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Communicative Functions of Spoken  
Japanese and Its Meaning Interpretation  
on MT System

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## Abstract

This report aims to describe communicative functions of sentence final elements and its meaning interpretation as well as preliminary studies in linguistic phenomena of spoken Japanese.

Being wholesome of MT system would base on understanding of natural language, formula aptitude, processing speed which hardly stand up at the same time. Language understanding involves morphological, syntactic, semantic, pragmatic understanding of source/target languages.

When MT of spoken-language between hetero-language, *e.g.* Japanese-English MT is aimed, there are cases where syntax of source language needn't necessarily to be transferred into target language: a Japanese argument pattern does not necessarily correspond to a English argument pattern and also used expression styles in source language grammatically are not always the same with target language one. Identification of communicative functions reenacts the scene of the conversation; who, to whom, what, in which intention an event is uttered. Disambiguation of meanings in target language, analysis of interpersonal feelings or the difference of expression styles due to different thinking way, pivot on semantic understanding apart from the syntax, although 'semantics without syntax' is impossible. Therefore, studies of communicative functions are indispensable for MT task.

In Japanese, sentence-final elements are the most representative of spoken Japanese in the point of view of functional notions of communication. This report focuses on meaning interpretation of sentence-final elements of simple sentence, labeling with functional notions in conversations.

An unification-formalism parser and HPSG grammar are used for analyzing the telephone dialogue.

Keywords and abbreviations

machine translation (MT), analysis, spoken Japanese, semantic representation, situation semantic, Head-driven Phrase Structure Grammar (HPSG), syntax (SYN), semantics (SEM), pragmatics (PRAG), meaning interpretation.

Research period of time

The grammar actually used in SL-TRANS<sup>1</sup> has been first developed by MM. Yoshimoto and Kogure and then reshaped by Mr. Nagata and Mrs. Kume.

Our research about communicative functions of an utterance is done from April of 1990 to March of 1991. First experiences are made on Symbolics3400 and the second is done on SUN04 in march of 1992 , by making minimum changes of lexicon and grammar-rules.

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<sup>1</sup>The acronym is Spoken Language TRANSLation system which is prototype MT system in ATR.

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# 1 Introduction

## 1.1 Overview of spoken Japanese

This section is devoted to the characterization of spoken Japanese.

- Topic-comment prominent language

The Japanese is a topic-comment prominent language with a basic word order of the verb being placed at the end of a sentence, in contrast with English, a subject-predicate prominent language with a basic word order of subject-verb-object. And in the spoken Japanese, topicalization expression by a postposition *wa*<sup>2</sup> is more frequent than in the written Japanese. And *wa* replaces or attaches with all other postpositions. Therefore the semantic representation of *wa* is object of discussion as well as the ellipsis phenomena which frequently occur in spoken Japanese.

- Honorific and polite systems

The Japanese has a generous system of respectful or humble polite with different devices as lexies or with presentation varieties of politeness. This means there are at least 3 factors in polite expression system: who is respected, who is respecting and by which way it is done.

The Japanese has also formal/informal expression according to speaker's interpersonal places. The formal style are marked by auxiliaries after the verb in a sentence.

- Ellipsis

Agent specification of an event which is uttered is not so obligatory to mention as observed in English. So grammatical subject is frequently omitted in a conversation. Additionally what is obvious or comprehensible between interlocutors is not expressed. Ellipsis phenomenon occurs frequently in order of PP<sup>3</sup> constituted by *ga*<sup>4</sup>, PP by *wo*<sup>5</sup> and PP by *ni*<sup>6</sup> and the other PPs. VP ellipsis occurs also frequently in form of substituting-be verbs, *i.e.* *desu*, *onegaishimasu*, etc.

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<sup>2</sup> *Wa* is postposition for indicating the topicalized syntagmatic noun. Topicalization *wa* will be mentioned in next technological report which makes series.

<sup>3</sup> PP means syntagmatic nouns with postposition.

<sup>4</sup> *Ga* is postposition for indicating the grammatical subject of a sentence.

<sup>5</sup> *Wo* is postposition for indicating the grammatical direct-object of a sentence.

<sup>6</sup> *Ni* is postposition generally for indicating the grammatical indirect-object of a sentence.

- Deixis

There are a lot of deictic verbs, pronouns and attributes in Japanese. So the ellipsis of grammatical elements of a sentence occurs easier in Japanese than in English or in French, because deictic devices indicate a viewpoint of speakers in an utterance and the omitted elements are obvious between the speaker and hearer, owing to deictic lexie particularity.

- Syntagmatic noun particularity

As for a noun phrase, the Japanese has neither grammatical gender and number, nor morphologically specified, non-specified forms. However the concept of number or specified/non-specified noun exist, because we can identify a noun whether singular or plural by the context<sup>7</sup>. Additionally Japanese has a lot of counter nouns which are not contextual, in contrast with English determiners: a, the, this, that, these and those. So it is debatable how to specify Japanese syntagmatic nouns.

- Syntagmatic verb particularity

Japanese people tend to view and describe the world as a natural state: there exist in general 3 types of verbs: transitive verb, intransitive verbs, relative-intransitive verbs. The last is a representation style of an action as if something was brought about by the some unknown force. There is a difficulty to determine a meaning interpretation for analysis phase of Japanese-English MT, because there does not exist such a linguistic phenomena in English as in Japanese, excepting the activo-passive.

- Postposition particularity

The Japanese has postpositions which express not only grammatical relationship but also interpersonal feelings. The word order is not obligatory in a sentence, because of postposition functions<sup>8</sup>. Postpositing fragments after the final verb is more frequently observed in spoken Japanese than in written one, because they express interpersonal feelings.

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<sup>7</sup>ex-a: Mewo(eyes) tojinasai  
(Close your eyes.)

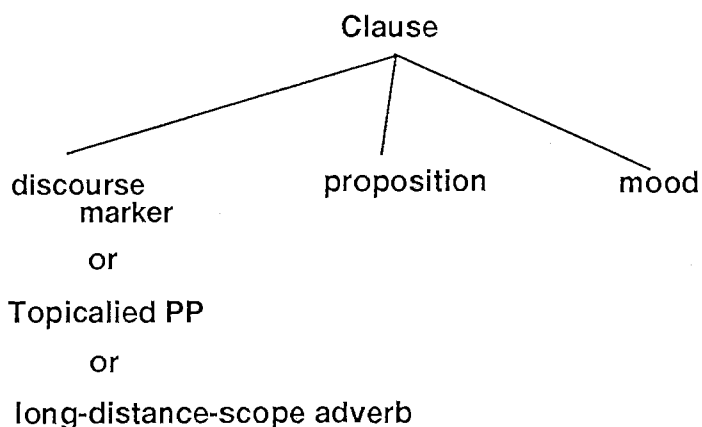
In Japanese sentence, when someone asks someone to close his eyes, if he asks to close only one eye, he is obliged to say 'katame (one eye) or migime (right eye)/hidarime (left eye). So *me* in Japanese is plural nouns.

Semantic representation of syntagmatic nouns will be mentioned in the next technological report which makes series with this one.

<sup>8</sup>However, after ATR database survey, the word order is not so disordered in real conversations.

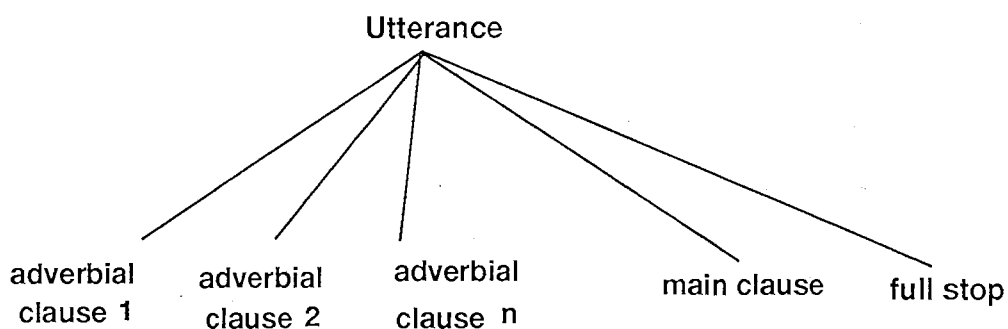
- Clause particularity

It's possible to say that Japanese clause is divided into 3 parts: topic element or discourse-dominating elements, proposition and mood expression part. And an utterance is an ensemble of the clauses.



- Utterance particularity

Japanese people have a tendency to construct an utterance with fragmented clauses by such devices as conjunctions. And a long utterance is constituted with conjunctive-words which are polysemy and poly-category. This signifies that relationship-inference task among clauses is necessary and important for compound-sentence analysis.



- Spoken behaviour

Japanese people tend to speak with reserve form in the conversation and to diverts conjunction words, auxiliaries, etc. as interactive devices for reserve expression. These conjunction's words can occur after all PPs, VPs, etc. like fillers or hesitation noises. If MT of real spoken language is



attempted, the first work of an analysis phase is to decide how to treat them or to remove them.

Fillers and hesitation noises occur frequently because of spontaneous speaking. Namely the fillers constituted by auxiliaries and postposition can occur any time and anywhere in an utterance. This phenomenon brings syntactical ambiguities at the analysis phase.

Japanese speakers have a tendency to leave any grammatical elements unsaid as long as what is unsaid is generally understood among interlocutors. For instance ill-formed sentences are not accepted by our system and this is not linguistically mentioned ellipsis, but one of spoken Japanese characteristics.

## 1.2 Sketch of semantic representation formula

Communicative function identification of sentence-final elements is a kind of meaning interpretation<sup>9</sup> of conversational behaviour in this report. When an event is uttered, what kind of attitude is taken by speaker and what kind of intentions are contained in his utterance are sought from sentence-final elements.<sup>10</sup> Searle classifies and characterises illocutionary verbs, not segments of conversational behaviour. So an illocutional act is not viewed as an utterance by means of which a speaker communicates his feelings, attitudes, beliefs or intentions.

However, it is obvious that an utterance shows speakers feelings, attitudes, intentions, etc. as well as an event to be communicated. And the Japanese is typically a language in which speaker reports an event, while involving interpersonal feelings. So, segments of conversational behaviour Searle has neglected are object of our consideration.

A sentence is represented as the trichotomy of syntax, semantics and pragmatics by means of feature bundles and feature value propagations.

In analysis phase, multi-level semantic interpretation should be assumed: *e.g.* firstly, identification of grammatical subject, object, etc. as surface level interpretation, secondarily valency-identification of predicate verbs or simple meaning taxonomy of verbs as semi-deep level, finally extracting of speakers intentions as situational semantic level.

Meanings of the sentence-final elements are represented with the *EVENT* and *CONDITION* by extracting illocutionary forces from concerning lexical items. Illocutionary force means common practices that an utterance evokes in speech act. The value of *EVENT* is propositional acts which a speaker talks about and it grammatically falls on the proposition of a sentence. The value of *CONDITION* is the condition or situation in which an event happens. It falls on sentence-final elements of a sentence. Relation name of *CONDITION* is illocutionary forces which are labeled to sentence-final elements.

In this report, the value of *CONDITION* is a principal output from Japanese analysis phase and input into the transfer for sentence-final elements, because its interpretation indicates the speech intention of a speaker and the transfer is doing, using the intermediate of speech intention specification in SL-TRANS.

Sentence-final elements corresponds to the concept of mood by Teramura.<sup>11</sup>

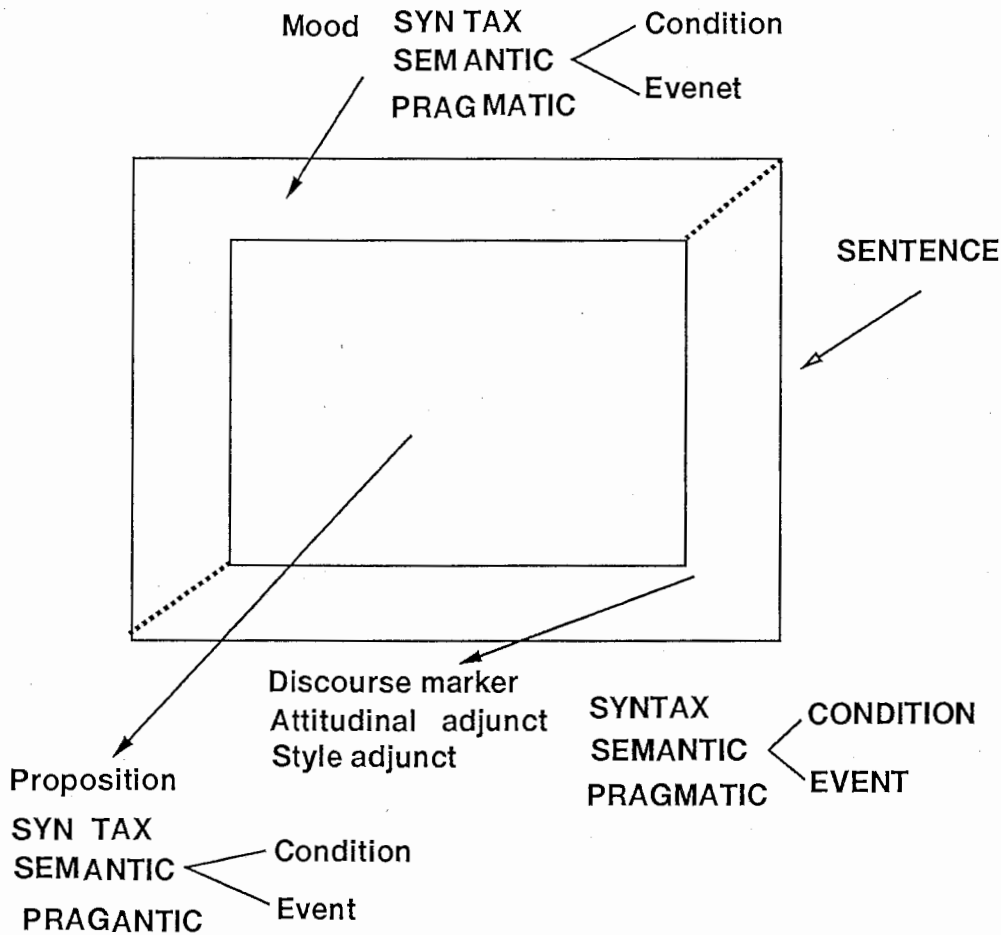
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<sup>9</sup>The concept of *meaning* is debatable.

<sup>10</sup>Meaning approach by communicative functions is criticized by Petr Sgall and Edmondson.

<sup>11</sup>When a sentence is divided into 3 parts, as mentioned above, discourse markers, topicalized PP and long-distance-scope adverb are a beginning part of a sentence. The mood

The mood is indicated in general by auxiliaries, postpositions, suffix. and expresses speakers psychological state, points of view, epistemical points, etc. at the moment where a speaker talks about an event.



### Semantic representation

The sketch of meaning representation formula of the mood elements is shown below.

```
((<!m sem> == [[CONDITION [[RELN X]
                    [--EE ?SUBJ-SEM]
                    [--ANT ?OBJ-SEM]]]]) in lexicon
```

part is a part which is separated from the beginning part and proposition in a sentence.

$\langle\langle !m \text{ sem } \textit{CONDITION} \rangle\rangle == \langle\langle !h\text{-dtr } !\text{sem } \textit{CONDITION} \rangle\rangle \langle\langle !m \text{ sem } \textit{EVENT} \rangle\rangle == \langle\langle !c\text{-dtr } !\text{sem} \rangle\rangle$

$V \rightarrow (V \text{ auxv})$  in grammar-rules

X is mother relation name.

m = mother

sem = semantics

h-dtr = head daughter

c-dtr = complement daughter

v = verb

vaux = auxiliary

EVENT is in principle, verb phrase which is subcategorized from head feature in this example.

-EE and -ANT are elements which constitute *CONDITION RELN X*.

-EE is subject of *M* feature and -ANT is grammatical subject of the complement and object of *M* feature.

The used abbreviations in the Basic Structure figures are as follows:

pos= part of speech / gr= grammatical relation / pform= particle form /  
subcat= subcategorization / PP= postposition phrase / VP= verb phrase /  
sem= semantics / Fn= formal adverb

For example, a transitive verb could be described as follows:

$VT\{\text{pos } v; \text{gr } \textit{nil}; \text{pform } \textit{nil}; \text{subcat}\{\text{PP}[\textit{subj}], \text{PP}[\textit{obj}]\}\}$

And shorten form of above VT description is as follows:

$V[\text{subcat } \{\text{PP}[\textit{subj}], \text{PP}[\textit{obj}]\}]$

This means a transitive verb has a grammatical subject and a grammatical object. The subject and object are elements which are subcategorized from the verb and at the same time, are valency of a verb.

Proposition part takes verb phrase (VP), in general. V-elements of VP has a relation name *RELN*. Actually the relation name is realized as each verb itself in the context. However, some verbs have upper concept relation name as *RELN*.

As for pragmatics, meaning itself incorporates pragmatics as well as semantic aspects. Two types of pragmatic are realized, *i.e.* one which belongs to

the system of language and the other which belongs to communicative competence such as presuppositions and implicatures. The former is taken deal with in *SEM*antics and the latter such as presuppositions and implicatures is taken deal with in *PRA*Gmatics.

### 1.3 Lexicon

Lexies which are registered in lexicon are a word or a chain of words. The advantage that a chain of words is taken as an entity in lexicon is:

- In spoken language, sentence-final elements are meaningful in block and are patterned.
- A chain of words can be a transfer unit into target language.
- Values of duration, pitch, stress as the result from speech recognition for a chain of words serve to disambiguate meanings.

Lexicon is constituted with *SYN*tax, *SEM*antics, and *PRA*Gmatics. In *SYN* feature, are described morphological and syntactical conditions where a lexical item is used in a sentence, *i.e.* conjugation type, conjugation form, category, modality, valency and obligatory case markers of a verb, subcategorized phrases, etc. In *SEM* feature, meanings of lexical item and constraint conditions for corresponding meanings. *PRA*G feature is constituted with relation name and its proper features.

Lexical items according to functional notions depending of performance are identified as Lexis and its basic structure as **Basic Structure** in this report. Lexicon, meaning interpretation of a sentence comprising relating devices, etc. are also shown.

The sentence-final elements are constituted with the following word order:

causative  $\Rightarrow$  passive  $\Rightarrow$  respect, spontaneity, possibility/ability  $\Rightarrow$   
(aspect)  $\Rightarrow$  deictic  $\Rightarrow$  desire, obligation  $\Rightarrow$  likeness  $\Rightarrow$  conjecture  
 $\Rightarrow$  (past tense)  $\Rightarrow$  (negation)  $\Rightarrow$  volition  $\Rightarrow$  polite  $\Rightarrow$  copula  $\Rightarrow$   
sentence final particle.

There would exist also negative expression, mutual action expression, facility expression, difficulty expression by the auxiliary or the suffix, but we do not deal with them in this report.

Aspect and tense are not mentioned in this report. Titles of each chapter follow the above-mentioned chart of the final elements in Japanese sentence from left to right. Propositional acts and the others will be also mentioned later.

## 2 Sentence final elements

### 2.1 Causative

Lexis: *SASERU*, *SERU*, *SASU*

The idea that someone/something causes, influences or allows a third party to do something is marked by auxiliaries *SASERU*, *SERU*, *SASU*<sup>12</sup> or initial causative-verbs<sup>13</sup> in Japanese. There are two parts, a *causer* and a *causee* as the situationality in causative sentences and the causer, in principle must be equal or higher than the causee in terms of social status in Japanese, when the causative expression is uttered.

In English causative, there is no such a situation-semantic constraint as in Japanese, because ex-1 occurs difficultly in Japanese in situational view but it could easily occur in English.

ex-1:\*<sup>14</sup> Watashiwa (I) uwayakuwo (my supervisor) kaigini (to the conference) ikaseta (make go)

(I made my supervisor go to the conference.)

Causative forms normally occur with active verbs and are in general polysemy between causative and permissive as ex-2 shows.

ex-2: Karewa (he) musumewo (his daughter) daigakuni (to college) ikaseta (go to)

(He made his daughter go to college.)

(He allows his daughter to go to college.)

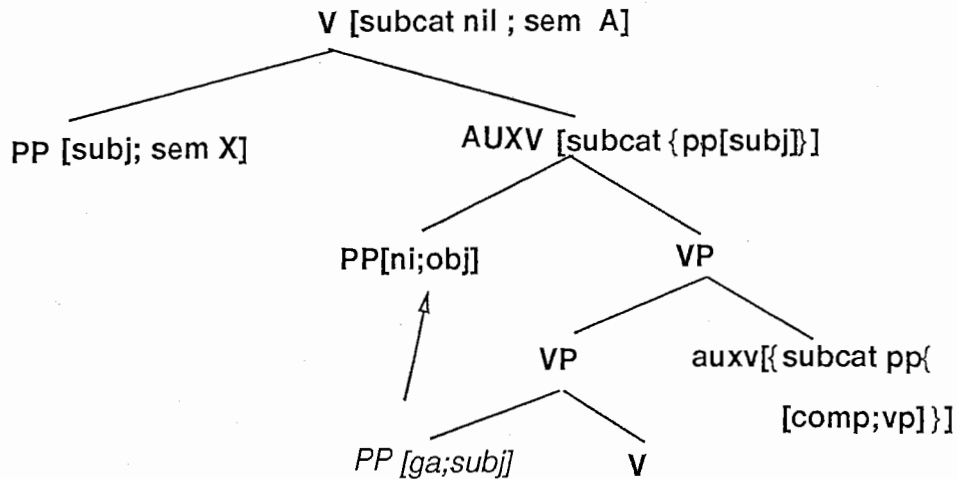
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<sup>12</sup>These devices are called auxiliary in Japanese standard grammar. We also call them auxiliary in this report, temporarily. However, we can take deal with them as inflexin forms or suffix of verbs

<sup>13</sup>In transitive verb sentence, 2 types of causative forms are possible: *i.e.* *OROSU*(make/let get out) and *ORISASERU*(make/let get out). The first is a transitive verb and means that someone causes someone get out or that someone let someone get out. The second is an intransitive verb which is combined with a causative auxiliary.

<sup>14</sup>The symbol \* signifies that a sentence is ungrammatical or that a sentence does not occur in ordinary conversation in the point of co-occurrence of words in an utterance.

Basic Structure:



V[subcat {PP[subj;sem X] ,  
 PP[obj;sem Y] ,  
 V[subcat {PP[subj;sem Y]} ;  
 [sem Z] ;

SEM SERU (X, Y)  
 SASERU (X, Y) ]

In case that the grammatical object is inanimate, the causative means that a state is brought by the agent of predicate verb and there is no longer permissive meanings.

ex-3: Kitousiga (faith hearler) amewofuraseta (got rain)  
 (A faith hearler got rain.)

In the case that the causer is omitted in an utterance, the causer is always the speaker himself.

when *TEITADAKU* is added to *SASE*, *SASETEITADAKU* means pragmatically speaker's condescension for establishing a politeness attitude in an utterance.



ex-4: Kaigini (to the conference) sanku *SASETEITADAKITAIN-ODESUGA* (would like to participate)

(I would like to participate to the conference.)

Therefore, Japanese causative form semantically expresses the permissive and the causative: then a person who gives a permission as *PERMISSER* and a person who is permitted to do something as *PERMITTED*: a person who causes to do something as *CAUSER* and a person who is caused as *CAUSEE*. The disambiguation between the causative and the permissive can be partially done by taxonomy of the verb meanings. However, this report does not go further about this subject.

Lexicon of the causative is as follows:

e.g. *seru*

```
([[PHON (:DLIST          se
      |?X10| )]
 [SYN [[SUBCAT [[FIRST ?X07[[SYN [[SUBCAT
      (:LIST ?X04[[SYN [[SUBCAT (:LIST )]
      [FORM ga]
      [COMPLEMENT +]]]]]
      [SEM ?X02[]]
      ?X03[[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS P]
      [FORM wo]
      [COMPLEMENT +]]]]]]]
      )]
 [HEAD [[POS V]
      [AST ?X06[]]
      [GRFS [[OBJ ?X03]
      [SUBJ ?X04]]]]]
 [MORPH [[CFORM VONG]]]]]]]
 [HEAD [[POS V]
      [AST ?X06]
      [GRFS [[COMP ?X07]
      [OBJ2 [[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS P]
      [FORM ni]
      [COMPLEMENT +]]]]]
      [SEM ?X02]
      [SEMF [[ANIM +]]]]]]]
```

```

[SUBJ [[SYN [[SUBCAT (:LIST )]
[HEAD [[POS P]
[FORM ga]
[COMPLEMENT +]]]]]
[SEM ?X08[]]
[SEMF [[ANIM +]]]]]]]]]
[WH [DLIST[IN ?X05[]]
[OUT ?X05[]]
[MORPH [[CTYPE VOW]]]]]
[SEM [[CONDITION [[RELN CAUSATIVE]
[CAUSEE ?X02]
[CAUSER ?X08]]]]]
[PRAG [[RESTR [DLIST[IN ?X01[]]
[OUT ?X01[]]]]]]
[ORTH (:DLIST se
[?X09| )]]
([[SYN [[MORPH [[CFORM ASPL]]]]]])
([[SYN [[MORPH [[CFORM INFN]]]]]])
([[SYN [[MORPH [[CFORM VONG]]]]]])
([[SYN [[SUBCAT [[FIRST [[SYN [[MORPH [[CTYPE SURU]]]]]]]]]])
([[SYN [[SUBCAT [[FIRST [[SYN [[MORPH [[CTYPE CONS-UV]]]]]]]]]])
([[SYN [[SUBCAT [[FIRST [[SYN [[MORPH [[CTYPE CONS-V]]]]]]]]]])

```

The grammar-rule is as follows:

$\langle \{!m \text{ !sem } CONDITION\} == \langle \{!h\text{-dtr } !sem \text{ } CONDITION\} \rangle \langle \{!m \text{ !sem } EVENT\} == \langle \{!c\text{-dtr } !sem\} \rangle$   
in  $V \rightarrow (V \text{ auxv})$

The figure means an *EVENT* is something which is produced in a situation conditioned by *CONDITION*. *EVENT* is related with *verb-sem* which is subcategorized from the mother, node, *i.e.* vp. The contents of *CONDITION* is shown by *causer* and *causee* which are related with grammatical elements of a input text by tag(?), respectively. So this syntactically means that an auxiliary *seru* takes a subject and an object vp and the concealed subject of complement vp is the object of the auxiliary *seru*.

The meaning interpretation of the causative is shown below:

*e.g. Senseiga gakuseini ronbunwo kakaseru*

(The professor makes students write their reports.)

```

[[CONDITION [[RELN CAUSATIVE]
      [CAUSER [[PARM ?X02[]]
        [RESTR [[RELN sensei-1]
          [ENTITY ?X02]]]]]]
      [CAUSEE [[PARM ?X01[]]
        [RESTR [[RELN gakusei-1]
          [ENTITY ?X01]]]]]]]]
[EVENT [[RELN kaku-1]
  [AGEN ?X01]
  [OBJE [[PARM ?X02[]]
    [RESTR [[RELN rombun-1]
      [ENTITY ?X02]]]]]]
  [SLOC []]]]]

```

*SASETEITADAKU* has a few productivity, but in a lot of cases, it is followed by *TAINODESUGA* which is a kind of reserve expression. And so *SASETEITADAKITAINODESUGA* is taken as an item in lexicon.

When the causer wants to emphasize a sentiment of the permission, he can add *TEAGERU*, *TEYARU* (receive some benefit from someone's action).

ex-5: Tarouwa (Tarou) Hanakowo (Hanako) daigakuni (to the college) ika (go to) *SETEYARU*

(Tarou makes Hanako go to the college.)

*TEAGERU*, *TEYARU*<sup>15</sup> are causative-deictic expression. The viewpoint of a speaker is there in Tarous side in ex-5. If the speaker takes Hanakos one, he should use *TEMORAU* as shown in ex-6.

ex-6: Hanakowa (Hanako) Tarouni (tarou) daigakuni (college) (the college) ika *SETEMORAU* (go to)

(Tarou has Hanako go to the college.)

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<sup>15</sup>See also deictic expression

## 2.2 Passive

Lexis: *RERU, RARERU*

There are morphologically three types of passive in Japanese: productive passive, lexical passive and intermediary passive. The productive passive is formed by *RERU, RARERU* as devices which follow active verbs and semantically expresses that a person/thing is affected by a person/thing in an event. The essential meaning of the Japanese passive is that an event is not under the control of a person in spite of meaning difference among predicate verbs. So the grammatical subject of passive voice is psychologically affected one.

The lexical passive is a passive such as verbs express semantically passive meaning without *RERU, RARERU*. The intermediary passive is said about a limited number of verbs such as verbs are intransitive and transitive forms with the same stem, e.g. *Kowasu-Kowareru, Azukaru-Azukeru*.

In contrast with English passive<sup>16</sup>, intransitive verbs as well as transitive verbs can grammatically form the passive voice in Japanese, because of its essential meanings.

ex-7: Genkouwo (my paper) nusumareru (stolen)

(I had my paper stolen.)

(My paper was stolen.)<sup>17</sup>

ex-8: Kinouha (yesterday) amenifurareta(it rained)

(It rained on me yesterday.)

The verb *FURU* in ex-8 is an intransitive verb and the verb *NUSUMU* in ex-7 is a transitive verb.

The English passive occurs in following cases:

- when speaker is interested in the object rather than the agents of an action
- the agent of an action is general person and needn't to be mentioned
- In written language
- For purpose of facilities of the sentence conjunction

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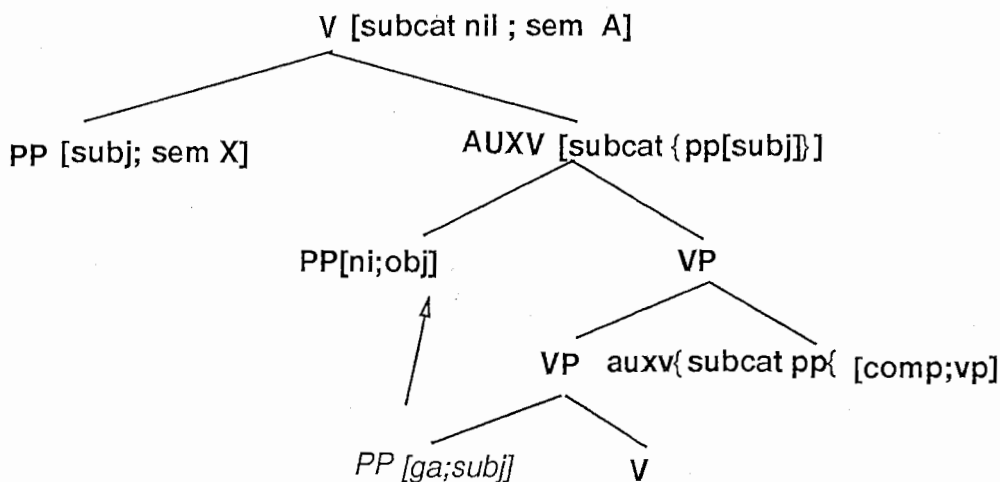
<sup>16</sup>However, stative verbs in English haven't passive forms: e.g. have, resemble, lack, etc.

<sup>17</sup>In this case, 2 translations of Japanese sentence into English are possible: the first is causative and the second is passive.

if a speaker is interested in the agent of an action, the grammatical subject is the agent. This is a common point to both languages<sup>18</sup> and is main reason of the usage of passive form in English.

Japanese passive occurs frequently in the conversation, because of its nuance of 'affected by something/someone and psychologically suffered from it', comparing the English passive which occurs in written language much more than in spoken language. Therefore it is possible that Japanese passive is not necessarily translated into English passive.

Basic Structure:



The figure means an *EVENT* is produced in a situation conditioned by *CONDITION*. *EVENT* is related with *verb-sem* which is subcategorized from VP and additionally contents of *CONDITION* is shown by *AFFECTED* and *AFFECTANT* which are related with grammatical elements of a input text by tag(?), respectively. So an auxiliary *RERU* takes PP*ga* and PP*ni* and the concealed subject of V is the same PP as PP*ni* which is subcategorized elements from the *RERU*.

18

ex-b: Konoshimawa (this island) koronbusuniyotte (by Columbus) hakkensaremasita (was discovered )

(This island was discovered by Columbus.)

ex-b indicates that 'Columbus didn't discover other islands, but only this island was discovered by him'.

However, we can translate also the sentence into Japanese by using topicalized pp:

Konoshimawa (as for this island) koronbusuga (Columbus) hakkensimasita (discovered).

V[subcat PP[subj; sem X], PP[obj; sem Y],  
 V[subcat PP[subj; sem Y]; [sem Z]; *RERU*(X, Y)]

Meaning interpretation of the passive is as follows:  
 e.g. *nusumareru*

```
[[CONDITION [[RELN AFFECTED]
             [AFFECTED ?X01[]]
             [AFFEECTANT ?X02[]]]]
 [EVENT [[RELN nusumu-1]
         [SOUR ?X01]
         [SUBJ ?X02]
         [OBJ []]]]
```

Furthermore there exist the Japanese transitive verbs which semantically is passive: *OSOWARU*, *KOUMURU*, *MAKERU*, etc. *OSOWARU* is the same meaning as *OSHIERARERU*<sup>19</sup>. However, these lexies are no longer such a meaning as someone is affected by someone. *OSOWARU* is a verb.

Lexicon of verbs with *CONDITION* and *EVENT* is as follows:

```
([[PHON (:DLIST          osowa
      |?X07| )]
 [SYN [[HEAD [[SYN [[POS  V]
                  [FORM  OSOWARU]]]
      [POS  V]
      [VASP [[CHNG  +]
            [MOME  -]
            [ACTV  +]]]
      [ASPECT  +]
      [VCAT [[MOVE  -]
            [VOL  +]]]
      [GRFS [[SUBJ [[SYN [[SUBCAT (:LIST  )]
                        [HEAD [[POS  P]
                                [FORM  ga]
                                [COMPLEMENT  +]]]]]
            [SEM ?X02[]]
            [SEMF [[HUM  +]]]]]
      [OBJ [[SYN [[SUBCAT (:LIST  )]
```

<sup>19</sup>*OSHIERARERU* is constituted with a transitive verb *OSHIERU* and a passive auxiliary *RARERU*

```

[HEAD [[POS P]
      [FORM wo]
      [COMPLEMENT +]]]]]
[SEM ?X05[]]
[SEMF [[ABS +]]]]]
[OBJ2 [[SYN [[SUBCAT (:LIST )]
            [HEAD [[POS P]
                  [FORM ni]
                  [COMPLEMENT +]]]]]]]
[SEM ?X01[]]
[SEMF [[HUM +]]]]]]]]]
[WH [DLIST[IN ?X04[]]
     [OUT ?X04[]]]
[MORPH [[CTYPE CONS-UV]
       [CFORM STEM]
       [SFCONS R]]]]]
[SEM [[RELN osowaru-1]
     [OBJ2 ?X01]
     [OBJ ?X05]
     [SUBJ ?X02]
     [CONDITION [[RELN PROFIT]
                [PROFITANT ?X01]
                [PROFITEE ?X02]
                [EVENT [[PARM ?X03[]]
                       [RESTR [[RELN osowaru-1]
                               [ENTITY ?X03]]]]]]]]]]]
[ORTH (:DLIST osowa
       |?X06| )]]]

```

ex-9: Jimuni (Jim) eigowo (the English) osowatta

(I was taught the English by Jim.)

(I learned English with Jim.)

The meaning interpretation of the passive without a *AFFECTED* nuance is shown below:

e.g. *Jimuni eigowo osowaru*

```

[[RELN osowaru-1]
 [ASPT UNRL]

```

```

[CONDITION [[RELN PROFIT]
            [PROFITANT
              ?X06[[PARM ?X02[]]
                  [RESTR [[RELN NAME]
                          [ENTITY ?X02]
                          [FIRST-NAME [[PARM ?X01[]]
                                        [RESTR [[RELN NAMED]
                                                [ENTITY ?X01]
                                                [IDEN Jimu]]]]]]]]]]]]
            [PROFITEE ?X04[]]
            [EVENT [[PARM ?X03[]]
                   [RESTR [[RELN osowaru-1]
                           [ENTITY ?X03]]]]]]]]
[SUBJ ?X04]
[OBJ [[PARM ?X05[]]
      [RESTR [[RELN eigo-1]
              [ENTITY ?X05]]]]]]
[OBJ2 ?X06]]

```

ex-10: Sonotihouwa (the region) ookina (heavy) songaiwo (losses)  
 KOUMUTTA (sustain)  
 (The region sustained heavy losses.)

The meaning interpretation of the passive voice of intransitive verbs is shown below:

*e.g. furareru*

```

[[CONDITION [[RELN AFFECTED]
             [AFFECTED []]
             [AFFEECTANT ?X01[]]]]]
[EVENT [[RELN furu-1]
        [FORC ?X01]]]]

```

There are also inverse case where Japanese passive is generally translated into a active voice in English. However, this problem is currently neglected. So, for example *TANOMARERU* is analyzed as *TANOMU + RERU*.

ex-11: Yuujinni (my friend) komoriwo (babysit) tanomaremasita  
 (ask)  
 (My friend asked me to babysit for her.)



## 2.3 Honorifics

Lexis: *RERU, RARERU, O...NINARU, O...SURU, GO...SURU, ITASU, NASARU, IRASSYARU, MESIAGARU, UKAGAU, GORANNINARU, MOUSHIAGERU, ITADAKU TEITADAKU, TEORIMASU, MOUSIMASU, ITASHIMASU, GOZAIMASU, O, GO*

What makes Japanese polite expressions distinctly different from polite expression of English is that the Japanese system involves grammar as well as lexies. There are two types of polite expression in Japanese: honorific polite expression by the form *O...NINARU*<sup>20</sup> and *RERU, RARERU*. Humble polite expression is formed by *O...SURU* and *ITASU*.

The honorific polite system is a way where a speaker elevates his interlocutor or a superior because of their higher social status or their older age than himself. The humble polite system is a way where a speaker makes lower position than his interlocutor or a person, because of their lower social status or their younger age than himself. So, the honorific expression implicitly/explicitly suggests the existence of a person who respects someone/something as *respectant* and a person who is respected by someone as *respected*<sup>21</sup>.

In ATR corpus, the Japanese polite expression is as mentioned above in Lexis and negative forms of each lexies.

The English polite expression is as follows in ATR corpus:

Please,.....

.....,Please

Would you like ....

Would you mind.....

Could you ....

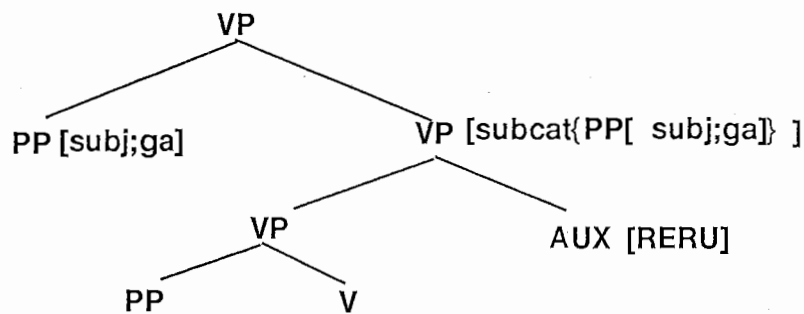
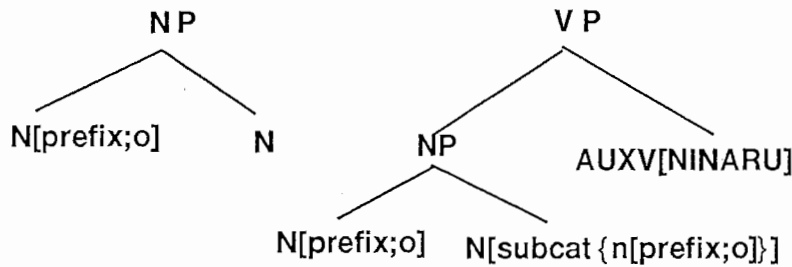
I wonder if you would....

### Basic Structure:

---

<sup>20</sup>*NINARU* is constituted with a particle *NI* and a verb *NARU*. *NARU* is polysemy: 1. with a noun which signifies a profession, the synonym is 'become'. 2. with a nominalization noun or common nouns, synonym is 'be' 3. with a prefix *O*, polite expression.

<sup>21</sup>Situationality of Japanese polite expression depends on the age, length of working, managerial position in such an organization as a company, same member of a group or same relatives. And also it depends on familiarity and conversational situation between two parties. There is a paper about the generation of polite expression in multilingual translation by Akamine S. and the others, '91. However, in analysis phase we have no means to know their actual status in society and the relationship of 2 parties is almost fixed in our task.



We can say there is politeness degree in interrogative or request sentence. However, in other styles of sentences it's generally useless to represent the semantic of politeness as the degree, because it's the subtle question, depending on the situation of the conversation or the context.

In our corpus, there are two parties: *i.e.* a caller who wants to take information about the international conference and a call-taker who is receptionist of the conference office. Two parties use formal style *i.e.* *DESU* or *MASU* in dialogues. And also they use humble polite and respect polite form. Honorifics are represented by whether humble polite or respect polite is it and by what reason it is used. The reason of respect polite issues is vague, but humble polite one is comparatively clearer in our corpus<sup>22</sup>. Therefore whether respect honorific or humble honorific is represented by *SEM*matic feature and why honorific is taken is represented by *PRAG*matic feature.

Lexicon of humble polite expression is as follows:

([PHON (:DLIST suru

22

ex-c: Kaisyaga (my company) harauto (pay) it *TEORIMASU*node (say)  
(My company will pay ..)

*TEORIMASU* is humble polite and the caller is a member of the company. This is reason why the caller used humble polite expression.

```

        |?X07| )]
[SYN [[SLASH [DLIST[IN ?X05[]]
        [OUT ?X05[]]]
    [HEAD [[POS V]
        [SUBV +]]]
    [WH [DLIST[IN ?X04[]]
        [OUT ?X04[]]]
    [MORPH [[CTYPE SURU]]]]]
[SEM [[CONDITION [[RELN HUMBLE-POLITE]
    [RESPECTANT ?X02[]]]]]]
[PRAG (:DLIST
    [[RELN HUMBLE-POLITE]
    [MEMBERSHIP ?X02]
    [STATUS -]]
    |?X01| )]
[ORTH (:DLIST
    suru
    |?X06| )]]
([[SYN [[MORPH [[CFORM ADNM]]]]]])
([[SYN [[MORPH [[CFORM SENF]]]]]])
([[SYN [[SUBCAT (:LIST
    [[SYN [[HEAD [[POS V]
        [MODL [[SFP-3 -]
            [SFP-2 -]
            [SFP-1 -]
            [INTN -]
            [POLT-AUX -]
            [POLT -]
            [TENT -]
            [EVID -]
            [PAST -]
            [OPTT -]
            [DONT -]
            [ASPC -]
            [NEGT -]]]]]]
        [MORPH [[CFORM INFN]]]]]
    )]]]]
([[SYN [[SUBCAT [[FIRST [[SYN [[MORPH [[CTYPE VOW]]]]]]]]]])
([[SYN [[SUBCAT [[FIRST [[SYN [[MORPH [[CTYPE CONS-UV]]]]]]]]]])
([[SYN [[SUBCAT [[FIRST [[SYN [[MORPH [[CTYPE CONS-V]]]]]]]]]])
([[SYN [[SUBCAT (:LIST
    [[SYN [[HEAD [[POS N]]]]

```

```

[MORPH [[CTYPE SURU]
        [CFORM STEM]]]]]
[SEMF [[ACT +]]]]
)]]]]))

```

The prefix *O* is used with verbs, adjectives and nouns to express speaker's respect, modesty or politeness.

ex-12: *GOyotei*

(Your schedule)

ex-13: *Tourokuryouwa* (registration fee) *Oikuradesuka*(how much)

(How much is the registration fee?)

Meaning interpretation of a noun with *O* is as follows:

e.g. *Oikuradesuka*

```

[[[RELN FORMAL-INTERROGATIVE]
  [ASPT UNRL]
  [IDEN [[RELN POLITENESS]
        [EVENT [[[PARM ?X01[]]
                  [RESTR [[RELN ikura-1]
                          [ENTITY ?X01]]]]]]]]]]
  [ASKING [[LABEL *SPEAKER*]]]
  [REPLYING [[LABEL *HEARER*]]]]]

```

Meaning interpretation of a noun with *GO* is as follows:

e.g. *goyotei*

```

[[[CONDITION [[RELN POLITENESS]
              [EVENT ?X02[[[PARM ?X01[]]
                          [RESTR [[RELN yotei-1]
                                  [ENTITY ?X01]]]]]]]]]]

```

The meaning interpretation of respect polite form is shown below:

e.g. *okakininaru*

```

[[CONDITION [[RELN RESPECT-POLITE]
             [RESPECTED ?X01[]]
             [RESPECTANT [[LABEL *SPEAKER*]]]]]
[EVENT [[CONDITION [[RELN POLITENESS]
                   [EVENT ?X02[]]
                   [EVENT ?X02[[RELN kaku-1]
                                [AGEN ?X01]
                                [OBJE []]
                                [SLOC []]]]]]]]]

```

ex-14: Watasiwa (I) senseini (professor) sonomondainituite (the problem) *Ohanasi SURU*  
 (I will talk the professor of the problem.)

The meaning interpretation of humble polite, *O....SURU* is shown below:  
*e.g. o...suru*

```

[[CONDITION [[RELN HUMBLE-POLITE]
             [RESPECTANT [[LABEL *SPEAKER*]]]]]
[EVENT [[CONDITION [[RELN POLITENESS]
                   [EVENT ?X01[]]
                   [EVENT ?X01[[RELN kaku-1]
                                [AGEN []]
                                [OBJE []]
                                [SLOC []]]]]]]]]

```

Additionally there exist the honorific words as lexies: *GOZONJIDESU* (know), *OSSYARU* (say), *MESU* (wear), *KUDASARU* (give), *NASARU* (do), etc.

ex-15: Senseiwa (My professor) *GOZONJIDESU* (konow)  
 (My professor knows.)

ex-16: Senseiwa (professor) sou (so) *OSSYARU* (say)  
 (The professor is saying so.)

ex-17: Senseiwa (professor) *Owakai* (young)  
 (The professor looks like young.)

ex-18: Senseiwa (professor) yukkuri (slowly) *hanasaRERU*  
 (The professor speaks slowly.)

Also the respect polite by the lexicon *NASARU*, *AGARU*, etc exist.

ex-19: Senseiga (My professor) *NASARUDESYOU* (will do)  
(My professor will do.)

The meaning interpretation of *NASARU* is shown below:

*e.g. Senseiganasaru*

```
[[[RELN  nasaru-RESPECT-POLITE]
 [ASPT  UNRL]
 [OBJE  []]
 [SUBJ  ?X02[[[PARM ?X01[]]
              [RESTR [[RELN  sensei-1
                      [ENTITY ?X01]]]]]]
 [CONDITION [[RELN  RESPECT-POLITE]
             [RESPECTANT [[LABEL  *SPEAKER*]]]
             [RESPECTEE ?X02]
             [EVENT  [[PARM ?X03[]]
                     [RESTR [[RELN  nasaru-RESPECT-POLITE]
                             [ENTITY ?X03]]]]]]]]]]
```

## 2.4 Spontaneity expression

Lexis: relative intransitive verbs<sup>23</sup>

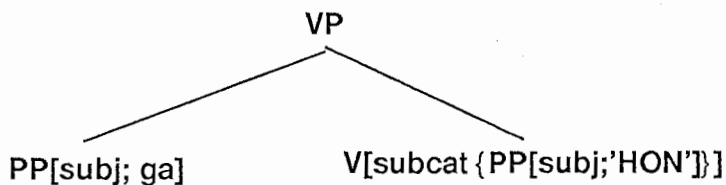
The spontaneity which is expressed by the activo-passive in English is expressed in Japanese by lexical items.

ex-20: Konohonwa (this book) tobuyouni (like hot cakes) *URERU*  
(sell)

(This book sells like hot cakes.)

Relative verbs are used as if the action is brought by some force and is able to be translated into passive voice.

Basic Structure:



For example, following verbs are relative verbs: *KAKARU*, *OCHIRU*, *SASARU*, *NAKUNARU*, etc.

ex-21: Ookina (big) sakanaga (fish) amini (in a net) kakatta (be caught)

(A big fish was caught in a net)

The verb, *KAKARU* expresses that an event is brought with the unknown force and that we can recognize only the state of 'a big fish' which is caught in the net. These verbs can be specified as potential verbs.

So meaning interpretation of relative transitive verbs depend on lexical items. Lexicon of *URERU* is shown below:

```

([ [PHON (:DLIST      ure
      |?X07| ) ]
  [SYN [[HEAD [[SYN [[POS V]
                  [FORM ureru]]]]]]
  
```

<sup>23</sup>Relative intransitive verbs are a kind of the intransitive verb which has relative transitive form, but they have no same stem, even if the concept of the stem is understood as consonant stopping stem.

```

[POS V]
[VASP [[CHNG +]
      [MOME -]
      [ACTV -]]]
[ASPECT +]
[VCAT [[MOVE -]
      [VOL -]]]
[GRFS [[SUBJ [[SYN [[SUBCAT (:LIST )]
                  [HEAD [[POS P]
                        [FORM ga]
                        [COMPLEMENT +]]]]]]
      [SEM ?X03[]]
      [SEMF [[CONC +]]]]]]]]]]
[WH [DLIST[IN ?X05[]]
     [OUT ?X05]]]
[MORPH [[CTYPE VOW]
        [CFORM STEM]]]]]]
[SEM [[RELN URERU-1]
      [SUBJ ?X03]
      [CONDITION [[RELN SPONTANEITY]
                  [OBSERVATOR ?X02[]]
                  [OBJECT ?X03]
                  [EVENT [[PARM ?X04[]]
                          [RESTR [[RELN ureru-1]
                                  [ENTITY ?X04]]]]]]]]]]]]]]]]]]]]
[PRAG [[RESTR [DLIST[IN ?X01[]]
                 [OUT ?X01]]]
        [SPEAKER ?X02]]]
[ORTH (:DLIST ure
        |?X06| )]]
([[SYN [[SUBCAT (:LIST )]
        [SLASH (:DLIST ?X09[]
                  |?X08| )]
        [HEAD [[GRFS [[SUBJ ?X09]]]]]]]]]]))
([[SYN [[SUBCAT (:LIST ?X11[]
              )]
        [SLASH [DLIST[IN ?X10[]]
                 [OUT ?X10]]]
        [HEAD [[GRFS [[SUBJ ?X11]]]]]]]]]]))

```



The meaning interpretation of the spontaneity expression is shown below:  
*e.g. sakanagakakaru*

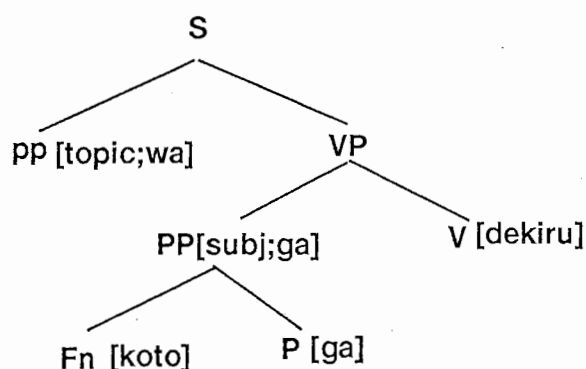
```
[[RELN kakaru-1]
 [ASPT UNRL]
 [SUBJ ?X02[[PARM ?X01[]]
            [RESTR [[RELN sakana-1]
                    [ENTITY ?X01]]]]]]
 [CONDITION [[RELN SPONTANEITY]
             [OBSERVATOR [[LABEL *SPEAKER*]]]
             [OBJECT ?X02]
             [EVENT [[PARM ?X03[]]
                    [RESTR [[RELN kakaru-2]
                            [ENTITY ?X03]]]]]]]]]
```

## 2.5 Ability expression

Lexis: *SERU, KOTOGADEKIRU, RARERU, RERU*<sup>24</sup>, *DEIRARERU, TEIRARERU, RU, URU, DEKIRU*

The idea of ability is expressed by two different methods. Firstly, *KOTOGADEKIRU* type is attached immediately to the verb. *KOTO* is nominalizer and indicates the contents; of ability. Therefore, the scope of negation is whole a nominalized clause. Secondly, ability expressions by the auxiliaries, e.g. *SERU, URU* are productive. Both types can occur with all types of verbs<sup>25</sup>, excepting sentiment verbs.

Basic Structure:



The case conversion among *PPga*, *PPwo*, *PPni* can occur in the ability expression of transitive verbs. However, the conversion of case markers of do not occur in intransitive verb sentence.

ex-22: Karega (he) eigowo (English) hanasu (speak) *KOTOGADEKIRU*  
(can)

(He can speak English.)

ex-23: Kareni (he) eigowoga (English) hana*SERU*

(He can speak ...)

ex-24: Karega (he) eigoga (English) *DEKIRU* (can speak)

<sup>24</sup>*RERU* and *RARERU* are polysemy among the ability, passive, honorifics, spontaneity. We have no idea to disambiguate their meanings. However, verbs of the sentiment expression can't occur in ability expression; *SUKU, KONOMU, KIRAU, OSHIMU, URAYAMU, OSORERU, NETAMU, NATSUKASHIMU, ANADORU, KOGARERU*. *RERU* and *RARERU* which follow these verbs express the passive, honorifics or spontaneity.

<sup>25</sup>However, e.g. *NIRU*(look like), *SOBIERU*(tower), etc. do not occur in ability expression.

(He can speak English.)

ex-25: Nagaijikan (longtime) tattei (stand on) *RARERU*

(I can stand still longtime.)

ex-26: Watashini (I) konohonga (this book) kaeru (can buy)

(I can buy this book.)

ex-27: Konosakanaga (this fish) taberareru (be eatable)

(This fish is eatable.)

The conversion of the case markers, *i.e.*

*ga.....wo.....seru*

*ga.....ga.....seru*

*ni.....wo.....seru*

*ni.....ga.....seru*

is described in lexicon as follows<sup>26</sup> :

Description of case conversions in lexicon is as follows:

*e.g. seru*

(:or

```
( (<!m syn head grfs subj> ==  
?(SUBJ !(simple-postp-agr- ga-with-semf ?subj-sem ?subj-semf)) )  
  (<!m syn head grfs obj2> ==  
?(OBJ2 !(simple-postp-agr- ga-with-semf ?obj2-sem ?obj2-semf)) )  
    (<!m syn head grfs COMP> == ?(comp !(ga/subj-vi-agr ?PRED-sem ?obj2-sem))
```

```
( (<!m syn head grfs subj> ==  
?(SUBJ !(simple-postp-agr- ga-with-semf ?subj-sem ?subj-semf)) )  
  (<!m syn head grfs obj2> ==  
?(OBJ2 !(simple-postp-agr- wo-with-semf ?obj2-sem ?obj2-semf)) )  
    (<!m syn head grfs COMP> == ?(comp !(ga/subj-vi-agr  
                                          ?pred-sem ?obj2-sem)) )))
```

<sup>26</sup>However, *NI.....GA.....SERU* and *NI...WO...SERU* is not implimented, because of slash consuming economy.

e.g. *kotogadekiru*

```
(<!M !SYNHEAD> == !(SUBJ-VI-AUXV-HEAD-VALUE
                    ?(COMP !(GA/SUBJ-VI-AGR ?COMP-SEM ?SUBJ-SEM))
                    ?(SUBJ !(simple-postp-agr-with-semf
                              ?subj-case-marker ?subj-sem ?subj-semf))))
(<!m syn head grfs subj-case-marker> == (:OR ga ni))
```

The ability expression contains a latent possibility of a realization of a event. And so a realized state is expressed by adverbs in Japanese. Then adverbs<sup>27</sup> which express the realization of a state is described as follows:

```
([[PHON (:DLIST      karoujite
        |?X05| )]
 [SYN [[SUBCAT (:LIST )]
      [SLASH [DLIST[IN ?X04[]]
              [OUT ?X04[]]]]
      [HEAD [[POS ADV]
             [FORM karoujite]
             [COH [[SYN [[HEAD [[POS V]]]]]]]]]]]
      [WH [DLIST[IN ?X03[]]
           [OUT ?X03[]]]]]]
 [SEM [[PARM ?X02[]]
      [RESTR [[RELN karoujite-1]
              [ENTITY ?X02[]]]]]]
 [PRAG [[RESTR [DLIST[IN ?X01[]]
                   [OUT ?X01[]]]]]]
 [ORTH (:DLIST      karoujite
        |?X06| )]]]
 ([[SYN [[HEAD [[COH [[SEM [[ATTAINMENT ?X07[]]]]]]]]
      [COMPLEMENT -]]]]]
 [SEM ?X07]])
 ([[SYN [[HEAD [[COMPLEMENT +]]]]]]))
```

Meaning interpretation of ability expression is shown below:

e.g. *Karoujite eigowohanaseru*

---

<sup>27</sup>MOU, MANMATO, YATTO, UMAIGUAINI, KAROUJITE, DOUYARA, CYANTO, etc. can mean the realized state.

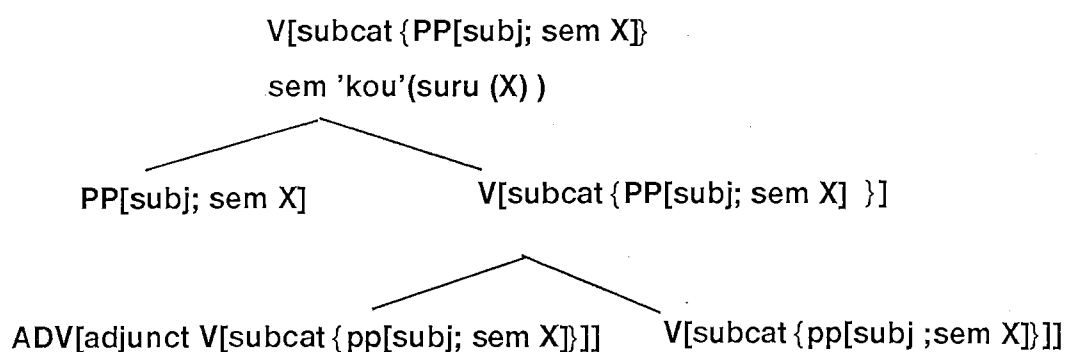
[[CONDITION [[RELN ABILITY]  
    [POSSESSOR ?X02]  
    [EVENT ?X03]]]  
[EVENT ?X03[[RELN *hanasu-1*  
    [ASPT UNRL]  
    [AGEN ?X02[]]  
    [OBJE [[PARM ?X01[]]  
        [RESTR [[RELN *eigo-1*  
                [ENTITY ?X01]]]]]]]]]  
[ATTAINMENT [[PARM ?X04[]]  
    [RESTR [[RELN *karoujite-1*  
        [ENTITY ?X04]]]]]]]

## 2.6 Deixis

Lexis: *IKU, KURU, TEKURU, TEIKU, KURERU, YARU, AGERU, KOUSURU, SOUSURU, AASURU*

Deictic expression is marked by verbs, pronouns<sup>28</sup> and attributes in Japanese and it is an expression in which choice of verbs/attributes depends on the viewpoint of a speaker in the conversation.

Basic Structure:



For example a verb *KURU*<sup>29</sup> commonly means a movement towards a place where the speaker physically exists. However, it can also describe a movement in direction where the speaker has placed his viewpoint where he feels strong sympathy. In the case that grammatical subject is third person, there is no difference of usage between Japanese and English.

ex-28: *Nagaosenseiwa pa-ti-ni KImasitaka*

(Did professor Nagao come to the banquet?)

<sup>28</sup>The choice of personal pronoun depends on interpersonal distance between a person en topic and a speaker. In the following conversation, if B uses a pronoun *kare* (he), B should be near to A's brother.

A: Otoutoga (my brother) kekkonitasimasu (will get married)

(My brother will get married.)

B-1: Otutosan (your brother) dareto (with who) kekkonnasaimasuka B-

2: *KARE*wa dareto kekkonshimasuka kekkonsurunodesuka (get married)

(Will your brother get married with who?)

<sup>29</sup>*KURU* is equivalent to *come* in English and Japanese antonym of *KURU* is *IKU* which is equivalent to *go* in English.

In this example, the speaker didn't attend to the banquet and takes the view-point of the hearer who attended, because the speaker thinks the topics of the party belongs to the hearer who attended to the banquet rather than the speaker.

ex-29: Karewa (he) Musukoni (my son) eigowo (English) osietekureteiru  
(is teaching)

(He is kindly teaching my son English.)

Lexicon of *TEKURERU* is shown below:

```
([[PHON (:DLIST      tekure
      |?X08| )]
 [SYN [[SUBCAT [[FIRST ?X06[[SYN [[SUBCAT (:LIST
      ?X05[[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS P]
      [FORM ga]
      [COMPLEMENT +]]]]]
      [SEM ?X02[]]]
      )]
 [HEAD [[POS V]
 [GRFS [[SUBJ ?X05]]]]]]]]]]
 [HEAD [[MODL [[DONT BENI]]]
 [ASPECT +]
 [SUBV -]
 [VASP [[CHNG +]
 [MOME -]
 [ACTV +]]]
 [GRFS [[COMP ?X06]
 [OBJ2 [[SYN [[SUBCAT (:LIST )]
 [HEAD [[POS P]
 [FORM ni]
 [COMPLEMENT +]]]]]
 [SEM ?X02]
 [SEMF [[ANIM +]]]]]
 [SUBJ [[SYN [[SUBCAT (:LIST )]
 [HEAD [[POS P]
 [FORM GA]
 [COMPLEMENT +]]]]]
 [SEM ?X03[]]]
```

```

[SEMF [[ANIM +]]]]]]]]]
      [WH [DLIST[IN ?X04[]]
          [OUT ?X04[]]]
[SEM [[CONDITION [[RELN DEIXIS]
                 [VIEWPOINT ?X01[]]
                 [RECEIV ?X02]
                 [OFFER ?X03]]]]]
[PRAG [[RESTR (:LIST          [[RELN POLITE]]
                              [[RELN EMPATHY-DEGREE]
                              [LESS ?X02]
                              [MORE ?X03]]
      )]
      [SPEAKER ?X01]]]
[ORTH (:DLIST          TEKURE
      [?X07| )]]      [MORPH [[CTYPE VOW]]]]])

```

ex-30: Kou (so) sitemitarara? (try to do)  
 (Try to do so.)

*KOU* is an adverb and the speaker of ex-30 is indicating the content of *KOU* by using a gesture at the same time.

The meaning of adverbs are represented by the case labels of the main verb in a sentence, because adverbs are treated as an adjunct of the predicate verb. The adverb *KOU* is marked with *DEIXIS* and *KOU* is represented by a case label *MANN*er of verb *SURU*.

Meaning interpretation is as follows:

*e.g. Koukaku*

```

[[RELN  kaku-1]
 [AGEN  []]
 [OBJE  []]
 [SLOC  []]
 [MANN  [[PARM ?X01[]]
        [RESTR [[CONDITION [[RELN DEIXIS]
                          [RESTR [[RELN  kou-1]
                          [ENTITY ?X01]]]]]]]]]]]

```

Generosity of deictic and respective expression existing in Japanese increase omissions of grammatical elements of a sentence. In English, *GO*, *COME*, *BRING*, *TAKE* are also deictic verbs. The difference of the usage between 2



languages depends on each lexical item, but English deictic expression does not bring any omission of grammatical elements.

A lexie *IKU* is described with the relation name, DEIXIS and the feature, viewpoint as pragmatics.

```
(<!m prag> == [[reln DEIXIS]
                [viewpoint ?speaker]])
```

Pragmatics of *DEIXIS* is as follows:

*e.g. iku*

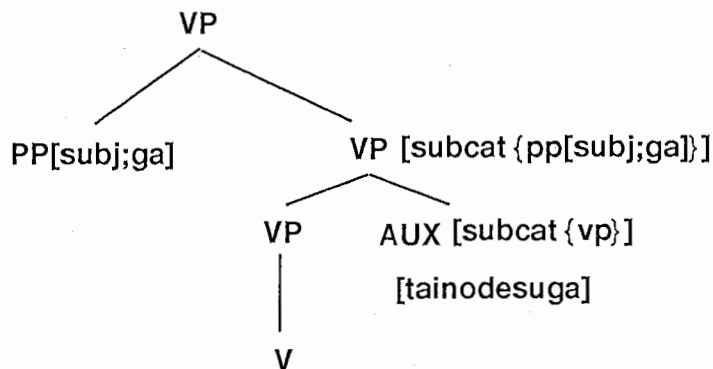
```
[[RESTR [DLIST[IN ?X01[]]
            [OUT ?X01[]]]
 [RELN DEIXIS]
 [SPEAKER ?X02[[LABEL *SPEAKER*]]]
 [HEARER [[LABEL *HEARER*]]]
 [VIEWPOINT ?X02]]
```

## 2.7 Desire expression

Lexis: *TAI, HOSHII, GARU, TAGARU*

Desire expression is formed by a suffix *TAI*, a verb *HOSHII*, etc. When *TAI* and *HOSHII* are combined with the nominalizer *NO*, the formal form *DESU* and the final particle *GA*, *TAINODESUGA* functions as a request with reserve in the point of the pragmatics and frequently occurs in real conversation, because the reserved behaviour is typically used for easing the conversation tone as speaking style taken in Japanese.

Basic Structure:



*TAINODESUGA* is registered as one lexical item in lexicon:

```

([[PHON (:DLIST          tainodesuga
          |?X01| )])
 [SYN [[SUBCAT (:LIST          [[SYN [[SUBCAT (:LIST )]
                                     [HEAD [[POS V]]]
                                     [MORPH [[CFORM INFN]]]]]]]]
                                     )]
 [SLASH [DLIST[IN ?X03[]]
          [OUT ?X03[]]]
 [HEAD [[POS V]
        [MODL [[SFP-1 tainodesuga]]]
        [GRFS [[COMP [[SYN [[SUBCAT (:LIST )]
                               [HEAD [[POS V]]]]]]]
              [SEM ?X05[]]]]
        [SUBJ [[SYN [[SUBCAT (:LIST )]
                    [HEAD [[POS P]
                          [FORM ga]]]]]]]]]]]]]]
  
```

```

[COMPLEMENT +]]]]]
[SEM ?X06[[]]]]]]]]
[MORPH [[CTYPE NONC]
        [CFORM SENF]]]
[WH [DLIST[IN ?X04[[]]
      [OUT ?X04]]]]]
[SEM [[CONDITION [[RELN DISCREET-DESIRE]
                  [EVENT ?X05]
                  [DESIRANT ?X06]]]]]
[PRAG []]
[ORTH (:DLIST      tainodesuga
       [?X02| )]]]

```

The meaning interpretation of *TAINODESUGA* is shown below:  
*e.g. kakitainodesuga*

```

[[CONDITION [[RELN UNDERSTATEMENT]
             [EVENT ?X01]
             [DESIRANT [[LABEL *SPEAKER*]]]]]]
[EVENT ?X01[[RELN kaku-1
             [AGEN []]
             [OBJE []]
             [SLOC []]]]]]

```

*GARU* and *TAGARU* are also suffixes which are attached to a psychological or physiological adjectives or verbs.

ex-31: Senseiwa (my professor) mendokusagatteimasu. (show signs of being bothered)

(My professor shows a signs of being bothered.)

ex-32: Kanojowa (she) furansuhe (to France) iki (go) *TAGATTEIRU*

(She wants to go to France.)

In principle, *HOSHII* and *TAI* forms are used only for the first person subject in affirmative expression and for the second person subject in interrogative expression. *GARU* and *TAGARU* are used only for the third person. Additionally, when *HOSHII* and *TAI* are used with the third person subject, the conjecture words follow them for indicating such a speakers impression as 'it appears ..' or 'it seems..' as an epistemological distinction.

ex-33: Kanojoha (she) furansuhe (to France) iki (go) *TAIrasii* (it seems)

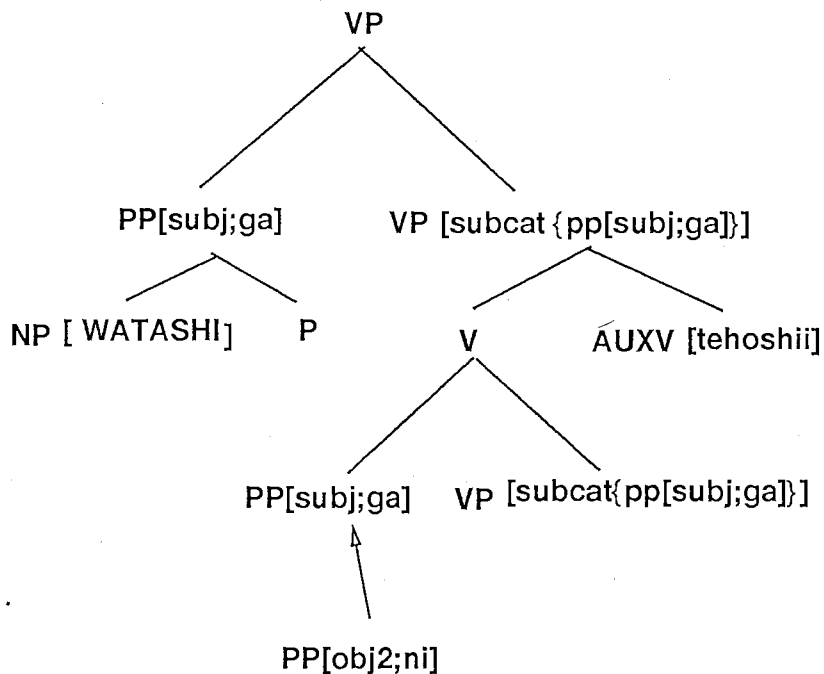
(It seems that she wants to go to France.)

When *HOSHII* is combined with *TE*, *TEHOSHII* expresses speaker's expectation towards a third person or something, following a verb.

ex-34: Watashiwa (I) senseini (my professor) kite (come) *HOSHII*

(I hope my profeskaradesusor will write down.)

Basic Structure:



Meaning interpretation of general expectation expression is shown below.

e.g. *tehosii*

```

[[CONDITION [[RELN EXPECTATION]
             [EVENT ?X01]
             [EXPECTANT ?X01[[LABEL *SPEAKER*]]]
             [EXPECTEE ?X02]]]
 [EVENT ?X01[[RELN okuru-1]
             [AGEN ?X02[]]
             [RECP []]
             [OBJE []]]]]
  
```

## 2.8 Obligation or duty expression

Lexis: *NAKEREBANARANAI, NAKUTEHAIKENAI, NAKUTEHANARANAI, NAKEREBANARIMASEN, NAITOIKEMASEN, NAITOIKENAI, BEKIDESU, NAKUCHAIKENAI, NAKUCHANARANAI, DAMEYO, KOMARIMASUYO, NAKYADAMEYO*<sup>30</sup>

These lexies express the idea of obligation. *NAKYUCHAIKENAI, NAKUCHANARANAI* are informal styles. The Japanese have a tendency to use the obligation expression of the first person subject in stead of the affirmative expression in order to keep away from directly expressing something in the conversation.

ex-35: Watashiwa (I) ika (go) *NAKUCHAIKEMASEN*

(I have to go.)

ex-36: Benkyousi *NAKYCHYADAMEDESUYO*

(You must study!)

*BEKIDESU* points out one's social responsibility as an action expected from a person and the others provide a straightforward command with the purpose of controlling human behaviour.

Obligation expressions is one of performative expression, contrasting with simple statement: *e.g.* 'He is running.'. In the other way to say, the performative clause, *e.g.* *I think* is there behind in obligation expressions and the expression is essentially a complex sentence.

Grammatical subject is always a person who is recommended or ordered.

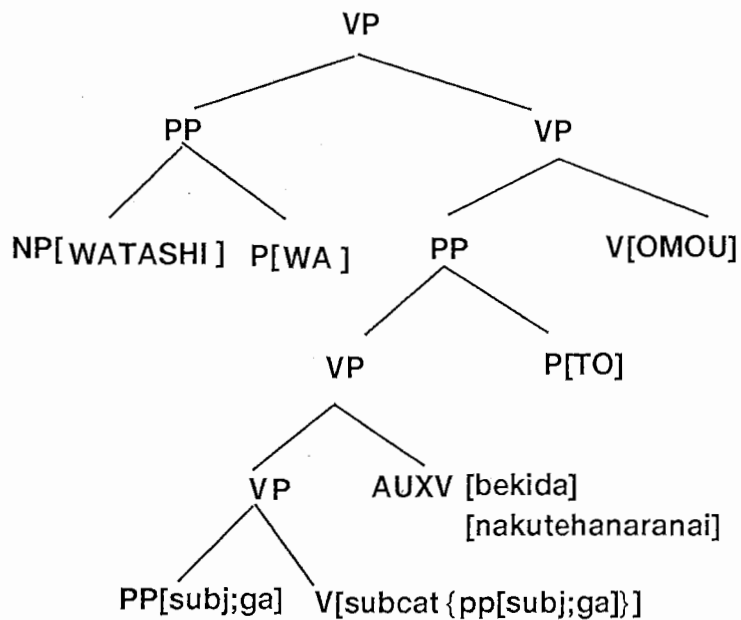
**Basic Structure:**

---

<sup>30</sup>*DAMEYO, KOMARIMASUYO, NAKYADAMEYO* mean a forbid also:

ex-d: Ogoewo (loud voice) dashi (shout) tewa *KOMARIMASUYO*

(You must not shout in a loud voice.)



The meaning interpretation of *NAKUCHAIKEMASEN* is shown below:  
*e.g. Kakanakuchaikemasen*

```

[[CONDITION [[RELN OBLIGATION]
              [OBLIGEE ?X01[]]
              [OBLIGING [[LABEL *SPEAKER*]]]]]]
[EVENT [[RELN kaku-1]
        [AGEN ?X01]
        [OBJE []]
        [SLOC []]]]]
  
```

## 2.9 Likeness expression

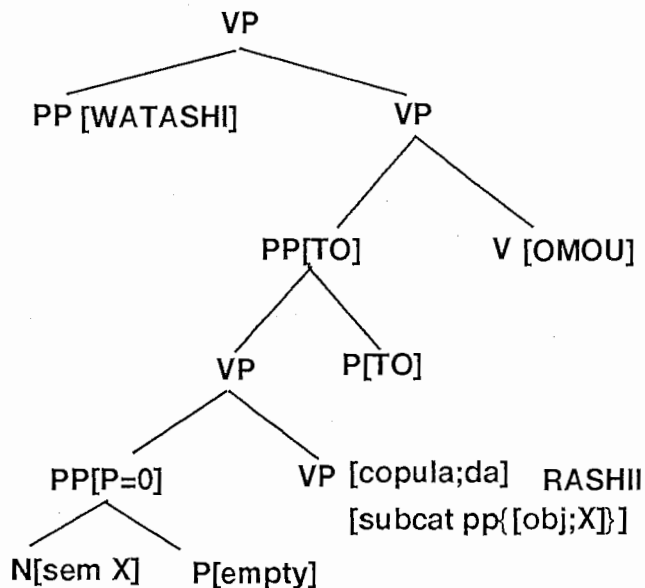
Lexis: *NOYOUNDA*, *NOYOUNDESU*, *RASHII*, *RASHIIDESU*

The likeness expression is such a sentence pattern as:

$\alpha$  *WA*  $\beta$  *RASHII*, where  $\alpha$  and  $\beta$  are a noun, respectively.

*RASHII* is said polysemy between the likeness of someone and the conjecture of a speaker. The subject of judgement or conjecture is speaker who is talking about topicalized *PP*. when a speaker expresses his conjecture about someone/something, he stresses on *RASHII* and when he expresses the likeness of someone/something, he stresses on a noun before *RASHII*.

Basic Structure:



ex-37: Kare *WA* (He) otoko *RASHIIKUNAI* (not manly)

(He is not manly.)

ex-38: Kare *WA* otoko jyanai *RASHII*

(It seems that he is not a man.)

Ex-37 is negative form of the likeness and ex-38 speakers conjecture on a man. The positive form of ex-37 and ex-38 is same, but disambiguation between two is not done<sup>31</sup>.

<sup>31</sup>Disambiguation by using the result of speech recognition should be taken into consideration.

Kare *WA* (He) otoko *RASHII*  
 (He has a manly attitude.)  
 (it seems that he is a man.)

The lexicon of *RASHII* is as follows:

```

([[PHON (:DLIST          rashi
      |?X07| )])
[SYN [[SUBCAT [[FIRST ?X04[[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS N]
      [FORMAL -]]]]]]
      [SEM ?X03[]]
      [SEMF [[ACT -]]]]]]]
[HEAD [[POS V]
      [MODL [[POLT-AUX -]
      [OPTT -]
      [COPL +]]]
      [SUBV -]
      [ASPECT +]
      [VASP [[CHNG -]
      [ACTV +]]]
      [GRFS [[COMP ?X04]
      [SUBJ [[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS P]
      [COMPLEMENT +]]]]]]
      [SEM ?X05[]]
      [FORM ha]]]]]]]
[WH [DLIST[IN ?X02[]]
      [OUT ?X02]]]
[MORPH [[CTYPE I]
      [CFORM STEM]]]]]
[SEM [[CONDITION [[RELN LIKENESS]
      [JUDGE ?X01[]]
      [EVENT ?X03]
      [OBJECT ?X05]]]]]
[PRAG [[SPEAKER ?X01]]]
[ORTH (:DLIST          rashi
      |?X06| )]]
([[SYN [[SUBCAT [[REST (:LIST )]]]]

```



```

[SLASH (:DLIST      ?X09[]
        |?X08| )]
[HEAD [[GRFS [[SUBJ ?X09]]]]]]))
([[SYN [[SUBCAT [[REST (:LIST      ?X11[]
                        )]]]
        [SLASH [DLIST[IN ?X10[]]
                  [OUT ?X10[]]
        [HEAD [[GRFS [[SUBJ ?X11]]]]]]]]))

```

Meaning interpretation is as follows:

*e.g. senseirashii*

```

[[CONDITION [[RELN LIKENESS]
             [OBJECT []]
             [EVENT ?X02[[[PARM ?X01[]]
                           [RESTR [[RELN sensei-1]
                                   [ENTITY ?X01]]]]]
             [JUDGE [[LABEL *SPEAKER*]]]]]
[EVENT ?X02]]

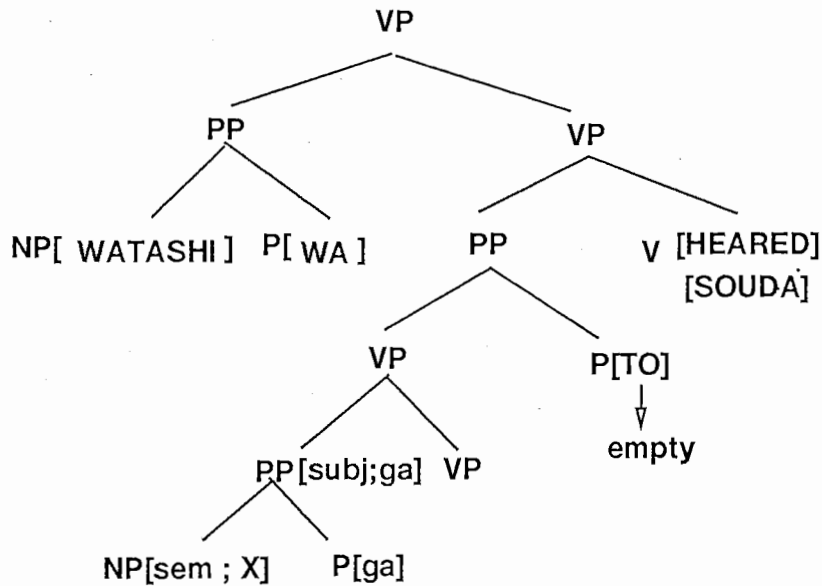
```

## 2.10 Hearsay expression

Lexis: *SOUDA*, *SOUDESU*, *TOIUKOTODESU*, *TOIWARETEIMASU*, *TONOKOTODESU*

The idea of the hearsay is formed as stated-above devices and information sources are indicated by the particle *NIYORUTO* or *NIYOREBA*. The speaker who utters is always hidden as a messenger in hearsay expression.

Basic Structure:



Lexicon of *TONOKOTODESU* is as follows:

```

([[PHON (:DLIST          tonokotodesu
      |?X06| )])
[SYN [[SUBCAT (:LIST          ?X05[[SYN [[SUBCAT (:LIST  )]
      [HEAD [[POS  V]]]]]]
  
```

```

[MORPH [[CFORM SENF]]]]]
[SEM ?X04[]]]
    )]
[SLASH [DLIST[IN ?X03[]]
        [OUT ?X03[]]]
[HEAD [[POS V]
        [MODL [[TENT +]]]
        [SUBV -]
        [ASPECT -]
        [VASP [[CHNG -]
                [ACTV -]]]
        [GRFS [[COMP ?X05]]]]]
[WH [DLIST[IN ?X02[]]
     [OUT ?X02[]]]
[MORPH [[CTYPE DESU]
        [CFORM STEM]]]]]
[SEM [[CONDITION [[RELN HEARSAY]
                  [REPORTER ?X01[]]
                  [EVENT ?X04]]]]]
[PRAG [[SPEAKER ?X01]]]
[ORTH (:DLIST      tonokotodesu
        |?X07| )))]

```

ex-39: Senseiga (the pofessor) sankasuru (participate) tonokotodesu  
(I heard)

The meaning interpretation of the hearsay expression is shown below:  
*e.g. Senseiga sankasuru tonokotodesu*

```

[[CONDITION [RELN HEARSAY]
 [EVENT [[RELN sankasuru-1]
         [AGEN [[PARM ?X01[]]
                [RESTR [[RELN sensei-1]
                        [ENTITY ?X01]]]]]]]
 [SLOC []]]]
[REPORTER [[LABEL *SPEAKER*]]]]]

```

## 2.11 Volition expression

Lexis: *U, MASU, MASHOU, TSUMORIDESU, KOTONISITEIMASU*

The volitional expression is formed by *MASU, MASHOU*<sup>32</sup> as well as *TAI, TEHOSII*, etc. *U*, is used to express the first person's volition. The grammatical subject of volition expression is rarely omitted and it is speaker himself.

ex-40: Watashiga (I) iki (go)*MASHOU*

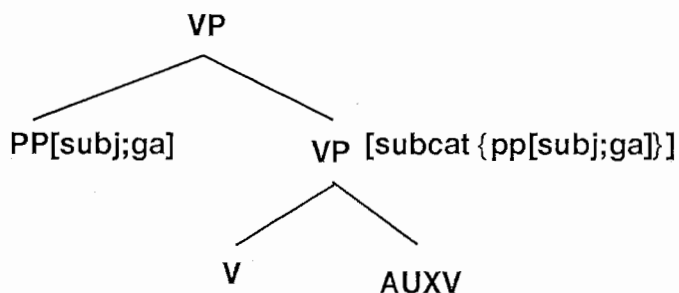
(I will go.)

Also the infinitive form of verbs expresses the first person's volition except the case where it is followed by formal adverbs<sup>33</sup> or the nominalizer.

ex-41: Watashiga (I) iku (go). (I will go.)

*TSUMORIDESU, KOTONISITEIMASU* can occur in past form for expressing really an undone action of a speaker.

Basic Structure:



Lexicon of *MASU* is as follows:

```

(DEFLEX-NAMED MASU-FORMAL-AND-VOLITION MASU AUXV
 ! (LEX-PHON-ORTH "masu" "masu")
 (<!M> == [[SYN [[HEAD [[POS V]
 [aspect -]
 [vasp ?vasp]
 [subv -]

```

<sup>32</sup>*MASHOU* is constituted with *MASU* and volitional auxiliary *U* is also used to express an invitation of the first person.

<sup>33</sup>The formal adverbs means words or a chain of words which make subordinate adverbial clauses in a sentence.

```

      [MODL [[POLT +]]]]]
    [MORPH [[CTYPE MASU][CFORM SENF]]]
  [SUBCAT (:LIST [[SYN [[HEAD [[POS V][vasp ?vasp]]]
    [MORPH [[CFORM INFN]]]
    [SUBCAT !EMPTY-LIST]]]
  [SEM ?PROPOSITION-SEM]])]
  [SLASH !EMPTY-DLIST]
  [WH !EMPTY-DLIST]]]
  [SEM [[CONDITION [[RELN INTENTION]
    [EVENT ?PROPOSITION-SEM]
    [WILLING ?SPEAKER]] ]]]]
  [PRAG [[SPEAKER ?SPEAKER]
    [HEARER ?HEARER]]]])

```

The meaning interpretation of *SEM* in *MASU* is shown below:

*e.g. kakimasu*

```

[[CONDITION [[RELN INTENTION]
  [EVENT ?X01]
  [WILLING ?X02]]]
[EVENT ?X01[[RELN kaku-1]
  [AGEN ?X02[[LABEL *SPEAKER*]]]
  [OBJE []]
  [SLOC []]]] ]

```

ex-42: Watashiga (I) sankasuru (participate) *TSUMORIDESU* (will)  
/ Sankasi*MASU* (will participate)

The meaning interpretation of *TUMORIDESU* is shown below:

*e.g. Kaku tumoridesu*

```

[[CONDITION [[RELN INTENTION]
  [ORIENTED ?X01[]]]]
[EVENT [[RELN kaku-1]
  [ASPT UNRL]
  [AGEN ?X01]
  [OBJE []]
  [SLOC []]]] ]

```

## 2.12 Performative expression

Lexis: *IU*, *YAKUSOKUSURU*, *ONEGAISIMASU*, *HOUGAI*, *HOUGAIYO*, *YO*, *ZO*

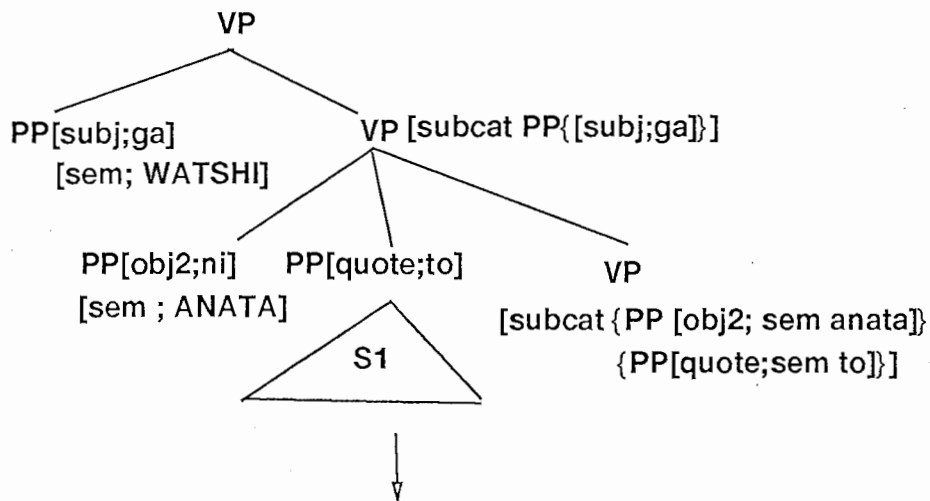
Speech act<sup>34</sup> is generally explained in point of view of: locutionary act, propositional act, illocutionary act, perlocutionary act. The notion of illocutionary and perlocutionary act is based on an implicit recognition that a speech act has interactive components.

The illocutionary act contains the imperative, interrogative, assertion, etc. as illocutionary forces. There are the case that the illocutionary act has an explicit performative formula or the case that it hasn't. In the former case, performative representation which is done by performative verbs: *IU*, *YAKUSOKUSURU*, *ONEGAISIMASU*, etc. in Japanese and *THINK*, *SAY*, *PROMISE* in English. In the latter case the imperative form of verbs is representative, e.g. *TEKUDASAI*.

ex-43: Tourokuyoushiwo (registration form) okut *TEKUDASAI* (send)

(Send me a registration form.)

Basic Structure:



Lexicon of the performative verbs is shown below:  
e.g. *tekudasai*

<sup>34</sup>As for *Speech act*, we have interesting discussion between Searle and Derrida.

```

([[PHON (:DLIST          tekudasai
      |?X08| )])
  [SYN [[SUBCAT (:LIST          ?X07[[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS V]]]]]
      [SEM ?X06[]]]
      )]
  [SLASH [DLIST[IN ?X05[]]
      [OUT ?X05[]]]
  [HEAD [[POS V]
      [MODL [[DONT BEND]]]
      [GRFS [[COMP ?X07]]]]]
  [WH [DLIST[IN ?X04[]]
      [OUT ?X04[]]]
  [MORPH [[CTYPE NONC]
      [CFORM IMPR]]]]]
  [SEM [[CONDITION [[RELN FORMAL-REQUEST]
      [REQUESTED ?X02[]]
      [REQUESTANT ?X03[]]
      [EVENT ?X06]]]]]
  [PRAG [[RESTR (:DLIST          [[RELN POLITE]
      [AGEN ?X03]
      [RECP ?X02]
      |?X01| )])
      [SPEAKER ?X03]
      [HEARER ?X02]]]
  [ORTH (:DLIST          tekudasai
      |?X09| )]])

```

The meaning interpretation of *OKUTTEKUDASAI* is as follows:

```

[[CONDITION [[RELN FORMAL-REQUEST]
  [EVENT ?X01]
  [REQUESTANT [[LABEL *SPEAKER*]]]
  [REQUESTED [[LABEL *HEARER*]]]]]
[EVENT ?X01[[RELN okuru-1]
  [AGEN []]
  [RECP []]
  [OBJE []]]]

```

## 2.13 Invitation expression

Lexis: *U*, *MASHOU*, *MASENKA*, *IKAGADESUKA*, *DOUDESUKA*, *DOUDESYOU*

The idea of invitation is formed by *U*<sup>35</sup> in positive form or *Ka*<sup>36</sup> in negative form. In invitation situation, negative question are more polite than positive form. The grammatical subject is usually omitted. If *MASHOU* form sentence implies the subject, it means the first person's volition.

ex-44: Iki (go) *MASHOU*

(Lest's go.)

ex-45: Watashiga (I) iki (go) *MASHOU*

(I will go.)

ex-46: Eigani (to a movie) iki(go) *MASENKA* (wouldn't you like)

(Wouldn't you like to go to a movie?)

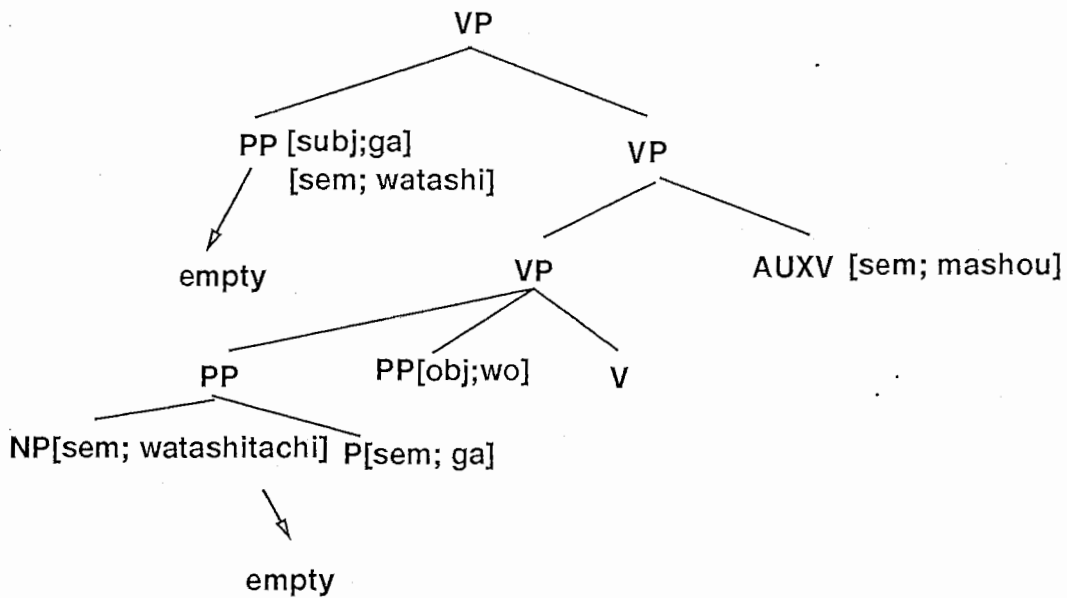
Basic Structure:

---

<sup>35</sup> *U* is a particle of the volition.

<sup>36</sup> *KA* is a sentence-final particle of interrogative





Lexicon of *MASHOU* is as follows:

```

([[PHON (:DLIST      mashou
      |?X01| )])
[SYN [[SUBCAT (:LIST      [[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS V]]]
      [MORPH [[CFORM INFN]]]]]
      [SEM ?X03[]]]
    )]
[SLASH [DLIST[IN ?X04[]]
      [OUT ?X04[]]]
[HEAD [[POS V]
      [MODL [[SFP-2 MASHOU]]]]
  
```

```

[GRFS [[COMP [[SYN [[SUBCAT (:LIST )]
                    [HEAD [[POS V]]]]]]
      [SEM ?X03]]]
[SUBJ [[SYN [[SUBCAT (:LIST )]
            [HEAD [[POS P]
                  [FORM ga]
                  [COMPLEMENT +]]]]]]]]]]
[MORPH [[CTYPE NONC]
       [CFORM SENF]]]
[WH [DLIST[IN ?X05[]]
     [OUT ?X05]]]]]
[SEM [[CONDITION [[RELN FORMAL-AND-INVITATION]
                 [INVITEE ?X06[]]
                 [INVITANT ?X07[]]
                 [EVENT ?X03]]]]]]
[PRAG [[SPEAKER ?X07]
       [HEARER ?X06]]]
[ORTH (:DLIST mashou
       [?X02| )]]]

```

Meaning interpretation of *MASHOU-INVITATION* is as follows<sup>37</sup>:

```

[[CONDITION [[RELN FORMAL-AND-INVITATION]
            [EVENT ?X01[[RELN iku-1]
                       [AGEN []]
                       [OBJE []]
                       [SLOC []]]]
            [INVITANT [[LABEL *SPEAKER*]]]
            [INVITEE [[LABEL *HEARER*]]]]]
[EVENT ?X01]]

```

*IKAGADESUKA*<sup>38</sup> is registered as a lexical item and lexicon is as follows:

<sup>37</sup>*INVITATION* meaning and *VOLITION* meaning is actually not disambiguated, because we permit the system to accept the omission of the grammatical subject. In the case of *MASHOU-VOLITION*, the meaning interpretation will be as follows:

```

[[CONDITION [[RELN FORMAL-AND-VOLITION] [EVENT ?X01] [WILLING ?X02[[LABEL
*SPEAKER*]]] [EVENT ?X01[[RELN IKU-1] [AGEN ?X02[[LABEL *SPEAKER*]]] [SLOC
[]]]]]]

```

<sup>38</sup>*Ikagadesuka* is dealt with as a verb.

```

([[PHON (:DLIST      ikagadesuka
      |?X02| )])
  [SYN [[SUBCAT (:LIST      ?X07[[SYN [[SUBCAT (:LIST  )]
      [HEAD [[POS P]
      [FORM demo]
      [COMPLEMENT +]]]
      [MORPH [[CFORM -]]]]]
      [SEM ?X06[]]
      [SEMF [[HUM +]
      [CONC +]
      [ABS +]]]]]
      )]
  [SLASH [DLIST[IN ?X08[]]
      [OUT ?X08]]]
  [HEAD [[POS V]
      [MODL [[SFP-3 IKAGADESUKA]]]
      [ASPT +]
      [GRFS [[SUBJ ?X07]]]]]
  [MORPH [[CTYPE NONC]
      [CFORM SENF]]]
  [WH [DLIST[IN ?X05[]]
      [OUT ?X05]]]]]
  [SEM [[CONDITION [[RELN INVITATION]
      [INVITEE ?X03[]]
      [INVITANT ?X04[]]
      [EVENT [[RESTR [[RELN ikagadesuka-INVITATION]
      [OBJECT ?X06]]]]]]]]]
  [PRAG [[SPEAKER ?X04]
      [HEARER ?X03]]]
  [ORTH (:DLIST      ikagadesuka
      |?X01| )]])

```

The *MASENKA* relatin name is described as *Invitation* and pragmatics of politeness is constitutd with as *Status* and *Formality*.

There exit other expressions for the invitation: *IKAGADESHOU*, *IKA-*

*GADESUKA*, *DOUDESUKA*<sup>39</sup> with an adverbial particle *DEMO*<sup>40</sup> which substitutes for a particle *WO*.

*DEMO* is used as a particle when other choices are expected to exist and the speaker lists only one of the possible alternatives. Meaning interpretation of *DEMO* in lexicon is as follows:

```
(<!m !synhead coh sem> == [[CONDITION [[RELN ALTERNATIVE]
                                [OBJECT ?noun-sem]]]])
```

ex-47: Eiga*DEMO* (to a movie) miniiki (go) *MASENKA* (wouldn't you like)

(Wouldn't you like to go to a movie or something?)

Lexicon of *IKAGADESUKA* is as follows:

```
([[PHON (:DLIST          ikagadesuka
                        |?X02| )]
 [SYN [[SUBCAT (:LIST          [[SYN [[SUBCAT (:LIST )]
                                     [HEAD [[POS P]]]
                                     [MORPH [[CFORM -]]]]]]]
      ]
      [SLASH (:DLIST |?X06| )]
      [HEAD [[POS V]
             [MODL [[SFP-3 IKAGADESUKA]]]
             [ASPT +]
             [GRFS [[SUBJ ?X07[[SYN [[SUBCAT (:LIST )]
                                     [HEAD [[POS P]
                                             [FORM DEMO]
                                             [COMPLEMENT +]]]]]]]]]]]
      [MORPH [[CTYPE NONC]
             [CFORM SENF]]]
      [WH [DLIST[IN ?X05[]]
          [OUT ?X05]]]]]
      [SEM [[GRFS [[SUBJ-SEMF [[ABS +][CONC +]]]]]]]
```

<sup>39</sup>*DOU* is used in informal speech instead of *IKAGA*. So *DOU* and *IKAGA* are used to offer or suggest something, asking about the state of the hearers mind regarding the offer or suggestion.

<sup>40</sup>*DEMO* expresses interpersonal sensitivity and consideration towards the interlocutor.

[CONDITION [[RELN INVITATION]  
          [INVITEE ?X03[]]  
          [INVITANT ?X04[]]]]]  
[PRAG [[SPEAKER ?X04]  
       [HEARER ?X03]]]  
[ORTH (:DLIST           *ikagadesuka*  
       |?X01| )]])

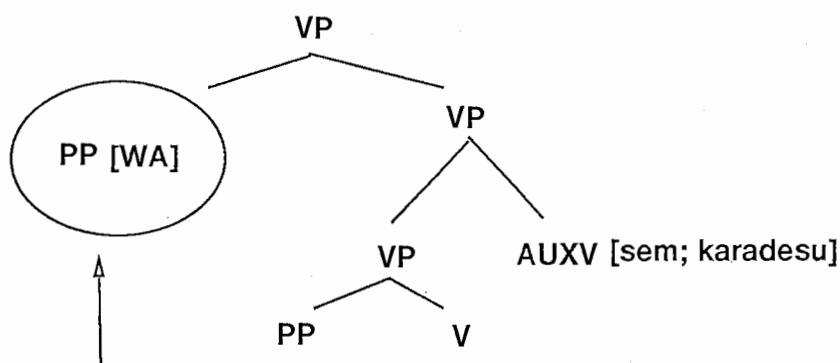
## 2.14 Reason expression

Lexis: *KARADESU*, *MASUNODE*, *NODESU*, *MONODESUKARA*, *TAMEDESU*

In simple sentence, the cause and reason are expressed by above-mentioned devices. *KARA*, *NODE*, *TAMEDESU*, *MONO*, *NO* are formal adverbs or formal nouns<sup>41</sup>. So the nominalization of a proposition part is due to ellipsis-cleft sentences. The cleft sentence is a sentence pattern:

' $\alpha$  *NOWA*  $\beta$  *DA*'  $\alpha$  and  $\beta$  are verb phrases. and indicates focused information by placing *vp/np* between *NOHA* and *DA*. PP[subj: *NOHA*] elements can be omitted, because PP[SBJ: *NOHA*] is mentioned in preceding utterance. So it needs to back until preceding utterance in order to get analyzed the omitted PP.

Basic Structure:



NODESUKA-clause

in preceding utterance

Among *KARA*, *NODE*, *TAME*, semantically *KARA* clause express a personally interpreted reason, comparing with *NODE*, and *TAME* expresses a cause or a purpose rather.

ex-48: -Naze ikanainodesuka.

(Why don't you go)

-Isogasiikaradesu

(Because I'm busy.)

<sup>41</sup>The formal noun and formal adverb are a kind of nominalizer which can indicate the scope of negation for whole a proposition.

ex-49: -Naze daigakuniikanakatta( didn't go to college) nodesuka  
?

(Why didn't you go to college?)

-Sorewa chichiga (my father) sinnda (died) *TAMEDESU* (because)

(Because my father died.)

Lexicon of *KARADESU* is shown below:

```
([[PHON (:DLIST          karadesu
      |?X06| )]]
  [[SYN [[SUBCAT (:LIST          [[SYN [[SUBCAT (:LIST )]]
      [HEAD [[POS  V]
              [VASP ?X05[]]]]
              [MORPH [[CFORM  SENF]]]]]
              [SEM ?X04[]]]
      )]]
  [SLASH [DLIST[IN ?X03[]]
          [OUT ?X03[]]]
  [HEAD [[POS  V]
          [MODL [[POLT  +]]]
          [VASP ?X05]
          [SUBV  -]
          [ASPECT -]]]
  [WH [DLIST[IN ?X02[]]
       [OUT ?X02[]]]
  [MORPH [[CTYPE  DESU]
          [CFORM  SENF]]]]]
  [SEM [[CONDITION [[RELN  REASON]
                    [REASONING ?X01[]]
                    [EVENT ?X04[]]]]]]
  [PRAG [[SPEAKER ?X01[]]]]
  [ORTH (:DLIST          KARADESU
        |?X07| )]])
```

Meaning interpretation of *KARADESU* is shown below:  
e.g. *Isogassii karadesu*

```
[[CONDITION [[RELN  REASON]
```

[EVENT ?X01]  
[REASONING [[LABEL \*SPEAKER\*]]]]]  
[EVENT ?X01[[RELN *isogashii-1*  
[ASPT STAT]  
[EXPER []]]]]



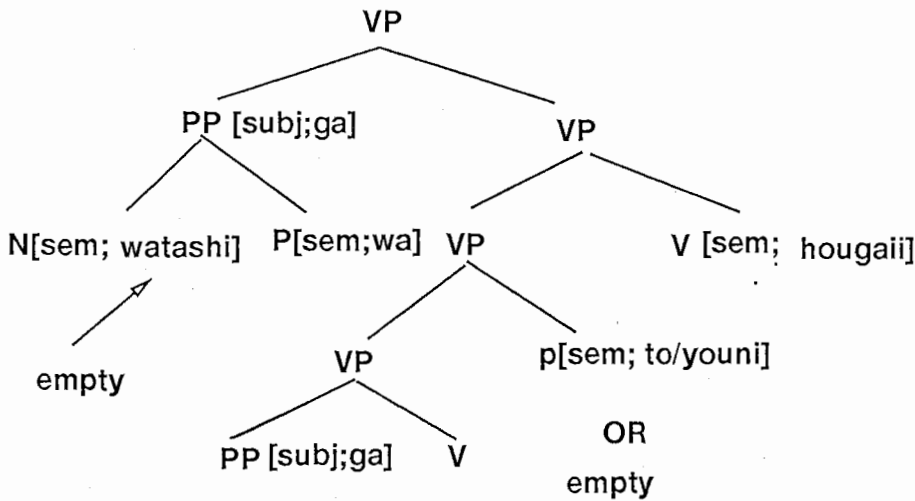
## 2.15 Recommendation expression

Lexis: *TEMOII*, *HOUGAI*, *NAIHOUGAI* *TEHAIKENAI*, *TEII*

*HOUGAI* expresses typically the idea of recommendation: a speaker recommends someone doing something, in general with the most final particle *YO*. *TEMOII* and *TEII* express a concession for a propose or permission to someone. *TEHAIKENAI* and *NAIHOUGAI* indicate a forbid against someone action.

The person who recommends is speaker himself and recommendation expression contain one of performative verbs behind itself, e.g. I recommend, I think, etc.

Basic Structure:



ex-50: Hayaku (earlier) neta (go to bed)*HOUGAI*  
 (You had better go earier to bed.)

Lexicon of recommendation expression is as follows:

```
([[PHON (:DLIST      hougai
      |?X04| )]]
 [SYN [[SUBCAT [[FIRST [[SYN [[MORPH [[CFORM ADNM]]]]]]]]]
      [HEAD [[POS V]
              [MODL [[OPTT OBLG]]]
              [POTN-MODL [[COPL +]]]
              [AST [[ASPF -]
                    [VASP ?X06]]]]]
      [GRFS [[COMP [[SYN [[SUBCAT (:LIST
                          ?X07[[SYN [[SUBCAT (:LIST )]
                                      [HEAD [[POS P]
                                              [FORM ga]
                                              [COMPLEMENT +]]]]]]]]
              )]
              [HEAD [[POS V]
                      [AST [[VASP ?X06]]]]]
              [MORPH [[CFORM ASPL]]]]]]]
      [SUBJ ?X07]]]]]
 [MORPH [[CTYPE I]
         [CFORM SENF]]]
 [WH [DLIST[IN ?X08[]]
      [OUT ?X08]]]]]
 [SEM [[CONDITION [[RELN RECOMMENDATION]
                  [RECOMMENDEE ?X02[]]
                  [RECOMMENDANT ?X03[]]]]]]]]
 [PRAG [[RESTR (:DLIST      [[RELN POLITE]
                             [AGEN ?X03]
                             [RECP ?X02]
                             |?X01| )]
        [SPEAKER ?X03]
        [HEARER ?X02]]]
 [ORTH (:DLIST      hougai
        |?X05| )]]))
```

Meaning interpretation of the recommendation expression is shown below:  
*e.g. kaku hougai*

```
[[CONDITION [[RELN RECOMMENDATION]
```

[RECOMMENDEE [[LABEL \*HEARER\*]]]  
[RECOMMENDANT [[LABEL \*SPEAKER\*]]]]]  
[EVENT [[RELN KAKU-1]  
[ASPT UNRL]  
[AGEN [[LABEL \*HEARER\*]]]  
[OBJE []]  
[SLOC []]]]]

## 2.16 Explanatory expression

Lexis: *NODA, NDESUNE, NDESU, NODESU, WAKEDESU, WAKENANDESU*<sup>42</sup>, *NANODESU, NANDESU*

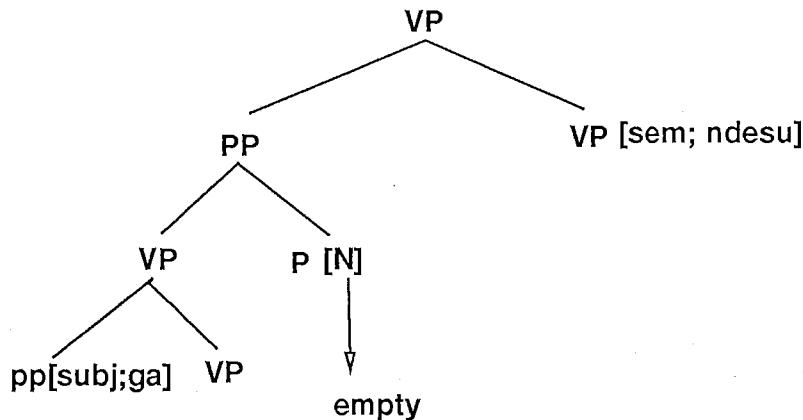
These lexies mean:

1) a judgment of a speaker about third persons' action/sentiment/state  
mbox

2) an explanation about an action/sentiment of a speaker himself  
according to the communicative situation<sup>43</sup>.

This expression is uttered as a reply towards a asked question. When these  
lexies occur in negative form, the scope of negation covers whole a proposition.

Basic Structure:



ex-48: Karewa (he) furansujin*NANDESU* (French person)

(He is French person.)

ex-49: Ginkouni (the bank) ittekita*NDESU*

(I went to the bank.)

Lexicon of explanatory expression is as follows:

<sup>42</sup> *WAKE* is a noun meaning 'reason'.

<sup>43</sup> However, it's possible to explain the 2nd persons' state, when the suffix of judgement  
e.g. *SUGIRU* follows verbs.

ex-e: \*Anatawa isogashiindesu.

(You are busy.)

ex-f: Anatawa isogashisugirundesu.

(You are too busy.)

```

([[PHON (:DLIST      ndesu
      |?X06| )])
  [SYN [[SUBCAT (:LIST      [[SYN [[SUBCAT (:LIST )]
      [HEAD [[POS  V]
      [VASP ?X05[]]]]
      [MORPH [[CFORM  SENF]]]]]
      [SEM ?X04[]]]
    )]
  [SLASH [DLIST[IN ?X03[]]
      [OUT ?X03[]]]
  [HEAD [[POS  V]
      [MODL [[POLT  +]]]
      [VASP ?X05]
      [SUBV  -]
      [ASPECT  -]]]
  [WH [DLIST[IN ?X02[]]
      [OUT ?X02[]]]
  [MORPH [[SP-1  NDESU]]]]]
[SEM [[CONDITION [[RELN  EXPLANATORY]
      [EXPLANATOR ?X01[]]
      [EVENT ?X04[]]]]]]
[PRAG [[SPEAKER ?X01]]]
[ORTH (:DLIST      ndesu
      |?X07| )]]))

```

Meaning interpretation of explanatory expression is shown below:

*e.g. Watashiha isogashii ndesu*

```

[[CONDITION [[RELN  EXPLANATORY]
      [EVENT ?X01]
      [EXPLANATOR ?X02]]]
[EVENT ?X01[[RELN  isogashii-1]
      [ASPT  STAT]
      [EXPER [[RELN  TOPICALIZATION]
      [TOPICALIZED ?X02[[LABEL  *SPEAKER*]]]]]]]]]

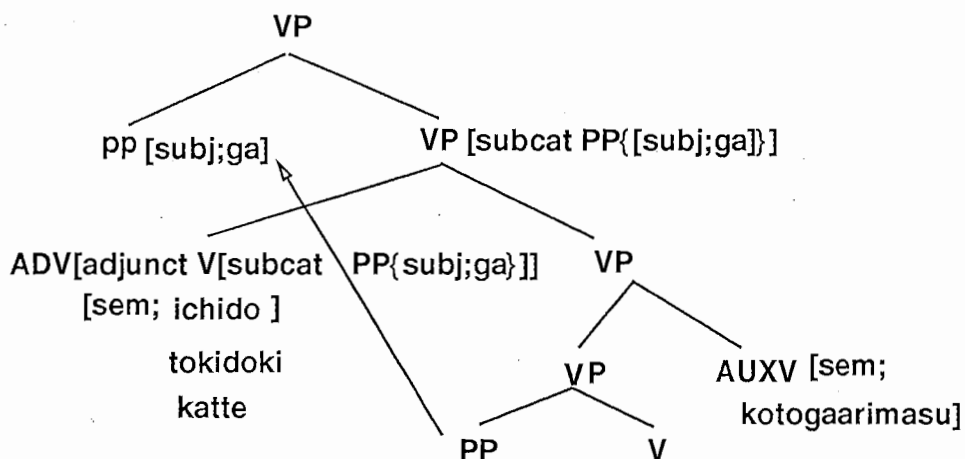
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## 2.17 Experience and habit expression

Lexis: *KOTOGAARIMASU*, *KOTOGAARU*, *TAKOTOGAARIMASU*,  
*TAKOTOGAARU*, *TAMONODA*

*KOTOGAARIMASU* expresses the idea that there was a time when someone/something was in some state or when someone did something: more specifically, one's experience in the past form *TAKOTOGAARIMASU*<sup>44</sup>; *TAKOTOGAARU*, *TAMONODA*. Additionally experience expressions frequently occur with temporal or frequency adverbs in an utterance.

Basic Structure:



Lexicon of experience expression is as follows:

e.g. *kotogaarimasu*

```
([[PHON (:DLIST      kotogaarimasu
      |?X05| )]
 [SYN [[SUBCAT [[FIRST ?X04[[SYN [[SUBCAT (:LIST
                                ?X02[[SYN [[SUBCAT (:LIST )]
                                           [HEAD [[POS P]
                                                    [FORM ga]
                                                    [COMPLEMENT +]]]]]]]]]]]
```

<sup>44</sup>TA is dealt with as an auxiliary in Japanese standard grammar. In fact we can paraphrase *TAKOTOGAARIMASU* into an auxiliary *TA* + a nominalizer *KOTO*, a particle *GA* a verb *ARIMASU*. *TA* will be mentioned later.



[ASPT UNRL]  
[AGEN ?X01[]]  
[OBJE []]  
[SLOC []]]]



## 2.18 Understatement

Lexis: *KOTONINARIMASITA, NATTEIMASU, NINARIMASITA, NINARIMASU, NAIDESHOUKA, TOOMOWAREMASU, NODE, KEDO, NONI, TE, YOUDESUNE, NODESUGA, CYOTTO, ATARI, GURAI, HODO, NADO*, etc.

The reserve expression is one of particularities of spoken Japanese. The aims are in general, to avoid straightforward expression and to diminish the tone of assertion.

Following strategies are taken as reserve expressions:

1. Using unsaid agent or responsible of an action
2. Using sentence final particles
3. Using conditional mood
4. Using spontaneity expression
5. Using adverbs of degree or litotes<sup>45</sup>
6. Using ellipsis expression

Strategies 1, 3, 5 are expressed by passive voice, conditional mood, expression styles in English. The others need to determine sentence style to transfer Japanese into English.

ex-50: Nanjini (what time) ukaga *TTARAYOIDESHOUKA*  
(come) (3)

(What time I should come here?)

ex-51: Uketsukewa (reception) kaigijyouno (convention hall) maeni (in front of) *NatteimasuGA* (1)(2)

(The reception is there in front of convention hall.)

ex-52: Tourokuryouwa (registration fee) neagesuru *KOTONINARIMASITA*  
(1)

(Will there be raised the price of the registration fee.)

ex-53: Tourokuryouga (registration fee) neage(be raised)  
*NINARIMASHITA* (4)

ex-54: Ocha (tea) *DEMO* ikagadesuka  
(How about having some tea?) (6)

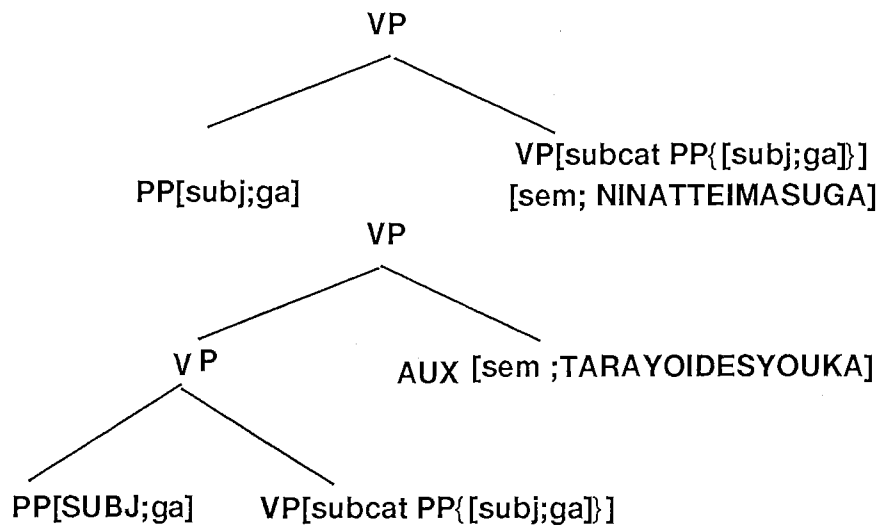
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<sup>45</sup>Litotes is a kind of rhetoric where the reserve expression is established to emphasize an impression a speaker has, using negation *e.g.* not a few, not bad at all.

ex-55: Kamaimasen *KEDO*  
 (That's no problem.)

The sentence structure is depending on lexies.

Basic Structure:



Lexicon of *tarayoideshouka* is as follows: mbox

```

([[PHON (:DLIST          tarayoideshouka
                               |?X08| )]
 [SYN [[SUBCAT (:LIST          [[SYN [[SUBCAT (:LIST )]
                                     [HEAD [[POS V]]]]]
                                     [SEM ?X03[]]]]
      ]])
 [SLASH [DLIST[IN ?X06[]]
        [OUT ?X06[]]
 [HEAD [[POS V]
        [AST [[VASP -]]]]]
 [WH [DLIST[IN ?X05[]]
      [OUT ?X05[]]
 [MORPH [[CTYPE DESUKA]
        [CFORM SEMF]]]]]
 [SEM [[CONDITION [[RELN RESERVE-INTERROGATIVE]
                  [EVENT ?X03]

```

```

[REPLYING ?X01[]]
[ASKING ?X02[]]]]]]
[PRAG [[RESTR (:DLIST      [[RELN RESERVE]
                             [FORMALITY ?X03]
                             [STATUS ?X01]]
                             |?X04| )]]
[SPEAKER ?X02]
[HEARER ?X01]]]
[ORTH (:DLIST      tarayoideshouka
       |?X07| )]]))

```

Meaning interpretation of *tarayoideshouka* is shown below:

*e.g. Donoyouni kaitarayoideshouka*

```

[[CONDITION [[RELN RESERVE-INTERROGATIVE]
             [ASKING [[LABEL *SPEAKER*]]]
             [REPLYING [[LABEL *HEARER*]]]
             [EVENT ?X02[[RELN KAKU-1]
                         [AGEN []]
                         [OBJE []]
                         [SLOC []]
                         [MANN [[PARM ?X01[]]
                               [RESTR [[RELN donoyouni-1]
                                       [ENTITY ?X01]]]]]]]]]]]
[EVENT ?X02]]

```

## 2.19 Perlocutional expression

Lexis: *KA, KAI, DAI, NE, WAYO, WANE, NE, NA, YO, ZE, WA, ZO, NE-, NA-, WA-, KASHIRA, KASHIRANE, KANA, KANA-*

Sentence final particles indicate in general

- the function of the sentence
- speakers' sentiments or attitudes towards hearers as well as his/her masculinity/feminity in conversational situation.

Meanings or functions of these devices are as follows<sup>46</sup>:

functions	formal	informal
question	KA	KAI (m), DAI (m)
confirmation	NE	WAYO (w), WANE (w)
invitation	NE, YO	NA (m), ZE (m)
soften request	NE	
neg. imperative		NA (m)
declaration		NA (m), WA (w)
monologue	NA	
weak assertion		NA (m)
assertion		ZO (m), ZE (m), YO
uncertainty		KASIRA (w), KASIRANE (w), KANA, KANA-
reserve	GA	KEDO, KEREDO, KEREDOMO, KEDOMO

The sentence final particles do not occur alone, excepting special cases in discourse depending ellipsis. So we will examine them with other final elements of a sentence.

<sup>46</sup>(m) = male speaking, (w) = female speaking

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