utterances or embedded quotations:

```
(INTJP (INTJ もしもし)
      (PU 。))
```

```
(INTJP (INTJ はい)
      (PU 。))
```

(534) すると帽子屋さんは、おやおやと思いました。

```
( (IP-MAT (CONJ すると)
  (PP-SBJ (NP (N 帽子屋さん))
          (P-OPTR は))
  (PU 、)
  (CP-THT-OB1 (INTJP (INTJ おやおや))
               (P-COMP と))
  (VB 思い)
  (AX まし)
```

(AXD た)
 (PU 。))
 (ID 55_aozora_Niimi-1943))

- When INTJs are accompanied with particles.

(IP-IMP (NP-SBJ *hearer*)
 (INTJP (INTJ すみません)
 (P が))
 (PU ,)
 (PP (NP (N 塩))
 (P を))
 (NP-OB1 *を*)
 (VB 取っ)
 (P て)
 (VB2 ください)
 (PU 。))

- When non-interjective words and phrases function as interjectivals. In the examples below, the particles *ね* and *が* project INTJPs instead of PPs.

(INTJP (IP-SUB (ADVP (ADV そう))
 (AX です))
 (P-FINAL ね))
 (INTJP (NP (PRO それ))
 (P-CONN が))

In the following attested example, the CP-THT 見えるかといって as a whole serves as an interjectivals.

(535) じゃ、私の顔が見えるかいと一心に聞くと、見えるかといって、そら、そこに、写
 ってるじゃありませんかと、にこりと笑って見せた。

((IP-MAT (NP-SBJ *pro*)
 (PP-SCON (IP-ADV (NP-SBJ *speaker*)
 (CP-THT-OB1 (CP-QUE (IP-SUB (NP-SBJ *hearer*)
 (CONJ じゃ)
 (PU 、)
 (PP-OB1 (NP (PP (NP
 (PRO 私))
 (P-ROLE
 の))
 (N 顔))
 (P-ROLE が))
 (VB 見える))
 (P-FINAL かい))
 (P-COMP と))
 (PP (NP (N 一心))
 (P-ROLE に))
 (VB 聞く))
 (P-CONN と))
 (PU 、)

(CP-THT-ADV (CP-FINAL (IP-SUB (NP-SBJ *pro*)
 (INTJP (CP-THT (CP-QUE (IP-SUB (NP-SBJ
 speaker)
 (NP-OB1
 hearer)
 (VB
 見える))
 (P-FINAL か
 い))
 (P-COMP って)))
 (PU 、)
 (INTJ そら)
 (PU 、)
 (PP (NP (PRO そこ))
 (P-ROLE に))
 (PU 、)
 (VB 写っ)
 (VB2 てる)
 (AX じゃ)
 (VB2 あり)
 (AX ませ)
 (NEG ん))
 (P-FINAL か))
 (P-COMP と))
 (PU 、)
 (ADVP (ADV にこりと))
 (VB 笑っ)
 (P-CONN て)
 (VB2 見せ)
 (AXD た)
 (PU 。))
 (ID 18_aozora_Natsume-1908))

Neither INTJs nor INTJPs are conjoined by CONJPs (see section 18). They are just juxtaposed at the same level.

(536) あー、はいはいはい、特にね
 ((CP-FINAL (IP-SUB (INTJ あー)
 (PU 、)
 (INTJ はい)
 (INTJ はい)
 (INTJ はい)
 (PU 、)
 (ADVP (ADV 特に)))
 (P-FINAL ね))
 (ID 45_spoken_JM10))

(537) ああそうだ、こうやればよさそうだな」
 ((CP-FINAL (IP-SUB (INTJ ああ)
 (INTJ そうだ)
 (PU 、)

```

(NP-SBJ;{CONFIDENCE} *pro*)
(IP-ADV-SCON-CND (NP-SBJ;{SHERLOCK+WATSON} *speaker+pro*)
  (ADVP (ADV こう))
  (VB やれ)
  (P-CONN ば))
  (ADJI よさ)
  (AX そう)
  (AX だ))
(P-FINAL な)
(PUR ー))
(ID 579_aozora_Doyle-1905))

```

23.2 False starts (FS)

FS indicates a false start. This is used particularly in the spoken data when disfluencies such as repetition and restating are observed.

(538) 「ひ、ひ、人殺しイ……」

```

( (FRAG (PUL 「)
  (NP (FS (N ひ)
    (PU 、))
    (FS (N ひ)
      (PU 、))
      (N 人殺しイ))
    (PU ……))
  (PUR ー))
(ID 41_aozora_Kunieda-1925))

```

(539) この場所ここのアリーナもまたギリシャの円形劇場のように忘我の状態のため
の場所です

```

( (IP-MAT (FS (NP-SBJ (D この)
  (N 場所)))
  (PP-SBJ (NP (PP (NP (PRO ここ))
    (P-ROLE の))
    (N アリーナ))
    (P-OPTR も))
    (ADVP (ADV また))
    (PP (NP (PP (NP (PP (NP (NPR ギリシャ))
      (P-ROLE の))
      (N 円形劇場))
      (P-ROLE の))
      (N よう))
      (P-ROLE に))
      (NP-PRD (PP (NP (PP (NP (PP (NP (N 忘我))
        (P-ROLE の))
        (N 状態))
        (P-ROLE の))
        (N ため))
        (P-ROLE の))
        (N 場所))

```


(AX です))
(ID 46_ted_talk_3))

23.3 Ellipsis

Ellipses can be found mostly, but not exclusively, in colloquial texts. This section summarizes the way to annotate them.

For zero pronouns, or omission of NPs with core grammatical roles, see section 8.

When particles that indicate grammatical roles (whether core ones or peripheral ones) of NPs are omitted, these NPs, which are bare, are directly tagged with these roles (e.g., NP-SBJ and NP-OB1).

(540) ご飯食べた？
‘Did you eat the meal?’
((CP-QUE (IP-SUB (NP-SBJ *hearer*)
 (NP-OB1 (N ご飯))
 (VB 食べ)
 (AXD た))
 (PU ？))
(ID 968_textbook_kisonihongo))

(541) あれ、雨降ってる。
‘Oh, it is raining.’
((IP-MAT (INTJ あれ)
 (PU 、)
 (NP-SBJ (N 雨))
 (VB 降っ)
 (VB2 てる)
 (PU 。))
(ID 969_textbook_kisonihongo))

Note that core grammatical roles are preferred to peripheral ones. あいつ in the following sentence can be complemented by both a -SBJ core grammatical role and a -TPC peripheral role. However, because of the preference, the -SBJ tag overwrites -TPC.

(542) あいつ、どこ行ったのかな。
‘Where did that guy go?’
((CP-QUE (IP-SUB (NP-SBJ; {MEN_971} (PRO あいつ))
 (PU 、)
 (NP-LOC (WPRO どこ))
 (VB 行っ)
 (AXD た)
 (FN の))
 (P-FINAL かな)
 (PU 。))
(ID 971_textbook_kisonihongo))

The next example contains a genuine NP-TPC:

(543) 仮校舎、不自由続く

```
( (IP-MAT (SYM □)
      (NP-TPC (N 仮校舎))
      (PU 、)
      (NP-SBJ (N 不自由))
      (VB 続く))
```

```
(ID 50_news_KAHOKU_37))
```

For discussion of the omission of heads in NPs, see section 24.2.

For discussion of the omission of heads in IP-ADV, see section 24.3.

23.4 Afterthoughts

Sometimes a phrase or a series of phrases is extraposed to the right after predicational syntagms, and sometimes even after sentence final particles. It is counted as an afterthought that complements the gapped sentence body.

When a phrase which is related to the sentence body in any way gets right-extraposed as an afterthought, it is related to the sentence body using *ICH* (see section 8.2). That is, the extraposed phrase leaves an *ICH* trace with an index which is dominated by a node whose label fully specifies the part-of-speech (indicated by the main label) and the overtly annotated grammatical role (indicated by the label extension(s)), if any; the extraposed phrase itself is labelled by the same main label (but without label extensions) and the same index. In example (29), the trace is specified as (PP-SBJ *ICH*-1) and the extraposed phrase is tagged as (PP-1 神戸は).

- (29) 美しい街ですよ、神戸は。
 ‘Kobe is a beautiful town.’

```
( (CP-FINAL (IP-SUB (PP-SBJ *ICH*-1)
                    (NP-PRD (IP-REL (NP-SBJ *T*)
                                   (ADJI 美しい))
                           (N 街))
                    (AX です))
  (P-FINAL よ)
  (PU 、)
  (PP-1 (NP (NPR 神戸))
        (P-OPTR は))
  (PU 。))
(ID 989_textbook_kisonihongo))
```

- (545) 来た、来た、バスが。
 ‘The bus came.’

```
( (CP-FINAL (IP-SUB (PP-SBJ *ICH*-1)
                    (IP-ADV-CONJ (VB 来)
                                   (AXD た))
                    (PU 、)
                    (VB 来)
                    (AXD た))
  (PU 、)
  (PP-1 (NP (N バス))
        (P-ROLE が))
  (PU 。))
(ID 990_textbook_kisonihongo))
```

(546) ／生きる、全てを糧に

```
( (CP-FINAL (IP-SUB (NP-SBJ *pro*)
                    (PU ／)
                    (IP-ADV-SCON *ICH*-1)
                    (VB 生きる))
  (PU 、)
  (IP-ADV-1 (PP-OB1 (NP (Q 全て))
                    (P-ROLE を))
            (PP-OB2 (NP (N 糧))
                    (P-ROLE に))))
(ID 3_news_KAHOKU_55))
```

23.5 Contractions

When a contraction of two morphemes occurs, then the assignment of a tag is usually made according to the part of speech of the morpheme that determines the function of the whole, typically the second member. Thus, the contracted forms *てる* (<ている), *ちゃう* (<てしまう), *てく* (<ていく), *とく* (<ておく) are all tagged as VB2s. Here are some examples.

(547) 僕、もうやめちゃうけど、君はどうするの。
‘I am going to stop, but what would you do?’

```
( (CP-QUE (IP-SUB (PP-CONJ (IP-ADV (NP-SBJ;{SPEAKER_992} (PRO 僕))
                                (PU 、)
                                (ADVP (ADV もう))
                                (VB やめ)
                                (VB2 ちゃう))
          (P-CONN けど))
  (PU 、)
  (PP-SBJ (NP;{HEARER_992} (PRO 君))
          (P-OPTR は))
  (ADVP-CMPL (WADV どう))
  (VB する)
  (FN の))
  (PU 。))
(ID 992_textbook_kisonihongo))
```

(548) ここに置いとくよ。
‘I will put it here.’

```
( (CP-FINAL (IP-SUB (NP-SBJ *speaker*)
                    (NP-OB1;{SUTFF_998} *pro*)
                    (PP (NP;{CURRENT_POSITION_998} (PRO ここ))
                      (P-ROLE に))
                    (VB 置い)
                    (VB2 とく))
  (P-FINAL よ)
  (PU 。))
(ID 998_textbook_kisonihongo))
```

24 Constructions

This section describes the annotation of different constructions.

24.1 Double subject sentences

There is a common sentence type in Japanese called a “double subject sentence”:

(549) 神戸は夜景がきれいだ。

‘The night view is pretty in Kobe.’

```
( (IP-MAT (PP-SBJ (NP;{KOBE} (NPR 神戸))
(P-OPTR は))
(PP-SBJ2 (NP (N 夜景))
(P-ROLE が))
(ADJN きれい)
(AX だ)
(PU 。))
(ID 762_textbook_kisonihongo))
```

In the example above, both は and が mark NPs that are annotated as grammatical subjects. The second subject (closest to the predicate) is interpreted as having a simple subject role with regard to the predicate, independent of other factors. The first (leftmost) subject is dependent on a relationship with either the second subject, or with the predicate, or with the predication that these two form (discussed in detail below). According to our annotation framework, the first subject (regardless of its particle marking) is tagged as SBJ, and the second が-marked subject is assigned the label SBJ2. As arguments, either can function as a controller in a superordinate clause.

In non-relative clauses, a non-focus first subject is typically marked with a *toritate* particle such as は, も, なら, だって, etc. A further characteristic of this construction is that the first subject can be marked with が given the right context, either in a relative clause

- ・オランダがチューリップが綺麗なことは知れ渡っている。

or with some special focus.

- ・Q. ヨーロッパ旅行、どこが良かった？A. オランダがチューリップが綺麗だったわ。

Sentences of this kind are subdivided into at least three types depending on the relationships that obtain between NP-SBJ, NP-SBJ2, and the predicate. (see [Nihongo Kijutsu Bunpou Kenkyukai 2009b](#), pp. 186-189). (The distinction between these types is not specified in the annotation, but an awareness of the types is useful for recognising the general construction.)

In the first type of double subject sentence, the first は-marked subject can be construed as the nominal complement of the second が-marked subject. Therefore, a sentence ‘A は B が C (だ)’ can be converted into ‘A の B が C (だ)’ without essentially changing the meaning. For example,

- 象は鼻が長い → 象の鼻が長い
- 神戸は夜景がきれいだ → 神戸の夜景がきれいだ
- 日本語は文字が複雑だ → 日本語の文字が複雑だ

The second type is formed on a nominal predicate, where the first subject can be construed as the complement of the noun that occurs as predicate. In other words, ‘A は B が C だ’ is almost equal to ‘B が A の C だ’. Typically the head of the nominal predicate denotes some crucial or integral aspect of NP-SBJ in these sentences. Here are examples:

- カキ料理は広島が本場だ。(→ 広島がカキ料理の本場だ)
- あの店はあさってがオープンだ。(→ あさってがあの店のオープンだ)

In the third type, the first subject does not stand in any particular grammatical relationship to the second subject or to the predicate individually, but has a relationship to predication that the pair forms. For example,

- このにおいは、ガスが漏れているな。

In this sentence, このにおいは has no relationship to ガス or to 漏れている in terms of complement relation or grammatical role, but has a summational relation to the predication they form.

The double subject construction is so robust in Japanese that a null NP-SBJ is construable when it is relativised, or controlled by an NP in a superordinate clause or retrievable from context. In the example below, The speaker is NP-SBJ of the IP-MAT, while at the same time functioning as controller into the IP-ADV, which has two subjects.

(550) 実家が塩釜の海産物屋なので、浜のにおいの中で育った。

```
( (IP-MAT (NP-SBJ *speaker*)
  (PP-SCON (IP-ADV (PP-SBJ2 (NP (N 実家))
    (P-ROLE が))
    (NP-PRD (PP (NP (N 塩釜))
      (P-ROLE の))
      (N 海産物屋))
    (AX な))
    (P-CONN ので))
  (PU 、)
  (PP (NP (PP (NP (PP (NP (N 浜))
    (P-ROLE の))
    (N におい))
    (P-ROLE の))
    (N 中))
    (P-ROLE で))
  (VB 育っ)
  (AXD た)
  (PU 。))
(ID 33_news_KAHOKU_303))
```

A careful distinction must be made between this kind of sentence and sentences with predicates that call for a が_s-marked NP-OB1. As explained in section 15.6 in some detail, in constructions with が_s-marked NP-OB1, the NP-OB1 can be left unexpressed and the NP-SBJ is still interpretable as a subject of the predicate. In most double subject sentences, however, the NP-SBJ is not simply interpretable as a subject of the predicate. Furthermore, only a limited number of predicates subcategorise for a が_s-marked object, whereas there is hardly any restriction on the type of predicate in a double subject construction, provided that the relevance of the NP-SBJ can be drawn.

Note that there are constructions of the type exemplified below which do not fit into any of the categories listed above and seem to be derived from topicalisation and left-shifting of the first NP plus exhaustive focus marking on the second NP:

- チューリップはオランダが綺麗だ。
- 歌は太郎が上手い。
- 編集は教科書が難しい。

It is not clear whether these should be treated as double subject sentences.

It is also a well known fact that triple and quadruple subject sentences are possible: 日本は女性₁は平均寿命₂が長い₃。 The question of how many NPs may be assigned subject status in one clause is another question that needs to be addressed. In this corpus, there is no other extension tag for subjects than -SBJ and -SBJ2.

Also note that the definition of the first type of double subject sentence is satisfied by constructions with the so-called “transitive (possessive) verb ある”, but our annotation treats the second が_s-marked argument for these constructions as NP-OB1.

24.2 N-bar deletion

Infrequently there are examples in which a head noun appears to have been deleted and a の-headed PP functions as a restrictor on some generalized entity:

(551) すごいいいデザインののがあってこれに決めた !!

```
( (IP-MAT (NP-SBJ *speaker*)
  (NP-OB1 *pro*)
    (IP-ADV-SCON (PP-SBJ (NP (PP (NP (IP-REL (NP-SBJ *T*)
      (ADVP (ADJI すごい))
      (ADJI いい))
      (N デザイン))
      (P-ROLE の)))
      (P-ROLE が))
      (VB あっ)
      (P-CONN て))
      (PP (NP (PRO これ))
        (P-ROLE に))
      (VB 決め)
      (AXD た)
      (PU !!))
    (ID 107_misc_KNB))
```

This phenomenon is called “N-bar deletion”. Note that the head is left empty; that is, with no overt annotation whatsoever.

24.3 Right node raising construction

Infrequently there are examples of coordination in which a head predicate appears to have been deleted from a non-initial conjunct:

(552) 右から開くと防災マップ、左から開くと高齢者見守りのマップとなるようにデザインした。

```

( (IP-MAT (NP-SBJ;{AAT} *pro*)
  (NP-OB1;{AAT_MAP} *pro*)
  (PP (NP (IP-EMB (NP-SBJ;{AAT_MAP} *pro*)
    (IP-ADV-CONJ (PP-SCON-CND (IP-ADV (NP-SBJ *arb*)
      (NP-OB1;{AAT_MAP}
*pro*)
      (PP (NP (N 右))
        (P-ROLE か
ら))
        (VB 開く))
        (P-CONN と))
        (NP-OB1 (N 防災マップ)))
      (PU 、)
      (PP-SCON-CND (IP-ADV (NP-SBJ *arb*)
        (NP-OB1;{AAT_MAP} *pro*)
        (PP (NP (N 左))
          (P-ROLE から))
          (VB 開く))
          (P-CONN と))
          (IP-SMC-OB1 (NP-PRD (PP (NP (N 高齢者見守り))
            (P-ROLE の))
            (N マップ))
            (AX と))
            (VB なる))
            (N よう))
            (P-ROLE に))
            (VB デザイン)
            (VB0 し)
            (AXD た)
            (PU 。))
            (ID 13_news_KAHOKU_33))

```

The phenomenon is called “Right-node raising”. Note that the head of the first conjunct is left empty; that is, with no overt annotation whatsoever.

(553) 最終的に舞台のアンネ役はスーザン・ストラスバークが、映画のアンネ役はミリー・パーキンスが演じた。

```

( (IP-MAT (ADVP (ADJN 最終的)
  (AX に))
  (IP-ADV-CONJ (PP-OB1 (NP (PP (NP (N 舞台))
    (P-ROLE の))
    (N アンネ役))
    (P-OPTR は))
    (PP-SBJ (NP (NPR スーザン・ストラスバーク))
      (P-ROLE が)))
    (PU 、)
    (PP-OB1 (NP (PP (NP (N 映画))
      (P-ROLE の))
      (N アンネ役))
      (P-OPTR は))
      (PP-SBJ (NP (NPR ミリー・パーキンス))
        (P-ROLE が)))

```

(VB 演じ)
 (AXD た)
 (PU 。))
 (ID 129_wikipedia_Audrey_Hepburn))

- (554) 太郎は小説が、花子は詩が、好きだ。
 ‘Taro likes novels and Hanako poetry.’

((IP-MAT (IP-ADV-CONJ (PP-SBJ (NP;{TARO_1230} (NPR 太郎))
 (P-OPTR は))
 (PP-OB1 (NP (N 小説))
 (P-ROLE が))
 (PU 、)
 (PP-SBJ (NP;{HANAKO_1230} (NPR 花子))
 (P-OPTR は))
 (PP-OB1 (NP (N 詩))
 (P-ROLE が))
 (PU 、)
 (ADJN 好き)
 (AX だ)
 (PU 。))
 (ID 1230_textbook_kisonihongo))

Note that in this construction the first conjunct without a predicate forms an IP-ADV-CONJ.

There are structures involving parallelism that are marked up in ways analogous to right-node raising. In the example below parallelism is expressed by conjunction of IPs where more than one node is “left behind” by the first conjunct. These are indicated by headless categories within the IP conjunct, in addition to the headless IP itself.

- (555) 参加者のアンケートには、過去に経験のある人から「メンバーが変わると答えも変わった」、初めての人から「こんなに多様な意見があるとは思わなかった」などの回答が寄せられた。

((IP-MAT (PP (NP (PP (NP (N 参加者))
 (P-ROLE の))
 (N アンケート))
 (P-ROLE に)
 (P-OPTR は))
 (PU 、)
 (IP-ADV-CONJ (PP-LGS (NP (IP-REL (NP-SBJ *T*)
 (PP (NP (N 過去))
 (P-ROLE に))
 (PP-OB1 (NP (N 経験))
 (P-ROLE の))
 (VB ある))
 (N 人))
 (P-ROLE から))
 (PP-SBJ (NP (PP (CP-THT (IP-SUB (PUL 「)
 (PP-SCON-CND (IP-ADV
 (PP-SBJ (NP (N メンバー))
 が))

(VB

変わる))

(P-CONN

と))

(PP-SBJ (NP (N 答

え))

(P-OPTR も))

(VB 変わっ)

(AXD た)

(PUR 」))))))

(PU 、)

(PP-LGS (NP (IP-REL (NP-SBJ *T*)

(NP-OB1 *pro*)

(ADJN 初めて)

(AX の))

(N 人))

(P-ROLE から))

(PP-SBJ (NP (PP (CP-THT (PUL 「)

(IP-SUB (NP-SBJ *pro*)

(CP-THT-OB1 (IP-SUB (PP-SBJ (NP

(IP-REL (NP-SBJ *T*)

(ADV

(ADJN こんな)

に))

(ADJ

多様)

(AX

な))

(N

意見))

(P-ROLE

が))

(VB ある))

(P-COMP と)

(P-OPTR は))

(VB 思わ)

(NEG なかつ)

(AXD た))

(PUR 」)

(P-OPTR など))

(P-ROLE の))

(N 回答))

(P-ROLE が))

(VB 寄せ)

(PASS られ)

(AXD た)

(PU 。))

(ID 15_news_KAHOKU_34))

24.4 Verbless depictive (absolute) clauses

There is a class of constructions called “depictive (absolute) clauses” that are similar to right-node raising constructions in lacking a verb. However, these clauses are unique in that they are adverbial to a following predication, rather than being parallel to it. Generally, they are of the form [A を B に] and placed under IP-ADV-SCON, unlike right-node raising constructions. They are further divided into two types with two different structural descriptions.

If に can be replaced with として without changing the meaning of the sentence, then [B に] is analyzed as a small clause (IP-SMC-OB1), with に as a copula (AX) in infinitive form:

(556) この研究は中島教授を中心に進められている。

‘This research is progressing, with Prof. Nakajima taking the lead.’

```
( (IP-MAT (PP-SBJ (NP (D この)
                      (N 研究))
                (P-OPTR は))
  (IP-ADV-SCON (PP-DOB1 (NP (NPR 中島教授))
                       (P-ROLE を))
               (IP-SMC-OB1 (NP-PRD (N 中心))
                           (AX に)))
  (NP-LGS *pro*)
  (VB 進め)
  (PASS られ)
  (P-CONN て)
  (VB2 いる)
  (PU 。))
(ID 415_textbook_djg_advanced))
```

(557) 親鸞は、ここを拠点に精力的な布教活動を行う。

‘He settled at Hitachi Province and spread his teachings vigorously to the people there.’

```
( (IP-MAT (PP-SBJ (NP (NPR 親鸞))
                (P-OPTR は))
  (PU 、)
  (IP-ADV-SCON (PP-DOB1 (NP (PRO ここ))
                       (P-ROLE を))
               (IP-SMC-OB1 (NP-PRD (N 拠点))
                           (AX に)))
  (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
                     (ADJN 精力的)
                     (AX な))
          (N 布教活動))
          (P-ROLE を))
  (VB 行う)
  (PU 。))
(ID 77_wikipedia_KYOTO_7))
```

If に cannot be replaced with として, then [B に] is analyzed as a post-positional phrase (PP-OB2), with に as a particle performing a peripheral grammatical role:

(558) オリンピックを前に、選手たちは泳ぎ込んだ。

```
( (IP-MAT (IP-ADV-SCON (PP-DOB1 (NP (NPR オリンピック))
                                (P-ROLE を))
```

```

(IP-SMC-OB1 (NP-PRD (N 前))
              (AX に)))
(PU 、)
(PP-SBJ (NP (N 選手たち))
        (P-OPTR は))
(VB 泳ぎ込ん)
(AXD だ)
(PU . ))
(ID 569_dict_vv-lexicon))

```

(559) 地図を手に目的地を探した。
 ‘I looked for the destination with a map in my hand.’

```

( (IP-MAT (NP-SBJ *speaker*)
      (IP-ADV-SCON (PP-DOB1 (NP (N 地図))
                             (P-ROLE を))
                    (IP-SMC-OB1 (NP-PRD (N 手))
                                  (AX に)))
      (PP-OB1 (NP (N 目的地))
               (P-ROLE を))
      (VB 探し)
      (AXD た)
      (PU 。 ))
  (ID 1166_textbook_kisonihongo))

```

24.5 Multiple sentences in a quotation

If there is concatenation of IP-MAT, IP-IMP or clauses of a CP* level within a quotation, or followed by a particle that modifies a noun with a content complement (という, といった, etc.), then the concatenated elements are placed directly under an instance of the multi-sentence tag. FRAG and INTJP, when forming distinct utterances, can also be placed directly under multi-sentence.

(560) 「イライラが募るのか。明らかに震災後の現象だ」と校長は対応に困惑する。

```

( (IP-MAT (CP-THT-OB1 (multi-sentence (PUL 「)
                                         (CP-QUE (IP-SUB (PP-SBJ (NP (N イラ
                                         イラ))
                                         (P-ROLE が))
                                         (VB 募る)
                                         (FN の))
                                         (P-FINAL か)
                                         (PU 。 ))
                                         (IP-MAT (NP-SBJ *pro*)
                                         (ADVP (ADJN 明らか)
                                         (AX に))
                                         (NP-PRD (PP (NP (N 震災後))
                                         (P-ROLE の))
                                         (N 現象))
                                         (AX だ))
                                         (PUR 」 ))
                                         (P-COMP と))

```

(PP-SBJ (NP (N 校長))
(P-OPTR は))
(PP (NP (N 対応))
(P-ROLE に))
(VB 困惑)
(VB0 する)
(PU 。))
(ID 21_news_KAHOKU_37))

(561) 私的日記にとどまらない、「誰かのためになる」「役に立つ」「琴線に触れる」よ
うなブログが、読み手の共感を得る。

((IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*))
(PP (NP (N 私的日記))
(P-ROLE に))
(VB とどまら)
(NEG ない))
(PU 、)
(IP-REL (NP-SBJ *T*))
(NP-PRD (multi-sentence (IP-MAT (PUL 「)
(IP-SMC-OB1
(NP-PRD (PP (NP (WPRO 誰)

か))

の))

ため))

に))

役))

に))

琴線))

に))

(N よう))
(AX な))
(N ブログ))
(P-ROLE が))
(PU 、)

(VB なる)
(PUR 」))
(IP-MAT (PUL 「)
(PP (NP (N
(P-ROLE
(VB 立つ)
(PUR 」))
(IP-MAT (PUL 「)
(PP (NP (N
(P-ROLE
(VB 触れる)
(PUR 」)))

```

      (PP-OB1 (NP (PP (NP (N 読み手))
                        (P-ROLE の))
                (N 共感))
      (P-ROLE を))
      (VB 得る)
      (PU 。))
      (ID 11_news_KAHOKU_87))

```

Note that the multi-sentence tag by itself does not create a syntactic island such as IP-SUB creates under CP-THT. Rather, it is the practice of allowing only utterance-level categories (namely, IP-MAT, IP-IMP, FRAG, INTJP, CP-QUE, CP-EXL, CP-FINAL) to appear under multi-sentence that produces the island effect.

24.6 Focused pseudocleft constructions

Focused pseudocleft constructions are analysed as copular clauses, typically with SBJ comprised of (N の) as the head noun, modified by an IP-REL with a trace. A subject so comprised forms the presuppositional part of a focused pseudocleft sentence. The focus part of the sentence is a copular predication, typically formed on an NP-PRD.

- (562) 太郎が勉強しているのは日本史だ。
 ‘It is Japanese history that Taro is studying.’

```

      ( (IP-MAT (PP-SBJ (NP (IP-REL (NP-OB1 *T*)
                                   (PP-SBJ (NP;{TARO_1062} (NPR 太郎))
                                   (P-ROLE が))
                                   (VB 勉強)
                                   (VB0 し)
                                   (P-CONN て)
                                   (VB2 いる))
                                   (N の))
                                   (P-OPTR は))
      (NP-PRD (N 日本史))
      (AX だ)
      (PU 。))
      (ID 1062_textbook_kisonihongo))

```

The focus part may be occupied by the projection of a particle phrase (PP-PRD).

- (563) 「わたしたちが信じるのは、もうあなたが話してくれたからではない。

```

      ( (IP-MAT (PUL 「)
      (PP-SBJ (NP (IP-EMB (NP-OB1 *pro*)
                          (PP-SBJ (NP;{SAMARITANS} (PRO わたしたち))
                          (P-ROLE が))
                          (VB 信じる))
                          (N の))
                          (P-OPTR は))
      (PU 、)
      (ADVP (ADV もう))
      (PP-PRD (IP-ADV (NP-OB1 *pro*)
                      (PP-SBJ (NP;{WOMAN} (PRO あなた))
                      (P-ROLE が))
                      (VB 話し)

```

(P-CONN て)
 (VB2 くれ)
 (AXD た))
 (P-CONN から))
 (AX で)
 (P-OPTR は)
 (NEG ない)
 (PU 。))
 (ID 284_bible_nt))

On the other hand, there are pseudoclefts which are annotated as involving not an IP-REL, but an IP-EMB. A typical case involves a focused element which expresses a reason for the presuppositional part. For such cases, it is not clear what kind of trace should be placed if an IP-REL were assumed.

(564) あなたがたが信じないのは、わたしの羊でないからである。

((IP-MAT (PP-SBJ (NP (IP-EMB (NP-OB1 *speaker*)
 (PP-SBJ (NP (PRO あなたがた))
 (P-ROLE が))
 (VB 信じ)
 (NEG ない))
 (N の))
 (P-OPTR は))
 (PU 、)
 (PP-PRD (IP-ADV (NP-SBJ *hearer*)
 (NP-PRD; {SHEEP} (PP (NP; {JESUS} (PRO わたし))
 (P-ROLE の))
 (N 羊))
 (AX で)
 (NEG ない))
 (P-CONN から))
 (AX で)
 (VB2 ある)
 (PU 。))
 (ID 900_bible_nt))

Furthermore, conjoined pseudoclefts are analyzed as having an IP-EMB uniformly if one of them must be so analyzed, even when an IP-REL analysis is possible for another conjunct.

(565) 二人が知り合ったのは友人を介してであり、ヘプバーンとドッティとの結婚生活が終わりを迎えようとしていた時期だった。

((IP-MAT (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (NUMCLP (NUM 二人)))
 (P-ROLE が))
 (VB 知り合っ)
 (AXD た))
 (N の))
 (P-OPTR は))
 (IP-ADV-CONJ (PP-PRD (NP (N 友人))
 (P-ROLE を介して))
 (AX で)
 (VB2 あり))
 (PU 、)

(NP-PRD (IP-EMB (PP-SBJ (NP (PP (NP (CONJP (NP (NPR ヘプバーン))
 (P-CONN と))
 (NP (NPR ドッティ))
 (P-CONN と))
 (P-ROLE の))
 (N 結婚生活))
 (P-ROLE が))
 (PP-OB1 (NP (N 終わり))
 (P-ROLE を))
 (VB 迎え)
 (AX よう)
 (AX と)
 (VB2 し)
 (P-CONN て)
 (VB2 い)
 (AXD た))
 (N 時期))
 (AX だっ)
 (AXD た)
 (PU 。))
 (ID 304_wikipedia_Audrey_Hepburn))

Note that there are copular clauses that have the same surface structure as focused pseudocleft constructions, but don't involve the concealed question/answer pairing that is characteristic of focused pseudocleft constructions. There is no special annotation to distinguish this construction from pseudoclefts.

(566) 津波に対抗して堤防を高くするのは、技術力に依存した20世紀型の発想。

((IP-MAT (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
 (IP-ADV-CONJ (PP (NP (N 津波))
 (P-ROLE に))
 (VB 対抗)
 (VB0 し)
 (P-CONN て))
 (PP-OB1 (NP (N 堤防))
 (P-ROLE を))
 (IP-SMC-CNT (ADJI 高く))
 (VB する))
 (N の))
 (P-OPTR は))
 (PU 、)
 (NP-PRD (IP-REL (NP-SBJ *T*)
 (PP (NP (N 技術力))
 (P-ROLE に))
 (VB 依存)
 (VB0 し)
 (AXD た))
 (IP-REL (NP-SBJ *T*)
 (NP-PRD (NUMCLP (NUM 20)
 (CL 世紀))
 (N 型))

```

                                (AX の))
                        (N 発想))
                (AX *)
                (PU 。))
        (ID 97_news_KAHOKU_78))

```

24.7 Double-ヲ constructions

Double-ヲ constructions, in which a transitive verbal noun taking an を-marked PP-OB1 is itself followed by を and VB0, occasionally occur in formal speech situations (e.g., in 国会会議録). In these instances, the second を is treated as a clausal constituent P particle directly dominated by IP:

- (567) ただいま議題となりました法律案につきまして、経済産業委員会における審査の経過と結果を御報告を申し上げます。

```

( (IP-MAT (NP-SBJ *speaker*)
  (PP (NP (IP-REL (NP-SBJ *T*)
    (IP-SMC-OB1 (NP-TMP (N ただいま))
      (NP-PRD (N 議題))
      (AX と))
    (VB なり)
    (AX まし)
    (AXD た))
    (N 法律案))
    (P-ROLE につきまして))
  (PU 、)
  (PP-OB1 (NP (PP (NP (PP (NP (N 経済産業委員会))
    (P-ROLE における))
    (N 審査))
    (P-ROLE の))
    (NML (CONJP (NP (N 経過))
      (P-CONN と))
      (NP (N 結果))))
    (P-ROLE を))
    (VB 御報告)
    (P-ROLE を)
    (VB0 申し上げ)
    (AX ます)
    (PU 。))
  (ID 145_diet_kaigiroku-17))

```

- (568) また材料も厳選されたものを素材に応じてあくぬきなどをしながら、味をひきだす技術が要求される。

‘Also the techniques of bringing out the flavor is required by selecting ingredient carefully, cooking properly suited for each ingredient such as skimming the scum.’

```

( (IP-MAT (NP-LGS; {CRAFTSMAN} *pro*)
  (CONJ また)
  (PP-TPC (NP (N 材料))
    (P-OPTR も))
  (PP-SBJ (NP (IP-EMB (NP-SBJ; {CRAFTSMAN} *pro*)

```



```

(IP-ADV-SCON (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
                                (NP-LGS; {CRAFTSMAN}
                                (VB 厳選)
                                (VB0 さ)
                                (PASS れ)
                                (AXD た))
                                (N もの))
                                (P-ROLE を))
(P-ROLE に応じて))
(P-CONN ながら))
(P-OPTR など)
(P-ROLE を)
(VB0 し)
(PU 、)
(PP-OB1 (NP (N 味))
(P-ROLE を))
(VB ひきだす))
(N 技術))
(P-ROLE が))
(VB 要求)
(VB0 さ)
(PASS れる)
(PU 。))
(ID 57_wikipedia_KYOTO_16))

```

24.8 Direct passive constructions

Direct passive sentences are those in which the SBJ has the semantic role of Patient or Recipient with respect to the core predicate, and the NP with the semantic role of Agent with respect to the core predicate is, if any, marked with a role particle (に, から, によって, etc.). One way to think of this is that an underlying OB1 or OB2 has been promoted to subject position, while an underlying subject has been demoted to an oblique position. The NP or PP with the Agent role is given the extension tag -LGS (a logical subject). The passive auxiliary verb is labelled PASS.

```

(569) そうすればお父さんからぶたれないだろう」
( (IP-MAT (NP-SBJ *hearer*)
  (IP-ADV-SCON-CND (ADVP-CMPL (ADV そう))
    (VB すれ)
    (P-CONN ば))
  (PP-LGS (NP (N お父さん))
    (P-ROLE から))
  (VB ぶた)
  (PASS れ)
  (NEG ない)
  (MD だろう)
  (PUR ー))
(ID 231_aozora_Yuki-1-2000))

```

Passive constructions can feed the formation of double subject sentences:

- (570) ジョンは論文が受理された。
 ‘John had his paper accepted.’

```
( (IP-MAT (NP-LGS *pro*)
  (PP-SBJ (NP (NPR ジョン))
    (P-OPTR は))
  (PP-SBJ2 (NP (N 論文))
    (P-ROLE が))
  (VB 受理)
  (VB0 さ)
  (PASS れ)
  (AXD た)
  (PU 。))
(ID 1209_misc_JSeM_beta_150530))
```

- (571) 金庫の中身は、大部分がテーブルの上に出されていた。

```
( (IP-MAT (NP-LGS *pro*)
  (PP-SBJ (NP;{SAFE_INSIDE} (PP (NP;{SAFE} (N 金庫))
    (P-ROLE の))
    (N 中身))
    (P-OPTR は))
  (PU 、)
  (PP-SBJ2 (NP (Q 大部分))
    (P-ROLE が))
  (PP (NP (PP (NP;{OLDACRE_HOUSE_BEDROOM_TABLE} (N テーブル))
    (P-ROLE の))
    (N 上))
    (P-ROLE に))
  (VB 出さ)
  (PASS れ)
  (P-CONN て)
  (VB2 い)
  (AXD た)
  (PU 。))
(ID 397_aozora_Doyle-1905))
```

24.8.1 Objects in passive

In the passive construction with ditransitive verbs, either OB1 or OB2 may be promoted to subject position. The remaining object does not change its grammatical role with respect to the core verb.

- (572) 二第三者に提供される個人データの項目
 ‘-LRB- ii -RRB- The items of the personal data to be provided to a third party’

```
( (FRAG (LST (LS ニ))
  (NP (PP (NP (IP-REL (NP-SBJ *T*)
    (NP-LGS *pro*)
    (PP-OB2 (NP (N 第三者))
      (P-ROLE に))
```

(VB 提供)
 (VB0 さ)
 (PASS れる))
 (N 個人データ))
 (P-ROLE の))
 (N 項目))
 (ID 125_law_h15A119))

This entails that the only time OB1 and PASS co-occur in the same IP is when the subject is promoted from an OB2 position.

(573) 難しい時代に直面する今、私たちは構想力を問われている。

((IP-MAT (NP-LGS *)
 (NP-TMP (IP-EMB (NP-SBJ *pro*)
 (PP (NP (IP-REL (NP-SBJ *T*)
 (ADJI 難しい))
 (N 時代))
 (P-ROLE に))
 (VB 直面)
 (VB0 する))
 (N 今))
 (PU 、)
 (PP-SBJ (NP (PRO 私たち))
 (P-OPTR は))
 (PP-OB1 (NP (N 構想力))
 (P-ROLE を))
 (VB 問わ)
 (PASS れ)
 (P-CONN て)
 (VB2 いる)
 (PU 。))
 (ID 12_news_KAHOKU_706))

When the logical subject appears in the same clause as an OB2, it is usually marked with a particle other than に (e.g., から, によって, により).

(574) その後、禅宗の最高峰を極めた臨済宗は、南宋時代の中国に渡り学んだ栄西らによって、鎌倉時代に日本に伝えられている。

‘Later the Rinzai school , which achieved the pinnacle of Zen teaching , was brought to Japan in the Kamakura period by Eisai , who went to China to study in the Southern Song period .’

((IP-MAT (NP-TMP (D その)
 (N 後))
 (PU 、)
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (PP-OB1 (NP (PP (NP (NPR 禅宗))
 (P-ROLE の))
 (N 最高峰))
 (P-ROLE を))
 (VB 極め)
 (AXD た))
 (NPR 臨済宗))

```

(P-OPTR は))
(PU 、)
(PP-LGS (NP (IP-REL (NP-SBJ *T*)
(IP-ADV-CONJ (PP (NP (PP (NP (N 南宋時代))
(P-ROLE の))
(NPR 中国))
(P-ROLE に))
(VB 渡り))
(VB 学ん)
(AXD だ))
(NPR 栄西ら))
(P-ROLE によって))
(PU 、)
(PP (NP (N 鎌倉時代))
(P-ROLE に))
(PP-OB2 (NP (NPR 日本))
(P-ROLE に))
(VB 伝え)
(PASS られ)
(P-CONN て)
(VB2 いる)
(PU 。))
(ID 13_wikipedia_KYOTO_2))

```

24.9 Causatives

Causative constructions are valence increasing constructions in that an additional argument (viz., the “causer”) is added to the argument frame of a predicate. In a causative construction, the core predicate (VB), its non-subject (internal) arguments, semantic Agent of the core predicate (i.e., the “causee”, typically marked with either *に* or *を*) and syntactic subject (the “causer”) all have sister positions under IP. The semantic Agent is tagged with the extension -CZZ. The auxiliary verb (VB2 (さ)せる) immediately follows the core predicate.

(575) 私は弟にケーキを食べさせた。

```

( (IP-MAT (PP-SBJ (NP; {SPEAKER_15} (PRO 私))
(P-OPTR は))
(PP-CZZ (NP (N 弟))
(P-ROLE に))
(PP-OB1 (NP (N ケーキ))
(P-ROLE を))
(VB 食べ)
(VB2 させ)
(AXD た)
(PU 。))
(ID 15_misc_EXAMPLE))

```

(576) 「どこからパンを買ってきて、この人々に食べさせようか」。

```

( (CP-QUE (PUL 「)
(IP-SUB (NP-SBJ *speaker*)
(IP-ADV-CONJ (PP (NP (WPRO どこ))

```

```

(P-ROLE から))
(PP-OB1 (NP (N パン))
(P-ROLE を))
(VB 買っ)
(P-CONN て)
(VB2 き)
(P-CONN て))
(PU 、)
(PP-CZZ (NP (D この)
(N 人々))
(P-ROLE に))
(NP-OB1 *pro*)
(VB 食べ)
(VB2 させ)
(AX よう))
(P-FINAL か)
(PUR 」)
(PU 。))
(ID 398_bible_nt))

```

24.10 Causative passives

In a causative passive construction, an SBJ-marked element of the local clause is the syntactic subject of the entire passivized predicate, (combined with both the auxiliary verb (さ)せ (VB2) and the auxiliary verb られ (PASS), and also the logical Agent of the core verb. A local LGS argument is the logical Agent of the causation event expressed by the causative morpheme (さ)せ (VB2) attached to the core predicate.

- (577) 高津さんはその事件を調べさせられた。
 ‘Mr. Takatsu was made to investigate the accident.’

```

( (IP-MAT (NP-LGS *pro*)
(PP-SBJ (NP;{TAKATSU_435} (NPR 高津さん))
(P-OPTR は))
(PP-OB1 (NP;{CASE_425} (D その)
(N 事件))
(P-ROLE を))
(VB 調べ)
(VB2 させ)
(PASS られ)
(AXD た)
(PU 。))
(ID 435_textbook_kisonihongo))

```

- (578) そこで妹は母親の忠告によって自分の決心をひるがえさせられたりしてはいなかった。

```

( (IP-MAT (CONJ そこで)
(PP-SBJ (NP;{GRETE} (N 妹))
(P-OPTR は))
(PP-LGS (NP (PP (NP;{MOTHER} (N 母親))
(P-ROLE の))

```

(N 忠告))
 (P-ROLE によって))
 (PP-OB1 (NP (PP (NP (PRO 自分))
 (P-ROLE の))
 (N 決心))
 (P-ROLE を))
 (VB ひるがえさ)
 (VB2 せ)
 (PASS られ)
 (P-CONN たり)
 (VB2 し)
 (P-CONN て)
 (P-OPTR は)
 (VB2 い)
 (NEG なかつ)
 (AXD た)
 (PU 。))
 (ID 704_aozora_Harada-1960))

24.11 Indirect passives

In contrast to the direct passive (see section 24.8), in an indirect passive construction the auxiliary verb (ら)れ is assigned the label PASS2. Indirect passive constructions are valence increasing constructions in that an Affected SBJ argument is added to the argument frame, while the logical subject of the core predicate is demoted to LGS and marked with に. These two arguments are sisters of the the core predicate (VB) combined with the passive morpheme (PASS2 (ら)れ), together with any internal arguments, which are marked for roles with respect to the core predicate.

(579) 太郎が花子に泣かれた。

((IP-MAT (PP-SBJ (NP; {PERSON} (NPR 太郎))
 (P-ROLE が))
 (PP-LGS (NP; {PERSON} (NPR 花子))
 (P-ROLE に))
 (VB 泣か)
 (PASS2 れ)
 (AXD た)
 (PU 。))
 (ID 1822_misc_JSeM_beta_150530))

(580) 太郎は先生に絵をほめられた。

‘Taro was praised for the picture by his teacher.’

((IP-MAT (PP-SBJ (NP; {TARO_413} (NPR 太郎))
 (P-OPTR は))
 (PP-LGS (NP (N 先生))
 (P-ROLE に))
 (PP-OB1 (NP (N 絵))
 (P-ROLE を))
 (VB ほめ)
 (PASS2 られ)

(AXD た)
 (PU 。))
 (ID 413_textbook_kisonihongo))

24.12 テアル constructions

テアル constructions are stative constructions that are primarily used to background agentivity in describing the results of volitional action.

The テアル construction is divided into two analyses according to the transitivity of the core predicate. When a combining stem of a transitive verb (or verb compound) is immediately followed by (P-CONN て) which in turn is followed by some form of (VB2 ある), if the underlying object of the transitive verb appears as a が-marked NP (or as a の-marked NP in a noun-modifying clause), that NP is labelled NP-SBJ and a node (PASS *) is introduced immediately after (P-CONN て). Furthermore, in cases where a CP-THT is used as argument of a verb of communication in the である form (e.g., 書いてある), without any overt subject in the same clause, the CP-THT is extended with -SBJ (see section 24.17.2) and (PASS *) is inserted in the same way. In this treatment, the underlying subject is completely suppressed, and the underlying object is promoted to subject, but other grammatical roles (specifically, OB2) remain unaffected.

- (407) 子供が笑っている写真が置いてあった。
 ‘A photo of a smiling child was put there.’

((IP-MAT (NP-LGS *pro*)
 (PP-SBJ (NP (IP-EMB (PP-SBJ (NP (N 子供))
 (P-ROLE が))
 (VB 笑っ)
 (P-CONN て)
 (VB2 いる))
 (N 写真))
 (P-ROLE が))
 (VB 置い)
 (P-CONN て)
 (PASS *)
 (VB2 あっ)
 (AXD た)
 (PU 。))
 (ID 1218_textbook_kisonihongo))

For this construction, if the underlying object of the transitive verb appears as an を-marked NP, a bare NP, or an NP marked with a *toritate* particle, etc., that object is treated as OB1. When no subject seems to be involved, a (NP-SBJ *exp*) subject is introduced. As the argument structure and the case marking are in their usual alignment, no node (PASS *) is introduced.

- (582) 丁度便所の坑の傍に、実をむしり残した向日葵の茎を二三本縛り寄せたのを、一本の棒に結び付けてある。

((IP-MAT (NP-SBJ *exp*)
 (ADVP (ADV 丁度))
 (PP-OB1 (NP (IP-EMB (PP-OB1 (NP (PP (NP (IP-REL (NP-SBJ *T*)
 (PP (NP (PP (NP
 (PP (NP (N 便所))

の)) (P-ROLE
 坑)) (N
 の)) (P-ROLE
 (N 傍))
 (P-ROLE に))
 (PU 、)
 (PP-OB1 (NP (N
 実)) (P-ROLE
 を)) (VB むしり)
 (VB2 残し)
 (AX た))
 (N 向日葵))
 (P-ROLE の))
 (N 茎))
 (P-ROLE を))
 (NP;*OB1* (NUMCLP (NUM 二三)
 (CL 本)))
 (VB 縛り寄せ)
 (AXD た))
 (N の))
 (P-ROLE を))
 (PU 、)
 (PP (NP (IP-REL;* (NP-SBJ *T*)
 (NP-PRD (NUMCLP (NUM 一)
 (CL 本))))
 (AX の))
 (N 棒))
 (P-ROLE に))
 (VB 結び付け)
 (P-CONN て)
 (VB2 ある)
 (PU 。))
 (ID 127_aozora_Mori-1912))

(583) この生け花はなかなか見事に生けてある。
 ‘This flower arrangement is done quite nicely.’

((IP-MAT (NP-SBJ *exp*)
 (PP-OB1 (NP (D この)
 (N 生け花))
 (P-OPTR は))
 (ADVP (ADVP (ADV なかなか))
 (ADJN 見事)
 (AX に))
 (VB 生け)
 (P-CONN て)

(VB2 ある)
 (PU 。))
 (ID 199_textbook_djg_intermediate))

The treatment for both cases is extended to traces in IP-REL and for null elements in general.

(584) それから水に漬けてある豆だとか慈姑だとか。

((FRAG (CONJ それから)
 (NP (CONJP (NP (IP-REL (NP-OB1 *T*)
 (NP-SBJ *exp*)
 (PP (NP (N 水))
 (P-ROLE に))
 (VB 漬け)
 (P-CONN て)
 (VB2 ある))
 (N 豆))
 (P-CONN だとか))
 (NP (N 慈姑))
 (P-CONN だとか))
 (PU 。))
 (ID 59_aozora_Kajii-1925))

When a combining stem of an intransitive verb (or verb compound) is immediately followed by (P-CONN て) which in turn is followed by some form of (VB2 ある), an NP subject of that verb is labelled NP-SBJ and no node (PASS *) is inserted. Examples can involve either unaccusative verbs,

(585) 台所に、まだ酒が残って在る筈だ。

((IP-MAT; {DAZAI_LIQUOR_REMAINING} (PP (NP (N 台所))
 (P-ROLE に))
 (PU 、)
 (ADVP (ADV まだ))
 (PP-SBJ (NP; {DAZAI_LIQUOR_REMAINDER} (N
 酒))
 (P-ROLE が))
 (VB 残っ)
 (P-CONN て)
 (VB2 在る)
 (FN 筈)
 (AX だ)
 (PU 。))
 (ID 131_aozora_Dazai-1-1940))

(586) 黄色く薄濁りした液体が一ぱいつまって在る一升瓶は、どうにも不潔な、卑猥な感じさえして、恥ずかしく、眼ざわりでならぬのである。

((IP-MAT (PP-SBJ (NP (IP-REL (NP-OB2 *T*)
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (ADVP (ADJI 黄色く))
 (VB 薄濁り)
 (VB0 し)

(AX た))
 (N 液体))
 (P-ROLE が))
 (NP;*SBJ* (Q 一ぱい))
 (VB つまっ)
 (P-CONN て)
 (VB2 在る))
 (N 一升瓶))
 (P-OPTR は))
 (PU 、)
 (IP-ADV-CONJ (ADVP (WADV どう)
 (P-OPTR にも))
 (PP-SBJ2 (NP (IP-REL (NP-SBJ *T*)
 (ADJN 不潔)
 (AX な))
 (PU 、)
 (IP-REL (NP-SBJ *T*)
 (ADJN 卑猥)
 (AX な))
 (N 感じ))
 (P-OPTR さえ))
 (VB し)
 (P-CONN て))
 (PU 、)
 (IP-ADV-CONJ (ADJI 恥ずかしく))
 (PU 、)
 (ADJN 眼ざわり)
 (AX で)
 (VB2 なら)
 (NEG ぬ)
 (FN の)
 (AX で)
 (VB2 ある)
 (PU 。))

(ID 68_aozora_Dazai-1-1940))

or passivized verbs.

(587) 汚れたすじが四方の壁に沿って引かれてあるし、そこかしこにはごみと汚れもののかたまりが横たわっている始末だ。

((IP-MAT (PP-CONJ (IP-ADV (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (VB 汚れ)
 (AX た))
 (N すじ))
 (P-ROLE が))
 (IP-ADV-CONJ (PP (NP (PP (NP (N 四方))
 (P-ROLE の))
 (N 壁))
 (P-ROLE に))
 (VB 沿っ)
 (P-CONN て))

(NP-LGS;{GRETE} *pro*)
 (VB 引か)
 (PASS れ)
 (P-CONN て)
 (VB2 ある))
 (P-CONN し))
 (PU 、)
 (NP-SBJ *pro*)
 (NP-PRD (IP-EMB (PP-LOC (NP (PRO そこかしこ))
 (P-ROLE に)
 (P-OPTR は))
 (PP-SBJ (NP (PP (NP (CONJP (NP (N ごみ))
 (P-CONN と))
 (NP (N 汚れもの))
 (P-CONN と))
 (P-ROLE の))
 (N かたまり))
 (P-ROLE が))
 (VB 横たわっ)
 (P-CONN て)
 (VB2 いる))
 (N 始末))
 (AX だ)
 (PU 。))
 (ID 894_aozora_Harada-1960))

Clausal conjunction is seen with the テアル construction as well:

(588) 瓦斯煖炉が焚いて、電燈が附けてある。

((IP-MAT (IP-ADV-CONJ (PP-SBJ (NP (N 瓦斯煖炉))
 (P-ROLE が))
 (VB 焚い)
 (P-CONN て)
 (PASS *))
 (PU 、)
 (PP-SBJ (NP (N 電燈))
 (P-ROLE が))
 (VB 附け)
 (P-CONN て)
 (PASS *)
 (VB2 ある)
 (PU 。))
 (ID 220_aozora_Mori-1912))

24.13 テモラウ constructions and テアゲル/クレル constructions

てもらう, てあげる, and てくれる belong to one and the same group of secondary verbs in the traditional study of Japanese. In our annotation, however, てもらう and てあげる/くれる are treated differently. Even in its subsidiary usage attached to a main verb, てもらう is labelled VB and embeds an IP-SMC (see section 10.3). See section 14.2.3 for control over IP-SMC by a へ-marked PP.

(589) 私は父にカメラを買ってもらいました。
 ‘My father bought a camera for me.’

```
( (IP-MAT (PP-SBJ (NP (PRO 私))
                    (P-OPTR は))
  (PP-DOB1 (NP (N 父))
            (P-ROLE に))
  (IP-SMC-OB1 (PP-OB1 (NP (N カメラ))
                     (P-ROLE を))
              (VB 買っ)
              (P-CONN て))
  (VB もらい)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 166_textbook_djg_basic))
```

いただく, the humilific form for もらう, undergoes the same analysis.

By contrast, あげる and くれる are tagged as VB2 and do not embed the predicate and accompanying constituents they are attached to. All the constituents are placed at the same level directly dominated by IP-MAT.

(590) 私は友達にお金を貸してあげた。
 ‘I loaned money to my friend.’

```
( (IP-MAT (PP-SBJ (NP (PRO 私))
                    (P-OPTR は))
  (PP-OB2 (NP (N 友達))
            (P-ROLE に))
  (PP-OB1 (NP (N お金))
            (P-ROLE を))
  (VB 貸し)
  (P-CONN て)
  (VB2 あげ)
  (AXD た)
  (PU 。))
(ID 15_textbook_djg_gram_terms))
```

(591) 道男は私をなぐさめてくれました。
 ‘Michio consoled me.’

```
( (IP-MAT (PP-SBJ (NP (NPR 道男))
                    (P-OPTR は))
  (PP-OB1 (NP (PRO 私))
            (P-ROLE を))
  (VB なぐさめ)
  (P-CONN て)
  (VB2 くれ)
  (AX まし)
  (AXD た)
  (PU 。))
(ID 114_textbook_djg_basic))
```

The same applied to さしあげる and くださる, the honorific forms for あげる and くれる.

24.14 Comparative constructions with clauses

In a comparison of two activities or events, typically the one forming the basis of comparison will be expressed in a finite clause marked directly with particle より, while the event that is characterised is typically an SBJ formed on a formal noun:

(592) 理屈をひねくり回すより、やってみることが大切だ.

```
( (IP-MAT (PP-SCON (IP-ADV (NP-SBJ *pro*)
                             (PP-OB1 (NP (N 理屈))
                                       (P-ROLE を))
                             (VB ひねくり回す))
      (P-CONN より))
  (PU 、)
  (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
                     (NP-OB1 *pro*)
                     (VB やっ)
                     (P-CONN て)
                     (VB2 みる))
            (N こと))
          (P-ROLE が))
  (ADJN 大切)
  (AX だ)
  (PU . ))
(ID 2663_dict_vv-lexicon))
```

24.15 Purpose of motion phrases

Verbs denoting motion are occasionally modified by either activity noun phrases or infinitive clauses indicating the purpose of motion. For noun phrases, an activity noun (e.g., 買い物) –including verbal nouns like 遊び– heads a phrase to which role particle に is attached. For infinitive clauses an activity verb in the infinitive inflection heads an IP-NMZ to which role particle に is attached. The role particle に heads a PP with the extension -PRP.

(199) 彼女のお母さんは買い物に行きました。
‘Her mother has gone shopping.’

```
( (IP-MAT (PP-SBJ (NP (PP (NP (PRO 彼女))
                          (P-ROLE の))
                        (N お母さん))
      (P-OPTR は))
  (PP-PRP (NP (N 買い物))
          (P-ROLE に))
  (VB 行き)
  (AX まし)
  (AXD た)
  (PU 。 ))
(ID 237_textbook_TANAKA))
```

(594) メロスは、それゆえ、花嫁の衣裳やら祝宴の御馳走やらを買いに、はるばる市にやっ来てたのだ。

((IP-MAT (PP-SBJ (NP (NPR メロス))
(P-OPTR は))
(PU 、)
(ADVP (ADV それゆえ))
(PU 、)
(PP-PRP (IP-NMZ (PP-OB1 (NP (CONJP (NP (PP (NP (N 花嫁))
(P-ROLE の))
(N 衣裳))
(P-CONN やら))
(NP (PP (NP (N 祝宴))
(P-ROLE の))
(N 御馳走))
(P-CONN やら))
(P-ROLE を))
(VB 買い))
(P-ROLE に))
(PU 、)
(ADVP (ADV はるばる))
(PP (NP (N 市))
(P-ROLE に))
(VB やって来)
(AXD た)
(FN の)
(AX だ)
(PU 。))
(ID 15_aozora_Dazai-2-1940))

For infinitive clauses indicating purpose of motion, typically the subject of the verb of motion controls into the infinitive clause. However, non-subject arguments of caused-motion predications such as 行かせる and 派遣する can also serve as controllers for purpose of motion clauses.

(595) 小僧にききにこさせるだけでほんとうに十分ではないだろうか

((CP-QUE (IP-SUB (NP-SBJ *pro*)
(IP-ADV-SCON (NP-SBJ *pro*)
(PP-CZZ (NP (N 小僧))
(P-ROLE に))
(PP-PRP (IP-NMZ (NP-OB1 *pro*)
(VB きき))
(P-ROLE に))
(VB こ)
(VB2 させる)
(P-OPTR だけ)
(AX で))
(ADVP (ADJN ほんとう)
(AX に))
(ADJN 十分)
(AX で)
(P-OPTR は)
(NEG ない)
(MD だろう))
(P-FINAL か))
(ID 162_aozora_Harada-1960))

Note that purpose of motion phrases headed by activity nouns don't have argument structure.

24.16 Indirect interrogatives and related constructions

24.16.1 Indirect interrogatives as argument

A typical indirect interrogative contains a CP-QUE which is followed by a particle (P-ROLE) and serves as an argument of a predicate in the next higher clause. When an indirect interrogative has a core grammatical role, a corresponding extension tag is added to the PP which dominates it. Below are some examples.

- CP-QUE + を – OB1

(596) その日何をしていたかを詳しく説明しなさい。
'Explain in detail what you were doing that day.'

```
( (CP-IMP (IP-SUB (NP-SBJ *hearer*)
  (PP-OB1 (CP-QUE (IP-SUB (NP-SBJ *hearer*)
    (NP-TMP; {DAY_1069} (D その)
      (N 日))
    (PP-OB1 (NP (WPRO 何))
      (P-ROLE を))
    (VB し)
    (P-CONN て)
    (VB2 い)
    (AXD た))
    (P-FINAL か))
    (P-ROLE を))
    (ADVP (ADJI 詳しく))
    (VB 説明)
    (VB0 し)
    (VB2 なさい))
    (PU 。))
  (ID 1069_textbook_kisonihongo))
```

- CP-QUE + が – SBJ

(597) わいせつ画像は、それそのものが問題なのではなく、それを誰が見るかが問題
だと思う。
'I think that opbscene oimages themselves are not the problem; who sees them is the
problem.'

```
( (IP-MAT (NP-SBJ *pro*)
  (PP-TPC (NP (N わいせつ画像))
    (P-OPTR は))
  (PU 、)
  (CP-THT-OB1 (IP-SUB (IP-ADV-CONJ (PP-SBJ (NP (PRO それ)
    (PRN (NP (PRO その
      もの))))
    (P-ROLE が))
    (NP-PRD (N 問題))
    (AX な)
```

(FN の)
 (AX で)
 (P-OPTR は)
 (NEG なく))
 (PU 、)
 (PP-SBJ (CP-QUE (IP-SUB (PP-OB1 (NP (PRO そ
 れ))
 (P-ROLE を))
 (PP-SBJ (NP (WPRO 誰))
 (P-ROLE が))
 (VB 見る))
 (P-FINAL か))
 (P-ROLE が))
 (NP-PRD (N 問題))
 (AX だ))
 (P-COMP と))
 (VB 思う)
 (PU 。))
 (ID 479_textbook_djg_advanced))

• CP-QUE + に – OB1

(598) 折り紙の最強のツールは、我々が部品をどうやって作るかに関係しています

((IP-MAT (PP-SBJ (NP (PP (NP (N 折り紙))
 (P-ROLE の))
 (IP-REL (NP-SBJ *T*)
 (ADJN 最強)
 (AX の))
 (N ツール))
 (P-OPTR は))
 (PU 、)
 (PP-OB1 (CP-QUE (IP-SUB (PP-SBJ (NP (PRO 我々))
 (P-ROLE が))
 (PP-OB1 (NP (N 部品))
 (P-ROLE を))
 (ADVP (WADV どうやって))
 (VB 作る))
 (P-FINAL か))
 (P-ROLE に))
 (VB 関係)
 (VB0 し)
 (P-CONN て)
 (VB2 い)
 (AX ます))
 (ID 66_ted_talk_1))

• CP-QUE + で

(599) どちらが県連の推薦を受けるかでもめ、木村太郎衆院議員が県連会長を辞任する騒動にまで発展した。

((IP-MAT (NP-SBJ *pro*)
 (IP-ADV-CONJ (PP (CP-QUE (IP-SUB (PP-SBJ (NP (WPRO どちら))
 (P-ROLE が))
 (PP-OB1 (NP (PP (NP (N 県連))
 (P-ROLE の))
 (N 推薦))
 (P-ROLE を))
 (VB 受ける))
 (P-FINAL か))
 (P-ROLE で))
 (VB もめ))
 (PU 、)
 (PP (NP (IP-EMB (PP-SBJ (NP;{PERSON} (NPR 木村太郎)
 (N 衆院議員))
 (P-ROLE が))
 (PP-OB1 (NP (N 県連会長))
 (P-ROLE を))
 (VB 辞任)
 (VB0 する))
 (N 騒動))
 (P-ROLE に)
 (P-ROLE まで))
 (VB 発展)
 (VB0 し)
 (AXD た)
 (PU 。))
 (ID 90_news_KAHOKU_28))

• CP-QUE + について

(600) ここでは、企業がいかにCSRに介入し、どのような問題に関心を持っているかについて討議したいと思います。

((IP-MAT (NP-SBJ;{SPEAKER} *speaker*)
 (PP (NP (PRO ここ))
 (P-ROLE で)
 (P-OPTR は))
 (PU 、)
 (CP-THT-OB1 (IP-SUB (PP (CP-QUE (IP-SUB (PP-SBJ (NP;{CORPORATIONS}
 (N 企業))
 (P-ROLE が))
 (IP-ADV-CONJ (ADVP (WADV
 いかに))
 (PP (NP;{CSR}
 (N CSR))
 (P-ROLE
 に))
 (VB 介入)
 (VB0 し))
 (PU 、)
 (PP (NP (WD どのような)
 (N 問題))
 (P-ROLE に))

(PP-OB1 (NP (N 関心))
(P-ROLE を))
(VB 持つ)
(P-CONN て)
(VB2 いる))
(P-FINAL か))
(P-ROLE について))
(VB 討議)
(VB0 し)
(AX たい))
(P-COMP と))
(VB 思い)
(AX ます)
(PU 。))
(ID 2_book_excerpt-31))

When a CP-QUE is followed by a *toritate* particle which can be replaced with a role particle for marking a core grammatical role without change of meaning, a suitable extension is added to the PP projected by the *toritate* particle.

• CP-QUE + は – OB1

- (601) 鈴木さんが大学に入ったかどうかは知りません。
'I don't know whether or not Mr. Suzuki entered college.'

((IP-MAT (NP-SBJ *speaker*)
(PP-OB1 (CP-QUE (IP-SUB (PP-SBJ (NP (NPR 鈴木さん))
(P-ROLE が))
(PP (NP (N 大学))
(P-ROLE に))
(VB 入っ)
(AXD た))
(P-FINAL かどうか))
(P-OPTR は))
(VB 知り)
(AX ませ)
(NEG ん)
(PU 。))
(ID 78_textbook_djg_basic))

• CP-QUE + さえ – OB1

- (602) どうして食っているかさえ分らなかった。

((IP-MAT (NP-SBJ *arb*)
(PP-OB1 (CP-QUE (IP-SUB (NP-SBJ *pro*)
(NP-OB1 *pro*)
(ADVP (WADV どうして))
(VB 食っ)
(P-CONN て)
(VB2 いる))
(P-FINAL か))
(P-OPTR さえ))

the predicates, but are not necessarily adjacent to the arguments in question. In the case of CP-QUE specifically, an overt argument is headed by a relational noun that is interpreted as a concealed question. Despite the close relationship, there is no adjacency condition between the CP-QUE and the argument, so a structural relation indicating apposition is not sufficient to describe the pattern. In order to indicate this relation, a parenthetical expression PRN is introduced together with the argument, and the CP is related to that position through the use of *ICH* (Interpret Constituent Here).

In the following example, the interrogative clause 芸術界で今何が起きているか can be interpreted as the direct object of the predicate 分かる because it is possible to insert the role particle が after the interrogative. At the same time, it can be regarded as having a semantic relationship to the following direct object 動向(が). To annotate this structure, CP-QUE is put under PRN extended with some appropriate number (normally PRN-1). Then another PRN is added in the sister position of the N which heads the noun phrase related to the CP-QUE. This PRN has as its daughter *ICH* extended with the same number as that of the other PRN (normally *ICH*-1).

(455) 芸術界で今何が起きているか動向が分るとされるものでした

```
( (IP-MAT (NP-SBJ *pro*)
      (NP-PRD (IP-EMB (NP-LGS *arb*)
        (CP-THT-SBJ (IP-SUB (PRN-1 (CP-QUE (IP-SUB (PP
(NP (N 芸術界))
(P-ROLE
で))
(NP-TMP
(N 今))
(PP-SBJ
(NP (WPRO 何))
(P-ROLE
が))
(VB
起こっ)
(P-CONN
て)
(VB2
いる))
(P-FINAL か)))
(PP-SBJ (NP (N 動向)
(PRN *ICH*-1))
(P-ROLE が))
(VB 分かる))
(P-COMP と))
(VB さ)
(PASS れる))
(N もの))
(AX でし)
(AXD た))
(ID 20_ted_talk_10))
```

The head of noun phrases associated with CP-QUE can be a pronoun or modified by a demonstrative determiner.

(606) しかし、どうしていま見えるようになったのか、それは知りません。

```

( (IP-MAT (NP-SBJ *speaker+pro*)
  (CONJ しかし)
  (PU 、)
  (PRN-1 (CP-QUE (IP-SUB (NP-SBJ *pro*)
    (ADVP (WADV どうして))
    (NP-TMP (N いま))
    (PP (NP (IP-EMB (NP-SBJ2 *pro*)
      (VB 見える))
      (N よう))
      (P-ROLE に))
      (VB なっ)
      (AXD た)
      (FN の))
      (P-FINAL か)))
    (PU 、)
    (PP-OB1 (NP (PRO それ)
      (PRN *ICH*-1))
      (P-OPTR は))
      (VB 知り)
      (AX ませ)
      (NEG ん)
      (PU 。))
      (ID 795_bible_nt))

```

There are also cases where CP-QUE is not an argument of a predicate, but has an appositive relation to an argumental noun phrase. For example, when used with expressions such as 見当がつく, 意見が分かれる, and 議論をする, CP-QUEs do not serve as arguments of these expressions, but describe the content of head nouns 見当, 意見, and 議論. In these cases, too, the tags *ICH* and PRN are used.

(607) それにどっちににげていったらいいのかけんとうもつきません。

```

( (IP-MAT (NP-SBJ;{PETER} *pro*)
  (CONJ それに)
  (PRN-1 (CP-QUE (IP-SUB (IP-ADV (NP-SBJ;{PETER} *pro*)
    (PP (NP;{LOC} (WPRO どっち))
      (P-ROLE に))
      (VB にげ)
      (P-CONN て)
      (VB2 いっ)
      (P-CONN たら))
      (ADJI いい)
      (FN の))
      (P-FINAL か)))
    (PP-OB1 (NP (N けんとう)
      (PRN *ICH*-1))
      (P-OPTR も))
      (VB つき)
      (AX ませ)
      (NEG ん)
      (PU 。))
      (ID 44_fiction-locked_POTTER-1902))

```

24.16.3 Adverbial use of interrogatives (CP-QUE-ADV)

If a CP-QUE is not an argument of a predicate in the next higher clause and cannot be complemented with a role or *toritate* particle, the extension tag -ADV is added to it. Such adverbial interrogatives (CP-QUE-ADV) are mostly self-addressed.

(608) その勢いに驚いたものか、捕り手はパッと左右へ開いた。

```
( (IP-MAT (CP-QUE-ADV (IP-SUB (NP-SBJ; {POLICE} *pro*)
                                (PP (NP (D; {KOSAKA_JINNAI} その)
                                      (N 勢い))
                                (P-ROLE に))
                                (VB 驚い)
                                (AXD た)
                                (FN もの))
                                (P-FINAL か))
  (PU 、)
  (PP-SBJ (NP; {POLICE} (N 捕り手))
    (P-OPTR は))
  (ADVP (ADV パッと))
  (PP (NP (N 左右))
    (P-ROLE へ))
  (VB 開い)
  (AXD た)
  (PU 。))
(ID 350_aozora_Kunieda-1925))
```

(609) たとえば、紅茶を入れたのに、どういうわけか、コーヒーを入れたと勘違いしてしまう。

```
( (IP-MAT (NP-SBJ; {PERSON_8} *arb*)
  (ADVP (ADV たとえば))
  (PU 、)
  (PP-SCON (IP-ADV (PP-OB1 (NP (N 紅茶))
                             (P-ROLE を))
              (VB 入れ)
              (AXD た))
            (P-CONN のに))
  (PU 、)
  (CP-QUE-ADV (IP-SUB (NP-SBJ *exp*)
                      (NP-PRD (WD どういう)
                              (N わけ))
                      (AX *))
              (P-FINAL か))
  (PU 、)
  (CP-THT-OB1 (IP-SUB (NP-SBJ; {PERSON_8} *pro*)
                  (PP-OB1 (NP (N コーヒー))
                          (P-ROLE を))
                  (VB 入れ)
                  (AXD た))
              (P-COMP と))
  (VB 勘違い)
  (VB0 し))
```

(P-CONN て)
 (VB2 しまう)
 (PU 。))
 (ID 8_book_excerpt-4))

There are cases where it is not clear whether a question is adverbial or argumental. The example in (610) has an overt を-marked argument, but also contains a CP-QUE (which cannot be case-marked in this context). Although the CP-QUE might be allowed as a complement of the predicate under different circumstances, here it is marked as CP-QUE-ADV. Note that this adverbial interrogative is neither appositive to an N nor interpreted as self-addressed, unlike the examples above.

(610) 間違いがないかどうか、書類をよく見直してください。

((CP-IMP (IP-SUB (NP-SBJ *hearer*)
 (CP-QUE-ADV (IP-SUB (PP-SBJ (NP (N 間違い))
 (P-ROLE が))
 (ADJI ない))
 (P-FINAL かどうか))
 (PU 、)
 (PP-OB1 (NP (N 書類))
 (P-ROLE を))
 (ADVP (ADJI よく))
 (VB 見直し)
 (P-CONN て)
 (VB2 ください))
 (PU .))
 (ID 3069_dict_vv-lexicon))

24.16.4 Interrogatives as predicate (CP-QUE-PRD)

Interrogatives (CP-QUE) are sometimes used as a predicate followed by a copula (AX) such as *だ* and *です*. In this case, the extension tag PRD is added to the label CP-QUE.

(611) 重要なのはこれらのシンボルが何を意味しているかです

((IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (ADJN 重要)
 (AX な))
 (N の))
 (P-OPTR は))
 (CP-QUE-PRD (IP-SUB (PP-SBJ (NP (PP (NP (PRO これら))
 (P-ROLE の))
 (N シンボル))
 (P-ROLE が))
 (PP-OB1 (NP (WPRO 何))
 (P-ROLE を))
 (VB 意味し)
 (P-CONN て)
 (VB2 いる))
 (P-FINAL か))
 (AX です))
 (ID 69_ted_talk_1))

24.16.5 Quoted interrogatives

Interrogatives (CP-QUE) are sometimes followed by a complementizer particle such as と. This kind of “quoted” interrogatives mostly serve as a complement of verbs of communication and cognition.

- CP-QUE + と

(612) 刑事は裏の窓を閉めたかと聞いた。

‘The detective asked me if I closed the back window.’

```
( (IP-MAT (PP-SBJ (NP (N 刑事))
                      (P-OPTR は))
  (CP-THT-OB1 (CP-QUE (IP-SUB (NP-SBJ *pro*)
                               (PP-OB1 (NP (PP (NP (N 裏))
                                                (P-ROLE の))
                                           (N 窓))
                                           (P-ROLE を))
                               (VB 閉め)
                               (AXD た))
                          (P-FINAL か))
              (P-COMP と))
  (VB 聞い)
  (AXD た)
  (PU 。))
(ID 499_textbook_purple_intermediate))
```

- CP-QUE + って

(613) うん、行こうかなーって思ってる。

```
( (IP-MAT (NP-SBJ *speaker*)
  (INTJ うん)
  (PU 、)
  (CP-THT-OB1 (CP-QUE (IP-SUB (NP-SBJ *speaker*)
                               (VB 行こ)
                               (AX う))
              (P-FINAL かなー))
              (P-COMP って))
  (VB 思っ)
  (VB2 てる)
  (PU 。))
(ID 82_spoken_JF15))
```

Furthermore, interrogatives can be followed by a complementizer particle such as という or との to form an adnominal clause (See also (414)).

- CP-QUE + という

(614) 問題は誰が社長をやり、誰が社長代行をやるかということだった。

```
( (IP-MAT (PP-SBJ (NP (N 問題))
                      (P-OPTR は))
  (NP-PRD (CP-THT (CP-QUE (IP-SUB (IP-ADV-CONJ (PP-SBJ (NP (WPRO
誰))
```


(P-ROLE が))
 (PP-OB1 (NP (N 社
 長))
 (P-ROLE を))
 (VB やり))
 (PU 、)
 (PP-SBJ (NP (WPRO 誰))
 (P-ROLE が))
 (PP-OB1 (NP (N 社長代行))
 (P-ROLE を))
 (VB やる))
 (P-FINAL か))
 (P-COMP という))
 (N こと))
 (AX だっ)
 (AXD た)
 (PU 。))
 (ID 9_book_excerpt-30))

24.17 Various complementizer clauses (CP-THT)

24.17.1 Complementizer clauses as complement of verbs of communication and cognition

Typically, CP-THTs appear under IP as complement of verbs of communication and cognition. In such cases, they are tagged with the extension -OB1. Such clauses do not actually have to be interpreted as direct quotations.

(615) 「私はむしろあなたを気に入ってるの」と彼女は言った。

((IP-MAT (CP-THT-OB1 (IP-SUB (PUL 「
 (PP-SBJ (NP (PRO 私))
 (P-OPTR は))
 (ADVP (ADV むしろ))
 (PP-OB1 (NP (PRO あなた))
 (P-ROLE を))
 (VB 気に入る))
 (VB2 てる))
 (FN の)
 (PUR 」))
 (P-COMP と))
 (PP-SBJ (NP (PRO 彼女))
 (P-OPTR は))
 (VB 言っ)
 (AXD た)
 (PU 。))
 (ID 211_fiction_DICK-1952))

(616) 彼がそんなに美しい死体になるとは誰も思わなかったでしょう。」

((IP-MAT (CP-THT-OB1 (IP-SUB (PP-SBJ (NP; {FLYNN} (PRO 彼))
 (P-ROLE が))

(IP-SMC-OB1 (NP-PRD (IP-REL (NP-SBJ *T*)
 (ADVP (ADJN そ
 んな)
 (AX に))
 (ADJI 美しい))
 (N 死体))
 (AX に))
 (VB なる))
 (P-COMP と)
 (P-OPTR は))
 (NP-SBJ (WPRO 誰)
 (P-OPTR も))
 (VB 思わ)
 (NEG なかつ)
 (AXD た)
 (MD でしょう)
 (PU 。)
 (PUR 」))
 (ID 156_aozora_Joyce-1914))

24.17.2 Complementizer clauses as argument

CP-THTs can also, though infrequently, appear as argument with a role particle. In the following examples, CP-THT is followed by a role particle such as が and を. In such cases, the extension tag -SBJ or -OB1 is added to the PP projected by the role particle.

- CP-THT + が

(617) 複数回答の結果、「家計的に苦しい児童・生徒が増えている」が小中学校ともに最多だった。

((IP-MAT (NP-ADV (PP (NP (N 複数回答))
 (P-ROLE の))
 (N 結果))
 (PU 、)
 (PP-SBJ (CP-THT (IP-SUB (PUL 「)
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (ADVP (ADJN 家計的)
 (AX に))
 (ADJI 苦しい))
 (NML (CONJP (NP (N 児童))
 (PU ・))
 (NP (N 生徒))))
 (P-ROLE が))
 (VB 増え)
 (P-CONN て)
 (VB2 いる)
 (PUR 」)))
 (P-ROLE が))
 (PP (NP (N 小中学校)
 (PRN (NP;* (Q とも))))
 (P-ROLE に))

(ADJN 最多)
 (AX だっ)
 (AXD た)
 (PU 。))
 (ID 12_news_KAHOKU_616))

• CP-THT + を

(618) ワニ君連を代表して、花束を持ってお見舞いに来たアシ君が、槇子の（秋作さん、秋作さん）を聞いてしまって、これを『社交室』へ急報した。

((IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (IP-ADV-CONJ (PP-OB1 (NP (NPR ワニ君連))
 (P-ROLE を))
 (VB 代表)
 (VB0 し)
 (P-CONN て))
 (PU 、)
 (IP-ADV-CONJ (PP-OB1 (NP (N 花束))
 (P-ROLE を))
 (VB 持つ)
 (P-CONN て))
 (PP (NP (N お見舞い))
 (P-ROLE に))
 (VB 来)
 (AXD た))
 (NPR アシ君))
 (P-ROLE が))
 (PU 、)
 (IP-ADV-CONJ (PP-OB1 (NP (PP (NP (NPR 槇子))
 (P-ROLE の))
 (CP-THT (FRAG (PUL ()
 (NP-VOC (NPR 秋作さん))
 (PU 、)
 (NP-VOC (NPR 秋作さん))
 (PUR)))))
 (P-ROLE を))
 (VB 聞い)
 (P-CONN て)
 (VB2 しまっ)
 (P-CONN て))
 (PU 、)
 (PP-OB1 (NP (PRO これ))
 (P-ROLE を))
 (PP (NP (PUL 『)
 (N 社交室)
 (PUR 』))
 (P-ROLE へ))
 (VB 急報)
 (VB0 し)
 (AXD た)

(PU 。))

(ID 736_aozora_Hisao-1939))

As the following examples show, CP-THTs followed by a complementizer particle such as *って* or *なんて* can be a subject without a role particle. In such cases, an extension tag is directly added to CP-THT.

• CP-THT + *って*

(619) 漢字を覚えるって大変ですね。

‘To memorize kanji it’s terribly hard , isn’t it ?’

((CP-FINAL (IP-SUB (CP-THT-SBJ (IP-SUB (NP-SBJ *arb*)
(PP-OB1 (NP (N 漢字))
(P-ROLE を))
(VB 覚える))
(P-COMP って))
(ADJN 大変)
(AX です))
(P-FINAL ね)
(PU 。))
(ID 356_textbook_djg_basic))

• CP-THT + *なんて*

(620) そんなにいつまでもしょげているなんて、あなたらしくないことよ。

‘It’s not like you to be so down for so long.’

((CP-FINAL (IP-SUB (CP-THT-SBJ (IP-SUB (NP-SBJ *hearer*)
(ADVP (ADJN そんな)
(AX に))
(PP (NP (WPRO いつ)
(P-ROLE まで)
(P-OPTR も))
(VB しょげ)
(P-CONN て)
(VB2 いる))
(P-OPTR なんて))
(PU 、)
(NP-PRD (PRO あなた))
(AX らしく)
(NEG ない))
(P-FINAL こと)
(P-FINAL よ)
(PU 。))
(ID 379_textbook_particles))

In sentences in which a passivized verb of communication or cognition co-occurs with a CP-THT, the subject is often covert. In such cases, it is sometimes difficult to decide which element to regard as the subject. In the following example, the zero pronoun **speaker** is inserted as the subject which denotes the receiver of the content expressed by the complementizer clause.

(621) 8時までに来いと言われたんだ。

‘I was told to come by 8.’

```

( (IP-MAT (NP-SBJ *speaker*)
  (NP-LGS *pro*)
  (CP-THT-OB1 (CP-IMP (IP-SUB (NP-SBJ *hearer*)
    (PP (NP (NUMCLP (NUM 8)
      (CL 時)))
      (P-ROLE まで)
      (P-ROLE に))
      (VB 来い)))
    (P-COMP と))
    (VB 言わ)
    (PASS れ)
    (AXD た)
    (FN ん)
    (AX だ)
    (PU 。))
  (ID 301_textbook_purple_intermediate))

```

In contrast, in the following example, no concrete receiver of the communicated content is conceivable and thus it is difficult to regard it as having a receiver as the subject. Furthermore, there is no other noun phrase which can be thought of as the subject. In such cases, the complementizer clause is regarded as the subject and the extension tag -SBJ is added to CP-THT.

(622) 運動は体にいいと言われている。
 ‘They say that exercise is good for you,’

```

( (IP-MAT (NP-LGS *arb*)
  (CP-THT-SBJ (IP-SUB (PP-SBJ (NP (N 運動))
    (P-OPTR は))
    (PP (NP (N 体))
      (P-ROLE に))
      (ADJI いい))
    (P-COMP と))
    (VB 言わ)
    (PASS れ)
    (P-CONN て)
    (VB2 いる)
    (PU 。))
  (ID 251_textbook_djg_advanced))

```

Also, in cases where a verb of communication or cognition is used with a CP-THT in である constructions and no noun phrases can be regarded as the subject, the complementizer clause is annotated as the subject.

(623) なんか、国際交流セミナーっていうやつ、あるって書いてあったんだけどー。

```

( (FRAG (PP (IP-ADV (ADVP (ADV なんか))
  (PU 、)
  (CP-THT-SBJ (IP-SUB (NP-SBJ (PP (NP (N 国際交流セミナー))
    (P-ROLE っていう))
    (N やつ))
    (PU 、)
    (VB ある))
    (P-COMP って))

```

```

(VB 書い)
(P-CONN て)
(PASS *)
(VB2 あっ)
(AXD た)
(FN ん)
(AX だ))
(P-CONN けど)
(SYM ー)
(PU 。)))
(ID 31_spoken_JF6))

```

24.17.3 Appositive quotes and questions

CP-THTs, as well as CP-QUEs, can be semantically related to both the predicate in the next higher clause and its argument noun phrase. In the following example, a CP-THT is the complement of the verb of cognition 聞きます and expresses the content of the OB1 noun phrase 話(を) at the same time. To show such an appositive relation between a CP-THT and a noun phrase, *ICH* and PRN-n are used, as is the case with appositive interrogatives (CP-QUE).

(624) やんちゃで済まされることが多く、地域の方からは、震災後から荒れるようになったと話を聞きます。

```

( (IP-MAT (IP-ADV-CONJ (PP-SBJ (NP (IP-REL (NP-OB1 *T*)
                                         (NP-SBJ *pro*)
                                         (PP (NP (N やんちゃ))
                                              (P-ROLE で))
                                         (VB 済まさ)
                                         (VB2 れ)
                                         (NEG ない))
                                         (N こと))
                                         (P-ROLE が))
                                         (ADJI 多く))
    (PU 、)
    (NP-SBJ *speaker*)
    (PP (NP (PP (NP (N 地域))
                  (P-ROLE の))
          (N 方))
        (P-ROLE から)
        (P-OPTR は))
    (PU 、)
    (PRN-1 (CP-THT (IP-SUB (NP-SBJ *pro*)
                           (PP (NP (N 震災後))
                                (P-ROLE から))
                           (PP (NP (IP-EMB (VB 荒れる))
                                (N よう))
                                (P-ROLE に))
                           (VB なっ)
                           (AXD た))
          (P-COMP と)))

```

```

      (PP-OB1 (NP (N 話)
                  (PRN *ICH*-1))
              (P-ROLE を))
      (VB 聞き)
      (AX ます)
      (PU 。))
(ID 103_news_KAHOKU_37))

```

The head of noun phrases associated with the complementizer clause can be a pronoun or modified by a demonstrative determiner.

(625) 坂本君、あの一国際交流問題とか、興味あるとか、そういうこと言ってたからー

```

( (FRAG (PP (IP-ADV (NP-SBJ (NPR 坂本君))
                  (PU 、)
                  (INTJ あの一)
                  (PRN-1 (CP-THT (IP-SUB (NP-SBJ *hearer*)
                                         (PP-OB2 (NP (N 国際交流問題))
                                                  (P-OPTR とか))
                                         (PU 、)
                                         (NP-OB1 (N 興味))
                                         (VB ある))
                              (P-OPTR とか))))
                  (PU 、)
                  (NP-OB1 (D そういう)
                          (N こと)
                          (PRN *ICH*-1))
                  (VB 言っ)
                  (VB2 て)
                  (AXD た))
                  (P-CONN からー)))
(ID 11_spoken_JM1))

```

There are also cases where CP-THT is not an argument of a predicate, but has an appositive relation to an argumental noun phrase. In these cases, too, the tags *ICH* and PRN-n are used.

(626) 「えい！」と初めて声を掛け、右手寄りにツツ——と詰める。

```

( (IP-MAT (NP-SBJ;{TOBISAWA_JINNAI} *pro*)
      (IP-ADV-CONJ (PRN-1 (CP-THT (INTJP (PUL 「)
                                         (INTJ えい)
                                         (PU !)
                                         (PUR 」))
                              (P-COMP と)))
      (ADVP (ADV 初めて))
      (PP-OB1 (NP (N 声)
                  (PRN *ICH*-1))
              (P-ROLE を))
      (VB 掛け))
      (PU 、)
      (PP (NP (N 右手寄り))
          (P-ROLE に))
      (ADVP (ADV ツツ——と))
      (VB 詰める)

```

(PU 。))
 (ID 128_aozora_Kunieda-1925))

24.17.4 Purposive adjuncts

Sometimes, CP-THTs do not serve as complements of the clausemate verb or show any semantic connection to other nouns in the clause. Among them, those which contain a volitional auxiliary such as (AX う・よう) or (NEG まい) and express the purpose of the action denoted by the clausemate predicate are annotated with the extension -PRP (a special kind of -ADV):

(627) 僕は僕を子供だとほのめかしたコターのじいさんに腹を立てていたけれども、
 彼が言い終えなかったセンテンスから意味を引き出そうと頭を悩ましていた。

((IP-MAT (PP-SBJ (NP;{SPEAKER} (PRO 僕))
 (P-OPTR は))
 (PP-CONJ (IP-ADV (PP (NP;{COTTER} (IP-REL (NP-SBJ *T*)
 (PP-DOB1 (NP;{SPEAKER}
 (PRO 僕))
 (P-ROLE を))
 (CP-THT-OB1 (IP-SMC (NP-PRD
 (N 子供))
 (AX
 だ))
 (P-COMP と))
 (VB ほのめかし)
 (AXD た))
 (IP-REL (NP-SBJ *T*)
 (NP-PRD (NPR コター))
 (AX の))
 (N じいさん))
 (P-ROLE に))
 (PP-OB1 (NP (N 腹))
 (P-ROLE を))
 (VB 立て)
 (P-CONN て)
 (VB2 い)
 (AXD た))
 (P-CONN けれども))
 (PU 、)
 (CP-THT-PRP (IP-SUB (NP-SBJ;{SPEAKER} *speaker*)
 (PP (NP (IP-REL (NP-OB1 *T*)
 (PP-SBJ (NP;{COTTER} (PRO 彼))
 (P-ROLE が))
 (VB 言い)
 (VB2 終え)
 (NEG なかつ)
 (AXD た))
 (N センテンス))
 (P-ROLE から))
 (PP-OB1 (NP (N 意味))
 (P-ROLE を))
 (VB 引き出そ)

(AX う))
 (P-COMP と))
 (PP-OB1 (NP (N 頭))
 (P-ROLE を))
 (VB 悩まし)
 (P-CONN て)
 (VB2 い)
 (AXD た)
 (PU 。))
 (ID 64_aozora_Joyce-1914))

(628) マラソンは苦しかったが、友達に遅れまいと一所懸命走った。
 ‘The marathon was very hard; determined that I wasn’t going to fall behind my friends,
 I ran the best I could.’

((IP-MAT (PP-CONJ (IP-ADV (PP-SBJ (NP (N マラソン))
 (P-OPTR は))
 (ADJI 苦しかった)
 (AXD た))
 (P-CONN が))
 (PU 、)
 (NP-SBJ *speaker*)
 (CP-THT-PRP (IP-SUB (NP-SBJ *soeaker*)
 (PP (NP (N 友達))
 (P-ROLE に))
 (VB 遅れ)
 (NEG まい))
 (P-COMP と))
 (ADVP (ADV 一所懸命))
 (VB 走っ)
 (AXD た)
 (PU 。))
 (ID 1028_textbook_particles))

24.17.5 Adverbial quotes (CP-THT-ADV)

CP-THTs can appear under IP as adverbial elements when it is clear that they neither relate to their sister predicates or nouns, nor express the purpose of the action denoted by the sister predicates. They are marked as an adjunct with extension -ADV.

(629) 警備員は「ちょっと待って」と私たちを引き止めた。

((IP-MAT (PP-SBJ (NP (N 警備員))
 (P-OPTR は))
 (CP-THT-ADV (CP-IMP (PUL 「)
 (IP-SUB (NP-SBJ *hearer*)
 (ADVP (ADV ちょっと))
 (VB 待っ)
 (P-CONN て))
 (PUR 」))
 (P-COMP と))
 (PP-OB1 (NP (PRO 私たち))

```

(P-ROLE を))
(VB 引き止め)
(AXD た)
(PU . ))
(ID 2586_dict_vv-lexicon))

```

24.17.6 Complementizer clauses as predicate (CP-THT-PRD)

When complementizer clauses (CP-THT) are used as a predicate followed by a copula (AX), the extension tag -PRD is added to the label CP-THT.

- (630) 彼女とはただお茶を飲んで話をしたというだけだ。
 ‘I just talked with her over a cup of tea; that’s all.’

```

( (IP-MAT (NP-SBJ *speaker*)
  (PP (NP (PRO 彼女))
    (P-ROLE と)
    (P-OPTR は))
  (ADVP (ADV ただ))
  (CP-THT-PRD (IP-SUB (IP-ADV-CONJ (PP-OB1 (NP (N お茶))
    (P-ROLE を))
    (VB 飲ん)
    (P-CONN で))
    (PP-OB1 (NP (N 話))
    (P-ROLE を))
    (VB し)
    (AXD た))
    (P-COMP という)
    (P-OPTR だけ))
  (AX だ)
  (PU 。))
(ID 399_textbook_djg_intermediate))

```

- (631) 書類についても、オールデイカーの個人的な仕事も、まったく知らない——だ
 そうだ。

```

( (IP-MAT (NP-SBJ *exp*)
  (CP-THT-PRD (IP-SUB (NP-SBJ;{MRS_LEXINGTON} *pro*)
    (NP-OB1 (CONJP (PP (NP;{DOCUMENTS} (N 書類))
      (P-ROLE について))
      (P-CONN も))
    (PU 、)
    (NP (PP (NP;{OLDACRE} (NPR オールデ
イカー))
      (P-ROLE の))
      (IP-REL (NP-SBJ *T*)
        (ADJN 個人的)
        (AX な))
        (N 仕事))
      (P-CONN も))
    (PU 、)
    (ADVP (ADV まったく))

```

```

(VB 知ら)
(NEG ない)))
(PU —)
(AX だ)
(MD そう)
(AX だ)
(PU 。))
(ID 423_aozora_Doyle-1905))

```

24.18 Raising-to-object constructions

In a raising to object construction, the logical subject of a complement clause (either a complementizer clause or a small clause) is typically marked with particle を and occupies a position in the matrix clause (sibling to the predicate that selects the complement clause). This logical subject is given the extension -DOB1.

24.18.1 Raising out of complementizer clauses

In this scenario the complementizer clause is annotated as an IP-SMC dominated by a CP-THT-OB1 (a control environment), and the matrix DOB1 controls the subject position in the IP-SMC.

(632) 自分はこの言葉を面白いと思った。

```

( (IP-MAT (PP-SBJ (NP (PRO 自分))
(P-OPTR は))
(PP-DOB1 (NP (D この)
(N 言葉))
(P-ROLE を))
(CP-THT-OB1 (IP-SMC (ADJI 面白い))
(P-COMP と))
(VB 思っ)
(AXD た)
(PU 。))
(ID 374_aozora_Natsume-1908))

```

(633) 警察はAを犯人だと断定した。

‘The police affirmed A to be the criminal.’

```

( (IP-MAT (PP-SBJ (NP (N 警察))
(P-OPTR は))
(PP-DOB1 (NP (NPR A))
(P-ROLE を))
(CP-THT-OB1 (IP-SMC (NP-PRD (N 犯人))
(AX だ))
(P-COMP と))
(VB 断定)
(VB0 し)
(AXD た)
(PU 。))
(ID 1095_textbook_kisonihongo))

```

While the matrix predicate is typically an attitude verb such as 思う or 考える, verbs like する and 扱う can also support this construction.

(82) 温度を一定だとする

```
( (IP-MAT (NP-SBJ; {SPEAKER_30} *speaker*)
  (PP-DOB1 (NP (N 温度))
    (P-ROLE を))
  (CP-THT-OB1 (IP-SMC (ADJN 一定)
    (AX だ))
    (P-COMP と))
  (VB する))
(ID 30_misc_EXAMPLE))
```

24.18.2 Raising out of small clauses

In this construction the predicate in the small clause is limited to being either an *い*-adjective, a modal with adjective-like inflection, or a copular expression, which must be in the infinitive inflection. In this case, the embedded clause is tagged as IP-SMC-OB1 without further projecting a CP-THT.

(635) お手伝いできないのを心苦しく思います。
 ‘It pains me to think that I cannot help you.’

```
( (IP-MAT (NP-SBJ *speaker*)
  (PP-DOB1 (NP (IP-EMB (NP-OB1 *pro*)
    (VB お手伝い)
    (VB0 でき)
    (NEG ない))
    (N の))
    (P-ROLE を))
  (IP-SMC-OB1 (ADJI 心苦しく))
  (VB 思い)
  (AX ます)
  (PU 。))
(ID 697_textbook_purple_basic))
```

(636) 彼らの出身の村や町には、戦死者を名誉に思って祈念碑が建立されるでしょう。

```
( (IP-MAT (PP-LOC (NP (IP-REL (NP-SBJ *T*)
  (NP-PRD (PP (NP (PRO 彼ら))
    (P-ROLE の))
    (N 出身))
    (AX の))
  (NML (CONJP (NP (N 村))
    (P-CONN や))
    (NP (N 町))))
  (P-ROLE に)
  (P-OPTR は))
  (PU 、)
  (IP-ADV-CONJ (NP-SBJ *pro*)
    (PP-DOB1 (NP (N 戦死者))
      (P-ROLE を))
    (IP-SMC-OB1 (ADJN 名誉)
      (AX に))
    (VB 思っ))
```

(P-CONN て))
 (NP-LGS *pro*)
 (PP-SBJ (NP (N 祈念碑))
 (P-ROLE が))
 (VB 建立)
 (VB0 さ)
 (PASS れる)
 (MD でしょう)
 (PU 。))
 (ID 280_aozora_Hayashida-2015))

These constructions frequently show up with predicates in the spontaneous (ら)れる form or in the potential form.

(361) その間が、たっぷり一時間はあった様に思われます。

((IP-MAT (NP-SBJ *speaker*)
 (PP-DOB1 (NP (D その)
 (N 間))
 (P-ROLE が))
 (PU 、)
 (IP-SMC-OB1 (NP-PRD (IP-EMB (PP;*SBJ* (NP (ADVP (ADV たっぷり))
 (NUMCLP (NUM 一)
 (CL 時間)))
 (P-OPTR は))
 (VB あっ)
 (AXD た))
 (N 様))
 (AX に))
 (VB 思わ)
 (VB2 れ)
 (AX ます)
 (PU 。))
 (ID 249_aozora_Edogawa-1929))

(638) 親不知の断崖を通過する頃、車内の電燈と空の明るさと同じに感じられた程、夕闇が迫って来た。

((IP-MAT (NP-TMP (IP-EMB (NP-SBJ *speaker*)
 (PP-OB1 (NP (PP (NP (NPR 親不知))
 (P-ROLE の))
 (N 断崖))
 (P-ROLE を))
 (VB 通過)
 (VB0 する))
 (N 頃))
 (PU 、)
 (PP-SCON (IP-ADV (NP-SBJ *speaker*)
 (PP-DOB1 (NP (CONJP (NP (PP (NP (N 車内))
 (P-ROLE の))
 (N 電燈))
 (P-CONN と))
 (NP (PP (NP (N 空))

```

(P-ROLE の))
(N 明るさ))
(P-CONN と))
(P-ROLE が))
(IP-SMC-OB1 (ADJN 同じ)
(AX に))
(VB 感じ)
(VB2 られ)
(AXD た))
(P-OPTR 程))
(PU 、)
(PP-SBJ (NP (N 夕闇))
(P-ROLE が))
(VB 迫っ)
(P-CONN て)
(VB2 来)
(AXD た)
(PU 。))
(ID 37_aozora_Edogawa-1929))

```

24.19 Raising-to-subject constructions

These constructions are passivized versions of the raising to object constructions. In such scenarios, the embedded clause is annotated as IP-SMC so that the control relation holds, just as in the active voice scenarios. The raised subject is given the extension -DSBJ.

24.19.1 Raising out of complementizer clauses to subject positions

In this scenario the complementizer clause is annotated as an IP-SMC dominated by a CP-THT-SBJ (a control environment), and the matrix DSBJ controls the subject position in the IP-SMC.

(639) 温度は一定だとされる

```

( (IP-MAT (NP-LGS *pro*)
  (PP-DSBJ (NP (N 温度))
    (P-OPTR は))
  (CP-THT-SBJ (IP-SMC (ADJN 一定)
    (AX だ))
    (P-COMP と))
  (VB さ)
  (PASS れる))
  (ID 31_misc_EXAMPLE))

```

(640) 招き猫の置物は、幸運を招き込むと言われます。

```

( (IP-MAT (NP-LGS *arb*)
  (PP-DSBJ (NP (PP (NP (N 招き猫))
    (P-ROLE の))
    (N 置物))
    (P-OPTR は))
  (PU 、)

```

```

(CP-THT-SBJ (IP-SMC (PP-OB1 (NP (N 幸運))
                                (P-ROLE を))
                (VB 招き込む))
            (P-COMP と))
(VB 言わ)
(PASS れ)
(AX ます)
(PU . ))
(ID 2991_dict_vv-lexicon))

```

24.19.2 Raising out of small clauses to subject positions

In this construction the predicate in the small clause is limited to being either an *い*-adjective, an adjective-inflecting modal, or a copular expression, which must be in the infinitive inflection. In this case, the embedded clause is tagged as IP-SMC-SBJ, without further projecting a CP-THT.

(641) 救心という薬は味も効能も仁丹ぐらいにしか思われてないが、ベラボーに高価なところが信仰されるのかも知れない。

```

( (IP-MAT (NP-LGS *arb*)
  (PP-CONJ (IP-ADV (PP-DSBJ (NP (PP (NP (N 救心))
                                      (P-ROLE という))
                                (N 薬))
                        (P-OPTR は))
    (IP-SMC-SBJ (NP-SBJ2 (CONJP (NP (N 味))
                                   (P-CONN も))
                  (NP (N 効能))
                  (P-CONN も))
    (PP-PRD (NP (N 仁丹))
            (P-OPTR ぐらい))
    (AX に)
    (P-OPTR しか))
    (VB 思わ)
    (PASS れ)
    (VB2 て)
    (NEG ない))
  (P-CONN が))
(PU 、)
(PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
                  (ADVP (ADJN ベラボー)
                        (AX に))
                  (ADJN 高価)
                  (AX な))
  (N ところ))
(P-ROLE が))
(VB 信仰)
(VB0 さ)
(PASS れる)
(FN の)
(MD かも知れない)

```

(PU 。))
 (ID 31_aozora_Sakaguchi-1950))

25 Ambiguous forms

In general, it is our policy that distinct functional words with homophonous forms be distinguishable from each other by part of speech assignment, structural position, and grammatical function, to the extent that this is reasonably possible. This mainly applies to such things as particles (P), copulas (AX), verbal auxiliaries (AX), and modal elements (MD).

25.1 Particles versus copulas

Putting a large variety of functions under one part of speech simplifies analysis but hides important distinctions in function and meaning. As a first step in sorting out the many different uses of basic functional elements, we try to distinguish between a particle and a copular function for items in the following phonological shapes: で, に, と, の.

25.1.1 で

To this end we identify, for example, a grammatical role particle で in contrast to a verbal suffix particle で and a non-finite copula stem で. The first selects an NP and projects a PP, the second follows a combining stem of a consonant-base verb to specify an inflection, and the last selects a nominal predicate and projects an IP.

There is a limit to the fine-grainedness of the distinctions we make: The role particle (P-ROLE) で will mark indistinguishably a place or occasion of activity,

(642) 共通のルールをつくる過程では、交渉と説得が行われる。

```
( (IP-MAT (NP-LGS *pro*)
  (PP (NP (IP-EMB (NP-SBJ; {COUNTRIES+ORGANIZATIONS} *pro*)
    (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
      (ADJN 共通)
      (AX の))
      (N ルール))
      (P-ROLE を))
      (VB つくる))
      (N 過程))
      (P-ROLE で)
      (P-OPTR は))
      (PU 、)
      (PP-SBJ (NP (CONJP (NP (N 交渉))
        (P-CONN と))
        (NP (N 説得)))
        (P-ROLE が))
        (VB 行わ)
        (PASS れる)
        (PU 。))
  (ID 64_news_KAHOKU_33))
```

(643) 翌年、慶長20年（1615年）の大坂の役（夏の陣）道明寺の戦いでは後藤基次らと戦った。

((IP-MAT (NP-SBJ;{MASAMUNE} *pro*)
 (NP-TMP (N 翌年))
 (PU 、)
 (PP (NP;{BATTLE_DOMYOJI} (NML (PP (NP (NPR 慶長)
 (NUMCLP (NUM 20)
 (CL 年)
 (PRN (PUL ()
 (NP (NUMCLP
 (NUM 1615)
 (CL
 年)))
 (PUR)))))
 (P-ROLE の))
 (NPR 大坂の役)
 (PRN (PUL ()
 (NP (N 夏の陣))
 (PUR))))
 (NPR 道明寺の戦い))
 (P-ROLE で)
 (P-OPTR は))
 (PP (NP (NPR 後藤基次ら))
 (P-ROLE と))
 (VB 戦っ)
 (AXD た)
 (PU 。))
 (ID 89_wikipedia_Datemasamune))
 a position in an ordered series,
 (644) 天正12年(1584年)10月に18歳で家督を相続し、伊達家17代を継承する。
 ((IP-MAT;{MASAMUNE_INHERITANCE} (NP-SBJ;{MASAMUNE} *pro*)
 (IP-ADV-CONJ (PP (NP (NPR 天正)
 (NUMCLP (NUM 12)
 (CL 年)
 (PRN (PUL ()
 (NP (NUMCLP
 (NUM 1584)
 (CL
 年)))
 (PUR)
)))
 (NUMCLP (NUM 10)
 (CL 月)))
 (P-ROLE に))
 (PP (NP (NUMCLP (NUM 18)
 (CL 歳)))
 (P-ROLE で))
 (PP-OB1 (NP;{DATE_FAMILY_LORD}
 (N 家督))
 (P-ROLE を))
 (VB 相続)
 (VB0 し))

(PU 、)
 (PP-OB1 (NP;{DATE_FAMILY} (N 伊達家)
 (NUMCLP (NUM 17)
 (CL 代)))
 (P-ROLE を))
 (VB 継承)
 (VB0 する)
 (PU 。))
 (ID 12_wikipedia_Datemasamune))

(645) うん、後で返事しても、いい？
 ((CP-QUE (IP-SUB (NP-SBJ *hearer*)
 (INTJ うん)
 (PU 、)
 (PP-SCON-CND (IP-ADV (NP-SBJ *speaker*)
 (PP-TMP (NP (N 後))
 (P-ROLE で))
 (VB 返事)
 (VB0 し)
 (P-CONN て))
 (P-OPTR も))
 (PU 、)
 (ADJI いい))
 (PU ？))
 (ID 56_spoken_JF4))

an instrument, cause, or reason, and

(646) その中のどのわざのために、わたしを石で打ち殺そうとするのか」。
 ((CP-QUE (IP-SUB (NP-SBJ *hearer*)
 (PP (NP (PP (NP (PP (NP (D その)
 (N 中))
 (P-ROLE の))
 (WD どの)
 (N わざ))
 (P-ROLE の))
 (N ため))
 (P-ROLE に))
 (PU 、)
 (PP-OB1 (NP;{JESUS} (PRO わたし))
 (P-ROLE を))
 (PP (NP (N 石))
 (P-ROLE で))
 (VB 打ち殺そ)
 (AX う)
 (AX と)
 (VB2 する)
 (FN の))
 (P-FINAL か)
 (PUR 」)
 (PU 。))
 (ID 911_bible_nt))

(647) 太郎は風邪で学校を休んだ。

‘Taro was absent from school because of a cold.’

```
( (IP-MAT (PP-SBJ (NP; {TARO_232} (NPR 太郎))
              (P-OPTR は))
  (PP (NP (N 風邪))
    (P-ROLE で))
  (PP-OB1 (NP (N 学校))
    (P-ROLE を))
  (VB 休ん)
  (AXD だ)
  (PU 。))
(ID 232_textbook_kisonihongo))
```

(648) 取材で行く西日本は東北とは食べ物も建造物も違う。

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-LOC *T*)
                             (NP-SBJ *speaker*)
                             (PP (NP (N 取材))
                               (P-ROLE で))
                             (VB 行く))
                        (NPR 西日本))
    (P-OPTR は))
  (PP (NP (NPR 東北))
    (P-ROLE と)
    (P-OPTR は))
  (NP-SBJ2 (CONJP (NP (N 食べ物))
                  (P-CONN も))
    (NP (N 建造物))
    (P-CONN も))
  (VB 違う)
  (PU 。))
(ID 12_news_KAHOKU_303))
```

parts or materials for a composite entity.

(649) この煙突はレンガで出来ている。

‘This chimney is made of brick.’

```
( (IP-MAT (PP-SBJ (NP (D この)
                      (N 煙突))
              (P-OPTR は))
  (PP (NP (N レンガ))
    (P-ROLE で))
  (VB 出来)
  (P-CONN て)
  (VB2 いる)
  (PU 。))
(ID 366_textbook_TANAKA))
```

We do not distinguish between these meanings of the grammatical role particle で. For extensions to be attached to PP to differentiate the meanings, see section 9.2.1.

In contrast to the grammatical role particles above, the verbal suffix particle で (an allomorph of て) attaches to *onbin* forms of voiced velar or nasal consonant base verbs (e.g., 泳ぐ, 読む, etc.): 泳いで, 読んで. This type of で is labelled P-CONN.

(650) また、ヘプバーンは縁起を担いで自身のラッキーナンバーである「55」番の楽屋を求めた。

```
( (IP-MAT (CONJ また)
  (PU 、)
  (PP-SBJ (NP (NPR ヘプバーン))
    (P-OPTR は))
  (IP-ADV-CONJ (PP-OB1 (NP (N 縁起))
    (P-ROLE を))
    (VB 担い)
    (P-CONN で))
  (PP-OB1 (NP (IP-REL (NP-SBJ *T*)
    (NP-PRD (IP-REL (NP-SBJ *T*)
      (NP-PRD (PP (NP (PRO 自身))
        (P-ROLE の))
        (N ラッキーナンバー))
      (AX で)
      (VB2 ある))
      (NUMCLP (PUL 「)
        (NUM 55)
        (PUR 」)
        (CL 番)))
      (AX の))
      (N 楽屋))
      (P-ROLE を))
      (VB 求め)
      (AXD た)
      (PU 。))
    (ID 175_wikipedia_Audrey_Hepburn))
```

Finally, the non-finite copula で, which is labelled AX, appears after an NP-PRD to project an IP-ADV,

(651) ハリウッド黄金時代に活躍した女優で、映画界ならびにファッション界のアイコンとして知られる。

```
( (IP-MAT (NP-SBJ *pro*)
  (IP-ADV-CONJ (NP-PRD (IP-REL (NP-SBJ *T*)
    (PP (NP (NPR ハリウッド黄金時代))
      (P-ROLE に))
      (VB 活躍)
      (VB0 し)
      (AXD た))
      (N 女優))
      (AX で))
    (PU 、)
    (NP-LGS *arb*)
    (PP (NP (PP (NP (CONJP (NP (N 映画界))
      (CONJ ならびに))
      (NP (N ファッション界)))
      (P-ROLE の))
      (N アイコン))
      (P-ROLE として))
```

(VB 知ら)
(PASS れる)
(PU 。))
(ID 3_wikipedia_Audrey_Hepburn))
or as the stem of analytic copular forms like (AX で) (VB2 ある) and (AX で) (VB2 ござい) (AX ます).

(652) 一人は、W君といって、初対面の人である。
((IP-MAT (PP-SBJ (NP (NUMCLP (NUM 一人)))
(P-OPTR は))
(PU 、)
(IP-ADV-CONJ (PP (NP; {WKUN} (NPR W君))
(P-ROLE と))
(VB いっ)
(P-CONN て))
(PU 、)
(NP-PRD (IP-REL (NP-SBJ *T*)
(NP-PRD (N 初対面))
(AX の))
(N 人))
(AX で)
(VB2 ある)
(PU 。))
(ID 8_aozora_Dazai-1-1940))

There are scenarios where the distinction between a copula and a particle is not easy to make: Descriptions of mode of event and depictive expressions are included in these. At present the practice is to annotate this kind of で following nouns as P-ROLE:

(653) 刺身は生で食べる。
‘We eat sashimi raw.’
((IP-MAT (NP-SBJ *arb*)
(PP-OB1 (NP (N 刺身))
(P-OPTR は))
(PP (NP (N 生))
(P-ROLE で))
(VB 食べる)
(PU 。))
(ID 777_textbook_kisonihongo))

However, で following an ADJN is annotated as an AX:

(654) 崖を必死でよじ登った。
((IP-MAT (NP-SBJ *pro*)
(PP-OB1 (NP (N 崖))
(P-ROLE を))
(ADVP (ADJN 必死)
(AX で))
(VB よじ登っ)
(AXD た)
(PU .))
(ID 3296_dict_vv-lexicon))

Furthermore, in IP-ADVs we annotate as AX で following a formal noun (FN), auxiliary (AX) or modal (MD) with a modal or aspectual meaning such as そう, べき, もの, よう, わけ, ごとく, がち, みたい, ところ, っぱなし, etc., regarding the fact that this kind of で is an inflected form of AXs such as だ and です which follow these elements in matrix contexts.

(655) お湯が煮え立ったところで、材料をいれる。

```
( (IP-MAT (NP-SBJ *pro*)
  (IP-ADV-SCON (PP-SBJ (NP (N お湯))
    (P-ROLE が))
    (VB 煮え立つ)
    (AXD た)
    (FN ところ)
    (AX で))
  (PU 、)
  (PP-OB1 (NP (N 材料))
    (P-ROLE を))
  (VB いれる)
  (PU . ))
(ID 2110_dict_vv-lexicon))
```

(656) 至極簡単明瞭な名だが、この名前、世間にザラにありそうで、滅多にないから不思議である。

```
( (IP-MAT (PP-CONJ (IP-ADV (NP-SBJ; {KODO_REALNAME} *pro*)
  (ADVP (ADV 至極))
  (NP-PRD (IP-REL (NP-SBJ *T*)
    (ADJN 簡単)
    (AX *))
    (IP-REL (NP-SBJ *T*)
    (ADJN 明瞭)
    (AX な))
    (N 名))
    (AX だ))
  (P-CONN が))
  (PU 、)
  (NP-SBJ *pro*)
  (PP-SCON (IP-ADV (NP-SBJ; {KODO_REALNAME} (D この)
    (N 名前))
    (PU 、)
    (IP-ADV-CONJ (PP (NP (N 世間))
      (P-ROLE に))
      (ADVP (ADJN ザラ)
        (AX に))
      (VB あり)
      (AX そう)
      (AX で))
    (PU 、)
    (ADVP (ADJN 滅多)
      (AX に))
    (ADJI ない))
    (P-CONN から))
```

(ADJN 不思議)
 (AX で)
 (VB2 ある)
 (PU 。))
 (ID 9_aozora_Nomura-7-1954))

(657) 私は先生の部屋に行ったが、入れ違ったようで会えなかった。

((IP-MAT (PP-SBJ (NP (PRO 私))
 (P-OPTR は))
 (IP-ADV-CONJ (PP-CONJ (IP-ADV (PP (NP (PP (NP (N 先生))
 (P-ROLE の))
 (N 部屋))
 (P-ROLE に))
 (VB 行っ)
 (AXD た))
 (P-CONN が))
 (PU 、)
 (VB 入れ違っ)
 (AXD た)
 (MD よう)
 (AX で))
 (VB 会え)
 (NEG なかつ)
 (AXD た)
 (PU .))
 (ID 191_dict_vv-lexicon))

In many respects the considerations with regard to the phonological form で also hold for に, と, and の. Each of these has a copular function mirrored in its structural position, although the details for each differ.

25.1.2 に

Particle に marks both core and peripheral grammatical roles. Core particle に marks SBJ with potential predicates such as できる, 難しい, stative predicates such as 必要だ and 無理だ, cognitive predicates such as 分かる, 見える, 欲しい, etc. It marks OB1 in a variety of basic predicates, including verbs like 似る, 勝つ, 当てる, 飽きる, etc., イ-adjectives such as 詳しい, 弱い, 等しい, 厳しい, etc., ナ-adjectives such as 必死だ, 反対だ, etc. Furthermore, it marks OB2 for ditransitive verbs like あげる, 送る, etc. Finally, it marks CZZ Causee in causative constructions, DOB1 for predicates selecting IP-SMC-OB1s such as もらう, ほしい, etc., and LGS in direct passive constructions (See section 14.2.3 for details).

Peripheral role particle に marks temporal and spatial location for non-activity verbs. It also marks the Goal for verbs of motion such as 行く, 着く, etc, the Source for the verbs 借りる, 貰う and いただく, a demoted Agent in unaccusative verbs like 捕まる, 見つかる, 教わる, 弱る, etc., and something similar to an agent with verbs like 満ちる, 溢れる, まみれる. The list is quite long and varied, but we do not distinguish between these meanings of the grammatical role particle に.

Role particle に also marks purpose clauses with verbs of motion, with the purpose clause annotated as a nominalized clause (IP-NMZ; see section 24.15):

(658) わたしは彼を起しに行く」。

```

( (IP-MAT (PP-SBJ (NP;{JESUS} (PRO わたし))
              (P-OPTR は))
  (PP-PRP (IP-NMZ (PP-OB1 (NP (PRO 彼))
                           (P-ROLE を))
            (VB 起し))
          (P-ROLE に))
  (VB 行く)
  (PUR ー))
  (PU 。))
(ID 946_bible_nt))

```

に is also analyzed as a copula in some contexts. Primarily heading ADVPs, we see ADJN followed by (AX に).

(659) また、供養墓が他の大名などと同様に高野山奥の院にある。

```

( (IP-MAT (CONJ また)
  (PU 、)
  (PP-SBJ (NP (N 供養墓))
            (P-ROLE が))
  (ADVP (PP (NP (PP (NP (N 他))
                    (P-ROLE の))
                  (N 大名))
        (P-OPTR など)
        (P-ROLE と))
        (ADJN 同様)
        (AX に))
  (PP (NP (NPR 高野山奥の院))
      (P-ROLE に))
  (VB ある)
  (PU 。))
(ID 242_wikipedia_Datemasamune))

```

Another context for (AX に) is in small clause constructions:

(660) 私はこの国に生まれ落ちたことを幸せに思う。

```

( (IP-MAT (PP-SBJ (NP (PRO 私))
              (P-OPTR は))
  (PP-DOB1 (NP (IP-EMB (PP (NP (D この)
                              (N 国))
                            (P-ROLE に))
                        (VB 生まれ落ち)
                        (AXD た))
            (N こと))
            (P-ROLE を))
  (IP-SMC-OB1 (ADJN 幸せ)
              (AX に))
  (VB 思う)
  (PU 。))
(ID 343_dict_vv-lexicon))

```

(661) 怖そうにも見えた。

((IP-MAT (NP-SBJ *speaker*)
 (NP-DOB1 *pro*)
 (IP-SMC-OB1 (ADJI 怖)
 (AX そう)
 (AX に)
 (P-OPTR も))
 (VB 見え)
 (AXD た)
 (PU 。))
 (ID 270_aozora_Natsume-1908))

One more context for copula に is in the small clause complements of verbs する and なる:

(662) 嗅覚とか味覚を刺激し、心をほぐして豊かにしてくれる。

((IP-MAT (NP-SBJ *pro*)
 (IP-ADV-CONJ (PP-OB1 (NP (CONJP (NP (N 嗅覚))
 (P-CONN とか))
 (NP (N 味覚)))
 (P-ROLE を))
 (VB 刺激)
 (VB0 し))
 (PU 、)
 (PP-OB1 (NP (N 心))
 (P-ROLE を))
 (IP-ADV-CONJ (VB ほぐし)
 (P-CONN て))
 (IP-SMC-CNT (ADJN 豊か)
 (AX に))
 (VB し)
 (P-CONN て)
 (VB2 くれる)
 (PU 。))
 (ID 45_news_KAHOKU_303))

(663) ある日、オットーは借金のカタとして自動車を回収する業者＝レポマンのバッドという男と知り合い、自分もレポマンになる事を決める。

((IP-MAT (NP-TMP (D ある)
 (N 日))
 (PU 、)
 (PP-SBJ (NP;{YOUTH} (NPR オットー))
 (P-OPTR は))
 (IP-ADV-CONJ (PP-OB1 (NP (PP (NP (IP-REL (NP-SBJ *T*)
 (NP-PRD (PRN (NP (IP-REL
 (NP-SBJ *T*)
 (NP (PP (NP (N 借金))
 の))
 カタ))
 (P-ROL

として))
 (NP (N 自動車)) (PP-OB1
 を)) (P
 回収) (VB
 する)) (VB0
 者)) (N 業
 (SYM =))
 (N レポマン))
 (AX の))
 (NPR バッド))
 (P-ROLE という))
 (N 男))
 (P-ROLE と))
 (VB 知り合い))
 (PU 、)
 (PP-OB1 (NP (IP-EMB (PP-SBJ (NP;{YOUTH} (PRO 自分))
 (P-OPTR も))
 (IP-SMC-OB1 (NP-PRD (N レポマン))
 (AX に))
 (VB なる))
 (N 事))
 (P-ROLE を))
 (VB 決める)
 (PU 。))
 (ID 5_wikipedia RepoMan))

Here too are scenarios where the distinction between a copula and a particle is not easy to make: In expressions such as ご褒美に, 担保に, しるしに, etc., に is arguably a copula, but the present practice is to annotate it as a role particle:

(664) メロスの十六の妹も、きょうは兄の代りに羊群の番をしていた。

((IP-MAT (PP-SBJ (NP (PP (NP (NPR メロス))
 (P-ROLE の))
 (IP-REL (NP-SBJ *T*)
 (NP-PRD (NUMCLP (NUM 十六)))
 (AX の))
 (N 妹))
 (P-OPTR も))
 (PU 、)
 (PP-TMP (NP (N きょう))
 (P-OPTR は))
 (PP (NP (PP (NP (N 兄))
 (P-ROLE の))
 (N 代り))
 (P-ROLE に))
 (PP-OB1 (NP (PP (NP (N 羊群))

(P-ROLE の))
 (N 番))
 (P-ROLE を))
 (VB0 し)
 (P-CONN て)
 (VB2 い)
 (AXD た)
 (PU 。))
 (ID 133_aozora_Dazai-2-1940))

Resultative clauses also can be analyzed as small clauses, and in this context too に is arguably a copula, but the present practice is to annotate it as a role particle, unless immediately following an ADJN:

(665) どう考え、どう行動するかを判断する力、すなわち「生き抜く力」を身に付ける
 ならば、原発事故のマイナスをプラスに変えられる。

((IP-MAT (NP-SBJ *pro*)
 (PP-SCON-CND (IP-ADV (PP-OB1 (NP (IP-EMB (NP-SBJ *arb*)
 (PP-OB1 (CP-QUE (IP-SUB
 (NP-SBJ *arb*)
 (IP-ADV-COM
 (ADVP (WADV どう))
 考え))
 (PU
 、)
 (ADVP
 (WADV どう))
 (VB
 行動)
 (VB0
 する))
 (P-FINAL
 か))
 (P-ROLE を))
 (VB 判断)
 (VB0 する))
 (N 力)
 (PU 、)
 (PRN (CONJ すなわち)
 (PUL 「)
 (NP (IP-EMB (NP-SBJ *arb*)
 (VB 生き)
 (VB2 抜く))
 (N 力))
 (PUR 」)))
 (P-ROLE を))
 (VB 身に付ける))
 (P-CONN ならば))
 (PU 、)
 (PP-OB1 (NP (PP (NP (N 原発事故))

```

(P-ROLE の))
(N マイナス))
(P-ROLE を))
(P-ROLE に))
(VB 変え)
(VB2 られる)
(PU 。))
(ID 82_news_KAHOKU_55))

```

25.1.3 と

For と, we distinguish a conjunctive particle (P-CONN), a case particle (P-ROLE), a complementizer particle (P-COMP), and a copula (AX).

As a conjunctive particle, と can conjoin NPs. Note that とs attached to non-final conjuncts head CONJPs, but the one that is attached to the last conjunct is “buried” under the whole dominating NP (see section 18 for more discussion):

(666) 滝役の千葉治郎は阿部と内田とで決めた。

```

( (IP-MAT (PP-OB1 (NP (PP (NP (N 滝役))
(P-ROLE の))
(NPR 千葉治郎))
(P-OPTR は))
(PP-SBJ (NP (CONJP (NP (NPR 阿部))
(P-CONN と))
(NP (NPR 内田))
(P-CONN と))
(P-ROLE で))
(VB 決め)
(AXD た)
(PU 。))
(ID 124_wikipedia_Kamen_Rider))

```

At the IP level, role particle と is primarily comitative. Sometimes the particle marking is determined by the requirements of the verb:

(643) 翌年、慶長20年（1615年）の大坂の役（夏の陣）道明寺の戦いでは後藤基次らと戦った。

```

( (IP-MAT (NP-SBJ; {MASAMUNE} *pro*)
(NP-TMP (N 翌年))
(PU 、)
(PP (NP; {BATTLE_DOMYOJI} (NML (PP (NP (NPR 慶長)
(NUMCLP (NUM 20)
(CL 年)
(PRN (PUL (
(NP (NUMCLP
(NUM 1615)
(CL
年))))
(PUR ))))))
(P-ROLE の))

```

(NPR 大坂の役)
 (PRN (PUL ()
 (NP (N 夏の陣))
 (PUR))))
 (NPR 道明寺の戦い))
 (P-ROLE で)
 (P-OPTR は))
 (PP (NP (NPR 後藤基次ら))
 (P-ROLE と))
 (VB 戦っ)
 (AXD た)
 (PU 。))
 (ID 89_wikipedia_Datemasamune))

(668) この年には『昼下りの情事』にも出演しており、ゲーリー・クーパーやモーリス・シュヴァリエと共演した。

((IP-MAT (NP-SBJ *pro*)
 (PP (NP (D この)
 (N 年))
 (P-ROLE に)
 (P-OPTR は))
 (IP-ADV-CONJ (PP (NP (PUL 『)
 (NPR 昼下りの情事)
 (PUR 』))
 (P-ROLE に)
 (P-OPTR も))
 (VB 出演)
 (VB0 し)
 (P-CONN て)
 (VB2 おり))
 (PU 、)
 (PP (NP (CONJP (NP (NPR ゲーリー・クーパー))
 (P-CONN や))
 (NP (NPR モーリス・シュヴァリエ)))
 (P-ROLE と))
 (VB 共演)
 (VB0 し)
 (AXD た)
 (PU 。))
 (ID 134_wikipedia_Audrey_Hepburn))

In other instances the role that the particle marks is peripheral to the predication:

(669) お昼に、卒業生と、なんか、ご飯いっしょに食べるんだけど

((FRAG (PP (IP-ADV (NP-SBJ *speaker*)
 (PP (NP (N お昼))
 (P-ROLE に))
 (PU 、)
 (PP (NP (N 卒業生))
 (P-ROLE と))
 (PU 、)

(ADVP (ADV なんか))
 (PU 、)
 (NP-OB1 (N ご飯))
 (ADVP (ADJN いっしょ)
 (AX に))
 (VB 食べる)
 (FN ん)
 (AX だ))
 (P-CONN けど))
 (ID 47_spoken_JF4))

と marks complement clauses of verbs of thought, feeling, and communication:

(670) そっか、ごはん、いっしょに食べないかなあと思って。

((IP-MAT (NP-SBJ *speaker*)
 (INTJ そっか)
 (PU 、)
 (CP-THT-OB1 (CP-QUE (IP-SUB (NP-SBJ *speaker+hearer*)
 (NP-OB1 (N ごはん))
 (PU 、)
 (ADVP (ADJN いっしょ)
 (AX に))
 (VB 食べ)
 (NEG ない))
 (P-FINAL かなあ))
 (P-COMP と))
 (VB 思っ)
 (P-CONN て)
 (PU 。))
 (ID 43_spoken_JF1))

P-COMP と also marks as a complement (CMPL) arguments of naming verbs (See section 14.6.3).

(671) 日本ではヘップバーンと表記されることも多い。

((IP-MAT (PP (NP (NPR 日本))
 (P-ROLE で)
 (P-OPTR は))
 (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
 (NP-LGS *arb*)
 (PP-CMPL (NP (NPR ヘップバーン))
 (P-COMP と))
 (VB 表記)
 (VB0 さ)
 (PASS れる))
 (N こと))
 (P-OPTR も))
 (ADJI 多い)
 (PU 。))
 (ID 2_wikipedia_Audrey_Hepburn))

と also has a distribution much like infinitive copula に in many respects. It appears at the end of adverbial expressions, and is annotated as (AX と) following ADJNs that head ADVPS:

(672) しかし、ユダヤ人らを恐れて、イエスのことを公然と口にする者はいなかった。

```
( (IP-MAT (CONJ しかし)
  (PU 、)
  (IP-ADV-CONJ (NP-SBJ *pro*)
    (PP-OB1 (NP (N ユダヤ人ら))
      (P-ROLE を))
    (VB 恐れ)
    (P-CONN て))
  (PU 、)
  (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
    (PP-OB1 (NP (PP (NP (NPR イエス))
      (P-ROLE の))
      (N こと))
      (P-ROLE を))
      (ADVP (ADJN 公然)
        (AX と))
      (PP-CMPL (NP (N 口))
        (P-ROLE に))
      (VB する))
    (N 者))
    (P-OPTR は))
  (VB い)
  (NEG なかつ)
  (AXD た)
  (PU 。))
(ID 538_bible_nt))
```

After common nouns it is still annotated as P-ROLE:

(673) 企画段階で紆余曲折を経た本作は、放映開始されても順風満帆とは行かなかった。

```
( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
  (PP (NP (N 企画段階))
    (P-ROLE で))
  (PP-OB1 (NP (N 紆余曲折))
    (P-ROLE を))
  (VB 経)
  (AXD た))
  (N 本作))
  (P-OPTR は))
  (PU 、)
  (PP-SCON (IP-ADV (NP-LGS *pro*)
    (VB 放映開始)
    (VB0 さ)
    (PASS れ)
    (P-CONN て))
    (P-OPTR も))
  (PP (NP (N 順風満帆))
    (P-ROLE と)
    (P-OPTR は))
  (VB 行か)
```

(NEG なかつ)
 (AXD た)
 (PU 。))
 (ID 81_wikipedia_Kamen_Rider))

Likewise, after adverbs which can stand on their own without と, と is annotated as P-ROLE. In contrast, when と appears at the end of an adverbial expression from which no ADV (or ADJN) can be isolated, it remains chunked together with other material in the adverbial (See section 17 for details.).

(276) 家事一切に関わらず、のんびりと心のぜいたくをする。

((IP-MAT (NP-SBJ *speaker*)
 (IP-ADV-CONJ (PP (NP (N 家事)
 (PRN (NP;* (Q 一切))))
 (P-ROLE に))
 (VB 関わら)
 (NEG ず))
 (PU 、)
 (ADVP (ADV のんびり)
 (AX と))
 (PP-OB1 (NP (PP (NP (N 心))
 (P-ROLE の))
 (N ぜいたく))
 (P-ROLE を))
 (VB する)
 (PU 。))
 (ID 15_news_KAHOKU_10414))

(675) 仙台の街を歩くと、妙にホッとしてしまう。

((IP-MAT (NP-SBJ *speaker*)
 (PP-SCON-CND (IP-ADV (PP-OB1 (NP (PP (NP (NPR 仙台))
 (P-ROLE の))
 (N 街))
 (P-ROLE を))
 (VB 歩く))
 (P-CONN と))
 (PU 、)
 (ADVP (ADJN 妙)
 (AX に))
 (ADVP-CMPL (ADV ホッと))
 (VB し)
 (P-CONN て)
 (VB2 しまう)
 (PU 。))
 (ID 25_news_KAHOKU_102))

と also appears after ADJNs and NP-PRDs and in small clause complements to verbs する and なる:

(676) また、この頃へプバーンは、アンネ・フランクの『アンネの日記』を題材とした舞台作品と映画作品の両方への出演依頼を受けた。

((IP-MAT (CONJ また)
 (PU 、)
 (NP-TMP (D この)
 (N 頃))
 (PP-SBJ (NP (NPR ヘプバーン))
 (P-OPTR は))
 (PU 、)
 (PP-OB1 (NP (PP (NP (PP (NP (IP-REL (NP-SBJ *T*)
 (PP-OB1 (NP (PP (NP (NPR ア
 ンネ・フランク))
 (P-ROLE の))
 (PUL 『)
 (NPR アンネの日
 記)
 (PUR 』))
 (P-ROLE を))
 (IP-SMC-CNT (NP-PRD (N 題材))
 (AX と))
 (VB し)
 (AX た))
 (NML (CONJP (NP (N 舞台作品))
 (P-CONN と))
 (NP (N 映画作品))))
 (P-ROLE の))
 (Q 両方))
 (P-ROLE へ)
 (P-ROLE の))
 (N 出演依頼))
 (P-ROLE を))
 (VB 受け)
 (AXD た)
 (PU 。))
 (ID 127_wikipedia_Audrey_Hepburn))

(677) 礼に過ぎれば諂（へつらい）となる。

((IP-MAT (NP-SBJ *arb*)
 (IP-ADV-SCON-CND (PP (NP (N 礼))
 (P-ROLE に))
 (VB 過ぎれ)
 (P-CONN ば))
 (IP-SMC-OB1 (NP-PRD (N 諂（へつらい）))
 (AX と))
 (VB なる)
 (PU 。))
 (ID 134_wikipedia_Datemasamune))

Note that if a copula can be inserted between と and an ADJN or NP-PRD without change of meaning, the particle is analyzed as a complementizer (P-COMP) which projects a CP-THT.

(678) いま心配なのは、さまざまな無償の支援を当然と思う雰囲気が生まれることだ。

((IP-MAT (PP-SBJ (NP (IP-REL (NP-OB1 *T*)
 (NP-SBJ *pro*))

(NP-TMP (N いま))
 (ADJN 心配)
 (AX な))
 (N の))
 (P-OPTR は))
 (PU 、)
 (NP-PRD (IP-EMB (PP-SBJ (NP (IP-EMB (NP-SBJ *pro*)
 (PP-DOB1 (NP (IP-REL (NP-SBJ
 T))
 (ADJN
 さまざま)
 (AX な))
 (IP-REL (NP-SBJ
 T))
 (ADJN
 無償)
 (AX の))
 (N 支援))
 (P-ROLE を))
 (CP-THT-OB1 (IP-SMC (ADJN 当
 然))
 (P-COMP と))
 (VB 思う))
 (N 雰囲気))
 (P-ROLE が))
 (VB 生まれる))
 (N こと))
 (AX だ)
 (PU 。))
 (ID 83_news_KAHOKU_55))

と attaches to IP-ADV as a conjunctive particle (P-CONN):

(679) 太平の世になると美食を極めることに目的を変えて料理研究を続けた。

((IP-MAT (NP-SBJ; {MASAMUNE} *pro*)
 (PP-SCON-CND (IP-ADV (NP-SBJ *exp*)
 (IP-SMC-OB1 (NP-PRD (IP-REL (NP-SBJ *T*)
 (ADJN 太平)
 (AX の))
 (N 世))
 (AX に))
 (VB なる))
 (P-CONN と))
 (IP-ADV-CONJ (PP (NP (IP-EMB (PP-OB1 (NP (N 美食))
 (P-ROLE を))
 (VB 極める))
 (N こと))
 (P-ROLE に))
 (PP-OB1 (NP (N 目的))
 (P-ROLE を))
 (VB 変え)

```

(P-CONN て))
(PP-OB1 (NP (N 料理研究))
(P-ROLE を))
(VB 続け)
(AXD た)
(PU 。))
(ID 208_wikipedia_Datemasamune))

```

25.1.4 の

の is ambiguous between usages as a case particle (P-ROLE), a so-called formal noun (N/FN), and a copula (AX).

の appears as a grammatical role particle marking an NP as a complement of a N (typically via a possessor/possessee relation or a whole/part relation or a set/member relation):

(680) 私のゼミの卒業生が集まって食事会をするんですけどもー

```

( (IP-MAT (PP (IP-ADV (PP-SBJ (NP (PP (NP (PP (NP (PRO 私))
(P-ROLE の))
(N ゼミ))
(P-ROLE の))
(N 卒業生))
(P-ROLE が))
(IP-ADV-CONJ (VB 集まっ)
(P-CONN て))
(PP-OB1 (NP (N 食事会))
(P-ROLE を))
(VB する)
(FN ん)
(AX です))
(P-CONN けどもー)))
(ID 15_spoken_JF1))

```

の appears as a core grammatical particle (P) marking subject NPs in adnominal clauses:

(681) 花子の読んだ本

```

( (FRAG (NP (IP-REL (NP-OB1 *T*)
(PP-SBJ (NP (NPR 花子))
(P-ROLE の))
(VB 読ん)
(AXD だ))
(N 本)))
(ID 32_misc_EXAMPLE))

```

(682) 隙のない印象の政宗であるが、酒には滅法弱く、酔って失敗した逸話がいくつか残されている。

```

( (IP-MAT (IP-ADV-CONJ (NP-SBJ;{MASAMUNE} *pro*)
(PP-CONJ (IP-ADV (NP-PRD (IP-REL (NP-SBJ *T*)
(NP-PRD (IP-EMB (PP-SBJ
(NP (N 隙))

```

```

(P-ROLE の))
(P-ROLE の))

```

ない)) (ADJI

(N 印象))

(AX の))

(NPR 政宗))

(AX で)

(VB2 ある))

(P-CONN が))

(PU 、)

(PP (NP (N 酒))

(P-ROLE に)

(P-OPTR は))

(ADVP (ADV 減法))

(ADJI 弱く))

(PU 、)

(NP-LGS *)

(PP-SBJ (NP (IP-EMB (NP-SBJ; {MASAMUNE} *pro*)

(IP-ADV-CONJ (VB 酔っ

(P-CONN て))

(VB 失敗)

(VB0 し)

(AXD た))

(N 逸話))

(P-ROLE が))

(NP; *SBJ* (NUMCLP (WNUM いく)

(CL つ))

(P-OPTR か))

(VB 残さ)

(PASS れ)

(P-CONN て)

(VB2 いる)

(PU 。))

(ID 218_wikipedia_Datemasamune))

の can nominalize a clause. This usage is called a formal noun in the traditional study of Japanese Grammar, but is assigned N in our annotation. This is the typical pattern for a pseudocleft clause:

(683) 舞台上でイライザを演じていたのはジュリー・アンドリュースだったが、アンドリュースには映画出演の話は来なかった。

((IP-MAT (PP-CONJ (IP-ADV (PP-SBJ (NP (IP-REL (NP-SBJ *T*)

(PP (NP (N 舞台))

(P-ROLE で))

(PP-OB1 (NP (NPR イライザ))

(P-ROLE を))

(VB 演じ)

(P-CONN て)

(VB2 い)

(AXD た))

(N の))

(P-OPTR は))

(NP-PRD (NPR ジュリー・アンドリュース))
 (AX だっ)
 (AXD た))
 (P-CONN が))
 (PU 、)
 (PP (NP (NPR アンドリュース))
 (P-ROLE に)
 (P-OPTR は))
 (PP-SBJ (NP (PP (NP (N 映画出演))
 (P-ROLE の))
 (N 話))
 (P-OPTR は))
 (VB 来)
 (NEG なかつ)
 (AXD た)
 (PU 。))
 (ID 181_wikipedia_Audrey_Hepburn))

The formal noun の can be also used to nominalize facts and activities:

(684) 「あなたが裸であることを、だれが知らせたのか。

((CP-QUE (IP-SUB (PUL 「)
 (NP-OB2 *hearer*)
 (PP-OB1 (NP (IP-EMB (PP-SBJ (NP;{MAN} (PRO あなた))
 (P-ROLE が))
 (NP-PRD (N 裸))
 (AX で)
 (VB2 ある))
 (N の))
 (P-ROLE を))
 (PU 、)
 (PP-SBJ (NP (WPRO だれ))
 (P-ROLE が))
 (VB 知らせ)
 (AXD た)
 (FN の))
 (P-FINAL か)
 (PU 。))
 (ID 124_bible_ot))

の appears as a clause-level particle immediately dominated by IP after a finite predicate and before a copula in a main clause (that is, as an element in a のだ construction). In such scenarios, の is labelled FN instead of N:

(685) 分からないのですがー

((IP-MAT (PP (IP-ADV (NP-SBJ *speaker*)
 (NP-OB1 *pro*)
 (VB 分から)
 (NEG ない)
 (FN の)
 (AX です))

(P-CONN がー))
 (ID 12_spoken_JF2))

Sometimes の follows a noun phrase as the adnominal form of a copula (AX の):

(686) もしよかったら、また別の機会があれば…。

((IP-MAT (NP-SBJ *hearer*)
 (IP-ADV-SCON-CND (ADVP (ADV もし))
 (ADJI よかつ)
 (P-CONN たら))
 (PU 、)
 (IP-ADV-SCON-CND (ADVP (ADV また))
 (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
 (ADJN 別)
 (AX の))
 (N 機会))
 (P-ROLE が))
 (VB あれ)
 (P-CONN ば))
 (PU …)
 (PU 。))
 (ID 20_spoken_JF1))

(687) この行為は秀吉の派手好みの性格を知っての行いと伝えられる。

((IP-MAT (NP-LGS *arb*)
 (CP-THT-SBJ (IP-SUB (PP-SBJ (NP; {MASAMUNE_TEE} (D この)
 (N 行為))
 (P-OPTR は))
 (NP-PRD (PP (IP-ADV (NP-SBJ; {MASAMUNE} *pro*)
 (PP-OB1 (NP (PP (NP; {HIDEYOSHI}
 (NPR 秀吉))
 (P-ROLE
 の))
 (IP-REL (NP-SBJ
 T))
 (NP-PRD
 (N 派手好み))
 (AX
 の))
 (N 性格))
 (P-ROLE を))
 (VB 知っ)
 (P-CONN て))
 (P-ROLE の))
 (N 行い))
 (AX *))
 (P-COMP と))
 (VB 伝え)
 (PASS られる)
 (PU 。))
 (ID 40_wikipedia_Datemasamune))

(688) 岩手が多い傾向は冬期間を除き、震災発生から1年半後の12年9月まで続いた。

```
( (IP-MAT (PP-SBJ (NP (IP-EMB (NP-SBJ2 *pro*)
                                (PP-SBJ (NP (NPR 岩手))
                                              (P-ROLE が))
                                (ADJI 多い))
                                (N 傾向))
    (P-OPTR は))
  (IP-ADV-SCON (NP-SBJ *exp*)
                (PP-OB1 (NP (N 冬期間))
                          (P-ROLE を))
                (VB 除き))
  (PU 、)
  (PP (NP (IP-REL (NP-SBJ *T*)
                  (NP-PRD (PP (NP (N 震災発生))
                                (P-ROLE から))
                          (NML (NUMCLP (NUM 1)
                                         (CL 年))
                          (NUMCLP (NUM 半))
                          (N 後)))
                  (AX の))
      (NUMCLP (NUM 12)
              (CL 年))
      (NUMCLP (NUM 9)
              (CL 月)))
    (P-ROLE まで))
  (VB 続い)
  (AXD た)
  (PU 。))
(ID 14_news_KAHOKU_65))
```

See section 15.22 for discussion on the criteria for distinguishing の as particle from copula.

25.2 れる・られる

There is a polysemous verb form that is formed by adding れる/られる to the relevant combining stem of a verb: れる is added to the *i/e*-combining stem for vowel-ending verbs, and こ for 来る, and れる is added to the *a*-stem of consonant-ending verbs. These verb forms are ambiguous between the direct passive, the indirect passive, and the honorific usages. Moreover, for vowel base verbs and the irregular verb 来る, the spontaneous usage and the potential usages are also formed in the same way, making れる/られる end up eventually being five-way ambiguous for these verbs. This section discusses the extent to which we distinguish these usages, and the means we adopt to do it.

25.2.1 Direct passive

In a direct passive construction, semantically, a SBJ has a Patient role with respect to the core predicate (VB) (corresponding to either an OB1 or an OB2 in a construction in active voice) and LGS has an Agent role with respect to the core predicate (VB) (corresponding to a SBJ in a construction in active voice). Thus, in a two-place predication, if A-が Bに VB₁(ら)れる is true, then B-が Aを VB₁ is also true.

The verbal auxiliary れる/られる in the direct passive construction is assigned the label PASS, and ‘NP に / から / によって’ is an LGS (a logical subject).

(689) 太郎は朝早く、友人に電話で起こされた。

‘Taro was woken up early in the morning with a phone call by a friend.’

```
( (IP-MAT (PP-SBJ (NP;{TARO_415} (NPR 太郎))
      (P-OPTR は))
  (NP-TMP (N 朝早く))
  (PU 、)
  (PP-LGS (NP (N 友人))
    (P-ROLE に))
  (PP (NP (N 電話))
    (P-ROLE で))
  (VB 起こさ)
  (PASS れ)
  (AXD た)
  (PU 。))
```

(ID 415_textbook_kisonihongo))

See section 24.8 for more discussion.

25.2.2 Indirect passive

The indirect passive is a valence-increasing construction which adds an affected subject SBJ at the same time that it demotes the logical subject of the core predicate to LGS. The internal arguments of the core predicate preserve their positions and grammatical roles, and the passive morpheme れる/られる is tagged as PASS2.

(690) 太郎が雨に降られた。

```
( (IP-MAT (PP-SBJ (NP;{PERSON} (NPR 太郎))
      (P-ROLE が))
  (PP-LGS (NP (N 雨))
    (P-ROLE に))
  (VB 降ら)
  (PASS2 れ)
  (AXD た)
  (PU 。))
```

(ID 1824_misc_JSeM_beta_150530))

(691) 鈴木さんは昨夜、一晩中子供に泣かれて困った。

‘Mr. Suzuki was perplexed last night with his child crying all night long.’

```
( (IP-MAT (PP-SBJ (NP;{SUZUKI_407} (NPR 鈴木さん))
      (P-OPTR は))
  (IP-ADV-SCON (NP-TMP (N 昨夜))
    (PU 、)
    (NP-MSR (NUMCLP (NUM 一)
      (CL 晩中))))
  (PP-LGS (NP (N 子供))
    (P-ROLE に))
  (VB 泣か)
  (PASS2 れ)
```



```

(P-CONN て))
(VB 困っ)
(AXD た)
(PU 。))
(ID 407_textbook_kisonihongo))

```

Note that while some grammars identify scenarios where a Possessor is SBJ and a Possessee is OB1 in a passive construction as being a special case of direct passive with an underlying Source argument (possessor passive), most syntactic arguments for that analysis have counterevidence. Such scenarios are treated as indirect passives here.

(692) 太郎が泥棒に財布を盗まれた。

```

( (IP-MAT (PP-SBJ (NP; {PERSON} (NPR 太郎))
(P-ROLE が))
(PP-LGS (NP (N 泥棒))
(P-ROLE に))
(PP-OB1 (NP (N 財布))
(P-ROLE を))
(VB 盗ま)
(PASS2 れ)
(AXD た)
(PU 。))
(ID 1812_misc_JSeM_beta_150530))

```

(693) そうでないものは塵塚に捨てられ、存在をさえ否定された。

```

( (IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
(ADVP-PRD (ADV そう))
(AX で)
(NEG ない))
(N もの))
(P-OPTR は))
(NP-LGS *pro*)
(IP-ADV-CONJ (PP (NP (N 塵塚))
(P-ROLE に))
(VB 捨て)
(PASS られ))
(PU 、)
(PP-OB1 (NP (N 存在))
(P-ROLE を)
(P-OPTR さえ))
(VB 否定)
(VB0 さ)
(PASS2 れ)
(AXD た)
(PU 。))
(ID 141_aozora_Terada-1921))

```

Note: Whether or not the subject SBJ is adversely affected is not at issue in identifying this construction. The crucial question is whether the construction is valence-increasing. The presence of an を-marked OB1 is not sufficient to decide the matter, either. If the predicate is three-place and the subject is an underlying OB2 in a corresponding active voice construction, this is a case of direct passive rather than indirect.

25.2.3 Spontaneity

In the spontaneous usage of れる/られる, main verbs are limited to those that mean cognition, thinking, or feeling. This type of れる/られる is labelled VB2.

An experiencer SBJ (marked with either に, は, or には) is the logical subject of the core predicate, while the internal argument of the core predicate is marked with が but retains its OB1/DOB1 label. The auxiliary morpheme is labelled VB2.

(694) そういった未来が予想されます

```
( (IP-MAT (NP-SBJ *speaker*)
      (PP-OB1 (NP (D そういった)
                  (N 未来))
              (P-ROLE が))
      (VB 予想)
      (VB0 さ)
      (VB2 れ)
      (AX ます))
  (ID 59_ted_talk_7))
```

(695) 私にはその話が不思議に思われた。
'The story seemed wondrous to me.'

```
( (IP-MAT (PP-SBJ (NP; {SPEAKER_373} (PRO 私))
            (P-ROLE に)
            (P-OPTR は))
      (PP-DOB1 (NP; {STORY_373} (D その)
                                (N 話))
              (P-ROLE が))
      (IP-SMC-OB1 (ADJN 不思議)
                  (AX に))
      (VB 思わ)
      (VB2 れ)
      (AXD た)
      (PU 。))
  (ID 373_textbook_kisonihongo))
```

(696) そういう事も今になって考えて見ると、甚だ奇怪に感じられるのである。

```
( (IP-MAT (NP-SBJ *speaker*)
      (PP-DOB1 (NP (D そういう)
                  (N 事))
              (P-OPTR も))
      (PP-SCON (IP-ADV (NP-SBJ *speaker*)
                       (NP-OB1 *pro*)
                       (IP-ADV-SCON (NP-SBJ *exp*)
                                     (IP-SMC-OB1 (NP-PRD (N 今))
                                                  (AX に))
                                     (VB なっ)
                                     (P-CONN て))
                       (VB 考え)
                       (P-CONN て)
                       (VB2 見る))
              (P-CONN て))
      (VB 見))
```

(P-CONN と))
 (PU 、)
 (IP-SMC-OB1 (ADVP (ADV 甚だ))
 (ADJN 奇怪)
 (AX に))
 (VB 感じ)
 (VB2 られる)
 (FN の)
 (AX で)
 (VB2 ある)
 (PU 。))
 (ID 58_aozora_Edogawa-1929))

There exist verbs which mean spontaneity or the likes in nature, some being derived and lexicalized from consonant base verbs (their potential form or passive form), and some being the unaccusative members of transitivity pairs:

- 見える, 聞こえる, 泣ける, 笑える, 待たれる, 売れる, etc.

They are treated as independent verbs and are labelled VB.

25.2.4 Potential

The potential form of vowel-ending verbs (and the irregular verb 来る) is formed in the same way as the direct passive, indirect passive, spontaneous, and honorific forms, adding られる to the relevant combining stem (viz. the *i/e*-combining stem for vowel base verbs, and こ for 来る): 見られる, 食べられる, こられる. An alternative colloquial form adds れる to these: 見れる, 食べれる, 来れる. In both cases the added morpheme is labelled VB2.

This contrasts with the potential form for consonant-ending verbs, formed on an *e*-combining stem: 走れる. This is left unanalyzed as a whole VB.

When できる is used as a light verb following a verbal noun it is labelled VB0. Generally, the potential form for する is provided by suppletion: できる.

(697) えっとー、そういった感じでも参加できるんですかー？

((CP-FINAL (IP-SUB (NP-SBJ *speaker*)
 (INTJ えっとー)
 (PU 、)
 (PP (NP (D そういった)
 (N 感じ))
 (P-ROLE で)
 (P-OPTR も))
 (VB 参加)
 (VB0 できる)
 (FN ん)
 (AX です))
 (P-FINAL かー)
 (PU ？))
 (ID 14_spoken_JF2))

For two-place predicates which can take OB1 with を, core particle marking in potential constructions can follow any of three patterns.

- SBJ が OB1 を VB (Potential form)

- SBJ が OB1 が VB (Potential form)
- SBJ に OB1 が VB (Potential form)

(698) むしろ、自分がこれまで実際にこのかぼそい脚で身体をひきずってこられたことが不自然に思われた。

```
( (IP-MAT (NP-SBJ; {GREGOR} *pro*)
  (ADVP (ADV むしろ))
  (PU 、)
  (PP-DOB1 (NP (IP-EMB (PP-SBJ (NP; {GREGOR} (PRO 自分))
    (P-ROLE が))
    (PP (NP (PRO これ))
      (P-ROLE まで))
    (PP (ADVP (ADV 実際))
      (P-ROLE に))
    (PP (NP (D この)
      (IP-REL (NP-SBJ *T*)
        (ADJI かぼそい))
        (N 脚))
      (P-ROLE で))
    (PP-OB1 (NP (N 身体))
      (P-ROLE を))
    (VB ひきずっ)
    (P-CONN て)
    (VB2 こ)
    (VB2 られ)
    (AXD た))
    (N こと))
    (P-ROLE が))
  (IP-SMC-OB1 (ADJN 不自然)
    (AX に))
  (VB 思わ)
  (VB2 れ)
  (AXD た)
  (PU 。))
(ID 1121_aozora_Harada-1960))
```

(699) どうしてこんな妹がかせぐことができるだろうか。

```
( (CP-QUE (IP-SUB (ADVP (WADV どうして))
  (PP-SBJ (NP; {GRETE} (D こんな)
    (N 妹))
    (P-ROLE が))
  (PP-OB1 (NP (IP-EMB (NP-OB1 *pro*)
    (VB かせぐ))
    (N こと))
    (P-ROLE が))
  (VB できる)
  (MD だろう))
  (P-FINAL か)
  (PU 。))
(ID 609_aozora_Harada-1960))
```

(700) では私たちに何ができるのでしょうか？

```
( (CP-QUE (IP-SUB (CONJ では)
  (PP-SBJ (NP (PRO 私たち))
    (P-ROLE に))
  (PP-OB1 (NP (WPRO 何))
    (P-ROLE が))
  (VB できる)
  (FN の)
  (MD でしょう))
  (P-FINAL か)
  (PU ?))
  (ID 21_ted_talk_9))
```

The status of the subjects in potential constructions is a bit complex. Their denotations typically have animate, sentient, human features. A (NP-SBJ *arb*) subject in a sentence like 一回目で自転車にうまく乗れないのは誰だって一緒だ is perfectly normal. But a sentence like この山に登れない is odd unless a retrievable subject (“we, they, everyone,” etc.) is available for the interpretation.

(701) この山に登れない。
‘I/you/he/she/we/they can’t climb this mountain.’

```
( (IP-MAT (NP-SBJ; {MAN_36} *pro*)
  (PP-OB1 (NP; {MOUNTAIN_36} (D この)
    (N 山))
    (P-ROLE が))
  (VB 登れ)
  (NEG ない)
  (PU 。))
  (ID 36_misc_EXAMPLE))
```

25.2.5 Honorifics

In the honorific usage of the れる/られる form, the core grammatical roles and labels are retained unchanged. れる/られる is tagged as VB2.

(702) 鈴木先生はその問題を詳しく調べられた。
‘Mr. Suzuki looked into the problem in detail.’

```
( (IP-MAT (PP-SBJ (NP; {SUZUKI_1302} (NPR 鈴木先生))
  (P-OPTR は))
  (PP-OB1 (NP; {PROBLEM_1302} (D その)
    (N 問題))
    (P-ROLE を))
  (ADVP (ADJI 詳しく))
  (VB 調べ)
  (VB2 られ)
  (AXD た)
  (PU 。))
  (ID 1302_textbook_kisonihongo))
```

For other honorific verb forms, see section 15.5.

25.3 よう

There are mainly three labels for the element よう.

- The auxiliary of volition and presumption which immediately follows predicates is labelled AX (this よう has う as its allomorph).
- The evidential ending よう(だ) that follows the past and the non-past form of verbs and イ-adjectives, [ナ-adjective + な/だった], and [noun + だった] is labelled MD.
- よう which appears in the same positions as the evidential ending but is not interpreted as evidential marker is labelled N. Furthermore, よう which follows [NP + の] is also tagged as N, irrespective of whether evidential or not.

This section discusses (MD よう) and (N よう).

25.3.1 The evidential よう

The evidential ending ようだ “It seems that...” which follows the past and the non-past form of verbs and イ-adjectives, [ナ-adjective + な/だった], and [noun + だった] is tagged as MD.

- (703) この事実から判断すると、あなたの見方は正しくないようだ。
‘Judging from this fact, it seems your point of view is not correct.’

```
( (IP-MAT (PP-SCON-CND (IP-ADV (NP-SBJ; {MAN_221} *pro*)
                                (NP-OB1; {CONCLUSION_221} *pro*)
                                (PP (NP (D この)
                                        (N 事実))
                                    (P-ROLE から))
                                (VB 判断)
                                (VB0 する))
                                (P-CONN と))
  (PU 、)
  (PP-SBJ (NP (PP (NP; {HEARER_221} (PRO あなた))
                  (P-ROLE の))
            (N 見方))
          (P-OPTR は))
  (ADJI 正しく)
  (NEG ない)
  (MD よう)
  (AX だ)
  (PU 。))
(ID 221_textbook_kisonihongo))
```

In NPCMJ, this evidential use of よう is distinguished from the simile use of よう, which is discussed below. Inferential adverbial phrases such as どうやら, どうも can be used to detect the former: if such adverbial phrases can be inserted without much changing the meaning of the entire clause, the よう in question is evidential.

- (704) どうも太郎はこのことを知っているようだ。
‘It seems that Taro knows about this somehow.’

```
( (IP-MAT (ADVP (WADV どう)
                (P-OPTR も))
  (PP-SBJ (NP; {TARO_119} (NPR 太郎))
```

(P-OPTR は))
 (PP-OB1 (NP; {FACT_119} (D この)
 (N こと))
 (P-ROLE を))
 (VB 知っ)
 (P-CONN て)
 (VB2 いる)
 (MD よう)
 (AX だ)
 (PU 。))
 (ID 119_textbook_kisonihongo))

In ending a non-final conjunct in a clausal coordination at main clause level, evidential よう is followed by the non-finite copula で.

(657) 私は先生の部屋に行ったが、入れ違ったようで会えなかった。

((IP-MAT (PP-SBJ (NP (PRO 私))
 (P-OPTR は))
 (IP-ADV-CONJ (PP-CONJ (IP-ADV (PP (NP (PP (NP (N 先生))
 (P-ROLE の))
 (N 部屋))
 (P-ROLE に))
 (VB 行っ)
 (AXD た))
 (P-CONN が))
 (PU 、)
 (VB 入れ違っ)
 (AXD た)
 (MD よう)
 (AX で))
 (VB 会え)
 (NEG なかつ)
 (AXD た)
 (PU .))
 (ID 191_dict_vv-lexicon))

25.3.2 The simile よう

When よう is used to express a simile meaning, よう is tagged as an N which takes an IP-EMB. Adverbial phrases like まるで, あたかも are typical indicators of よう's simile use (note that these adverbial phrases are located in the same clause as the copula, which is supported by the fact that they can occur with copulae even in the absence of よう).

(706) 頬冠りに尻端折り、草履は懷中へ忍ばせたものか、そこだけピクリと脹れているのが蛇が蛙を呑んだようだ。

((IP-MAT (NP-ADV (CONJP (NP (N 頬冠り))
 (P-CONN に))
 (NP (N 尻端折り)))
 (PU 、)
 (PP-SBJ (NP (IP-EMB (CP-QUE-ADV (IP-SUB (NP-SBJ; {TOBISAWA_JINNAI}
 pro))

(PP (NP;{TOBISAWA_JINNAI} *pro*))
 (PP (NP;{TOBISAWA_JINNAI_BOSOM}
 (PP-OB1 (NP (N 草履))
 (P-OPTR は))
 (N の*))
 (N 懐中))
 (P-ROLE へ))
 (VB 忍ばせ)
 (AXD た)
 (FN もの))
 (P-OPTR か))
 (PU 、)
 (PP-SBJ (NP;{TOBISAWA_JINNAI_BOSOM} (PRO そ
 こ))
 (P-OPTR だけ))
 (ADVP (ADV ピクリ)
 (AX と))
 (VB 脹れ)
 (P-CONN て)
 (VB2 いる))
 (N の))
 (P-ROLE が))
 (NP-PRD (IP-EMB (PP-SBJ (NP (N 蛇))
 (P-ROLE が))
 (PP-OB1 (NP (N 蛙))
 (P-ROLE を))
 (VB 呑ん)
 (AXD だ))
 (N よう))
 (AX だ)
 (PU 。))
 (ID 60_aozora_Kunieda-1925))

(707) まるで酔っているようだ。
 ‘She looks as if she were drunk.’

((IP-MAT (NP-SBJ *pro*)
 (ADVP (ADV まるで))
 (NP-PRD (IP-EMB (VB 酔っ
 (P-CONN て)
 (VB2 いる))
 (N よう))
 (AX だ)
 (PU 。))
 (ID 537_textbook_TANAKA))

Also, when よう takes an IP-EMB complement and itself modifies other words (in configurations such as ような), it is tagged as N.

(708) あいつは俺に感謝するどころか、おれの顔に泥をぬるようなことばかりしてく

れる。

‘Far from thanking me, he always does things which bring shame on me.’

((IP-MAT (PP-SBJ (NP (PRO あいつ))
(P-OPTR は))
(PP-SCON (IP-ADV (PP-OB1 (NP;{SPEAKER_1197} (PRO 俺))
(P-ROLE に))
(VB 感謝)
(VB0 する))
(P-OPTR どころか))
(PU 、)
(PP-OB1 (NP (IP-REL (NP-SBJ *T*)
(NP-PRD (IP-EMB (PP (NP (PP (NP;{SPEAKER_1197}
(PRO おれ))
(P-ROLE の))
(N 顔))
(P-ROLE に))
(PP-OB1 (NP (N 泥))
(P-ROLE を))
(VB ぬる))
(N よう))
(AX な))
(N こと))
(P-OPTR ばかり))
(VB し)
(P-CONN て)
(VB2 くれる)
(PU 。))
(ID 1197_textbook_kisonihongo))

In the complementizer complex [よう + に] used with some cognitive verbs, too, よう is tagged as N, with に projecting a small clause (IP-SMC-SBJ or IP-SMC-OB1):

(709) あたかも日本の製造業全体の競争力は強いかに思われてきた。
‘The competitiveness of the Japanese manufacturing industry has been perceived as
(though it were) strong.’

((IP-MAT (ADVP-1 (ADV あたかも))
(PP-DSBJ (NP;{COMPETITIVENESS} (PP (NP (PP (NP (NPR 日本))
(P-ROLE の))
(N 製造業)
(PRN (NP;* (Q 全体)))))
(P-ROLE の))
(N 競争力))
(P-OPTR は))
(IP-SMC-SBJ (ADVP *ICH*-1)
(NP-PRD (PP (CP-QUE (IP-SMC (NP-SBJ;{COMPETITIVENESS}
pro))
(ADJI 強い))
(P-FINAL か))
(P-ROLE の))
(N よう))
(AX に))

(VB 思わ)
 (PASS れ)
 (P-CONN て)
 (VB2 き)
 (AXD た)
 (PU 。))
 (ID 172_textbook_djg_advanced))

(710) 部屋の闇の中で僕は今また麻痺した人の重たい灰色の顔を見たように思った。

((IP-MAT (PP (NP (PP (NP (PP (NP (N 部屋))
 (P-ROLE の))
 (N 闇))
 (P-ROLE の))
 (N 中))
 (P-ROLE で))
 (PP-SBJ (NP;{SPEAKER} (PRO 僕))
 (P-OPTR は))
 (IP-SMC-OB1 (NP-PRD (IP-EMB (NP-TMP (N 今))
 (ADVP (ADV また))
 (PP-OB1 (NP;{VISAGE} (PP (NP;{FLYNN}
 (IP-REL (NP-SBJ *T*))
 麻痺)
 し)
 た))
 人))
 (P-ROLE の))
 (IP-REL (NP-SBJ
 T))
 (ADJI
 重たい))
 (IP-REL (NP-SBJ
 T))
 (ADJN
 灰色)
 (AX の))
 (N 顔))
 (P-ROLE を))
 (VB 見)
 (AXD た))
 (N よう))
 (AX に))
 (VB 思っ)
 (AXD た)
 (PU 。))
 (ID 65_aozora_Joyce-1914))

25.3.3 よう(だ) following [NP + の]

よう(だ) following [NP + の] is always labelled N irrespective of whether it is used as the evidential よう or as the simile よう.

- (711) 太郎はまだ子供のようだ。
‘Taro seems to be a child still.’

((IP-MAT (PP-SBJ (NP;{TARO_62} (NPR 太郎))
(P-OPTR は))
(ADVP (ADV まだ))
(NP-PRD (PP (NP (N 子供))
(P-ROLE の))
(N よう))
(AX だ)
(PU 。))
(ID 62_textbook_kisonihongo))

- (712) この絵は写実的で、写真のようだ。
‘This picture is realistic and like a photo.’

((IP-MAT (PP-SBJ (NP;{PICTURE_676} (D この)
(N 絵))
(P-OPTR は))
(IP-ADV-CONJ (ADJN 写実的)
(AX で))
(PU 、)
(NP-PRD (PP (NP (N 写真))
(P-ROLE の))
(N よう))
(AX だ)
(PU 。))
(ID 676_textbook_kisonihongo))

The same is true of よう(だ) following a determiner such as この, その, あの, and どの.

- (713) このようなことを知っている人は、もはやいない。
‘There is no longer a person who knows such a thing.’

((IP-MAT (PP-SBJ (NP (IP-REL (NP-SBJ *T*)
(PP-OB1 (NP (IP-REL (NP-SBJ *T*)
(NP-PRD;{FACT_111} (D こ
の)
(N よ
う))
(AX な))
(N こと))
(P-ROLE を))
(VB 知っ)
(P-CONN て)
(VB2 いる))
(N 人))
(P-OPTR は))
(PU 、)

```

(ADVP (ADV もはや))
(VB い)
(NEG ない)
(PU 。))
(ID 111_textbook_kisonihongo))

```

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