The relationships between phonological size and the role of intonation units in Japanese discourse

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Overview

- We study one of the functions of intonation units (Chafe 1994) in discourse structure.
- We propose that importance as well as oldness of a noun motivate linguistic forms.
- We study Japanese as an example.
What is IU?

The definition of IU

- An IU (an intonation unit) is defined as a stretch of speech occurring under a single intonation contour, which can be perceived from:
  - lag & rush
  - boundary tone
  - pitch reset
  - pause
  - and so on.

(cf. Chafe (1994: Ch.5), Du Bois et al. (1993))

A Typical IU in English

- Corresponds to a clause
  (i.e. (an) argument(s) and a predicate)

(cf. Chafe (1994))
Introduction to Japanese

Characteristics of Japanese

- Head final
- SOV basic word order
- Basic CV syllable structure
- Agglutinative language

(Shibatani 1990: Ch 4)
General issues

Two kinds of IUs in Japanese

- Corresponds to a clause → C-IU
- Corresponds to a phrase (i.e. an argument and a particle). → P-IU (cf. Iwasaki (1993))

General Question

- What’s the difference between C-IUs and P-IUs?
General issues

Two kinds of IUs in Japanese

- Corresponds to a clause $\rightarrow$ C-IU
- Corresponds to a phrase (i.e. an argument and a particle). $\rightarrow$ P-IU

(cf. Iwasaki (1993))

General Question

- What’s the difference between C-IUs and P-IUs?
Example of C-IU in Japanese

Characteristics
- A single proposition is expressed by a single IU.
- A single IU has both a predicate and the arguments of the predicate.
- C-IUs are common in English.

Example
a. ..ryokoo-ni iku-to:
   travel-to go-when
b. moo ano goruhu-baggu-o katui-de
   FILLER FILLER golf-bag-ACC carry-and
c. ...ano: hikooki-ni noru-tteiuyoona
   FILLER airplane-to get.on-such.as

“So when (we) go travelling, (we) carry our golf bags and get on the airplane.”
(CSJ: S00F0014)
(One line corresponds to one IU)
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“So when (we) go travelling, (we) carry our golf bags and get on the airplane.”

(One line corresponds to one IU)
Example of P-IU in Japanese

Characteristics

- A single proposition is expressed by four IUs.
- Only one predicate in the four IUs.
- Arguments of the predicate are scattered in the four IUs.

Examples

a. atashi wa ne?
   I  TOP  IP

b. uti-de kii-ta no ne?
   home-LOC hear-PAST SE  IP

c. sono are wa ne?
   that that  TOP  IP

d. hoosoo wa ne?
   broadcast  TOP  IP

“I heard that broadcast at home (with my family).” (Iwasaki 1993: 40)
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“I heard that broadcast at home (with my family).” (Iwasaki 1993: 40)
How to make P-IUs

- Clauses in Japanese can be divided into P-IUs typically by interactive markers such as *ne* and *yo*.

Examples

a. Mami-ni dake wa ne
   Mami(name)-to only TOP IP

b. ik-ase-ta rashii no yo
   go-CAUS-PAST seem SE IP

“It seems that (she) let only Mami go.”

(Iwasaki 1993: 45)

SE=sentence extension, IP=interactional particle
Previous Study

How to make P-IUs

- Clauses in Japanese can be divided into P-IUs typically by interactive markers such as *ne* and *yo*.

Examples

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SE=sentence extension, IP=interactional particle
Remaining Issue

- We don’t know when speakers use P-IUs and when they use C-IUs.
Question

- Do Japanese P-IUs have special function in discourse? If the answer is “yes”, what function?
Hypothesis

- There is a difference in role in terms of discourse structure between C-IUs and P-IUs.
  - P-IUs introduce new and important information.
  - C-IUs do not introduce important information.
- We study only nouns here.
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Corpus Investigation

Methods

Corpus

- Use CSJ (*Corpus of Spontaneous Japanese*)
  - 1269-second monologue (S00F0014)
  - Travel to Hawaii
  - 747 IUs and 974 nouns are identified.

Methods

- In order to see oldness and importance of a noun,
- Measure Referential Distance (RD) and Persistence (Givón 1983) for nouns in the corpus
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Methods

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- Measure **Referential Distance** (*RD*) and **Persistence** (Givón 1983) for nouns in the corpus
What are RD and Persistence?

Referential Distance (RD)
- Approximates the newness of a noun
- The number of IUs between
  - an IU where the referent in question is referred to and
  - the last IU the referent is referred to.

(Cf. Givón 1993: 13ff.)

Persistence
- Approximates the importance of a noun
- The number of IUs which refer to the referent in question after it is mentioned in an IU.

(Ibid.)
What are RD and Persistence?

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(ibid.)
### Examples of RD and Persistence

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<thead>
<tr>
<th>RD</th>
<th>Persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
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</table>

<table>
<thead>
<tr>
<th>a.</th>
<th>syoo-doobutu-ga koo tyoktyoko-to ki-ta-n-desu-ne</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>“An small animal came (to us).”</td>
</tr>
<tr>
<td>b.</td>
<td>de saisyo koo</td>
</tr>
<tr>
<td></td>
<td>“and at first uh”</td>
</tr>
<tr>
<td>c.</td>
<td>ano sotira-no soto-no-hoo-kara φ nozo-ta-mon-desu-kara</td>
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<tr>
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<td>“uh it looked at us from that direction, so”</td>
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<td>d.</td>
<td>watasi-wa saisyo</td>
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<tr>
<td></td>
<td>“I thought at first”</td>
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<tr>
<td>e.</td>
<td>φ risu-kana-to omot-ta-n-desu</td>
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<tr>
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<td>“it was a squirrel.”</td>
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<td>f.</td>
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<td></td>
<td>“and”</td>
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<td>g.</td>
<td>sat-to koo</td>
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<td>“quickly”</td>
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<td>h.</td>
<td>are-to omot-te it-tara</td>
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<td>“when I was thinking something,”</td>
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<td>i.</td>
<td>sat-to φ nige-tyai-masi-te</td>
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<td>“it quickly ran away, and”</td>
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(Nakagawa, Yokomori, & Asao (Kyoto Univ.) 08/08/2008 PGCCL 14 / 32)
Implications of RD and Persistence

Implications of RD

- Greater RD means newer information. (maximum: 100)
- Smaller RD means older information. (minimum: 0)

Implications of Persistence

- Smaller Persistence means less important information. (minimum: 0)
- Greater Persistence means more important information. (maximum: 200)
Implications of RD and Persistence

Implications of RD
- Greater RD means newer information. (maximum: 100)
- Smaller RD means older information. (minimum: 0)

Implications of Persistence
- Smaller Persistence means less important information. (minimum: 0)
- Greater Persistence means more important information. (maximum: 200)
IUs excluded from the results

Existentials
- Existential sentences (4)
  - Nouns in existentials appear in C-IUs but they are new and important information.
    (cf. There-construction)

Others
- IUs containing Complements of clefts (5) → “clefts”
- IUs containing listed nouns (15) → “list”
- IUs containing nouns modifying other nouns (28) → “modifying”
- IUs containing nouns which combine with o-suru “acc-do” and express events (22) → “do-construction”
- IUs containing predicative nouns (40) → “predicative”
  - They don’t have predicates.
Results of Corpus Investigation

Number of C-IUs and P-IUs identified
- C-IUs: 116
- P-IUs: 80

RD and Persistence of C-IUs and P-IUs

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- Nouns in C-IUs refer to unimportant information.
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## Results of Corpus Investigation II

### Persistence of C-IUs and P-IUs which refer to only new information

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- Nouns in C-IUs refer to unimportant information.
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## Examples of C-IUs

### Characteristics of C-IUs
- C-IUs refer to new but trivial information.

### Examples

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| a.  | ...ryokoo-ni iku-to | – | – |
|     | travel-to go-when  |

| b.  | ...moo ano: goruhu-baggu-o katui-de | 100 | 0 |
|     | FILLER FILLER golf-bag-ACC carry-and |

| c.  | ...ano: hikooki-ni noru-tte-iu-yoona | 100 | 0 |
|     | FILLER airplane-to get.on-QUOTE-called-like |

“Whenever (we) travel, (we) carry our golf bags and get on the airplane.”

(CSJ: S00F0014)
Examples of P-IUs

Characteristics of P-IUs

- P-IUs introduce important information.

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<td>100</td>
<td>4</td>
</tr>
<tr>
<td>b. maunaroa</td>
<td>&quot;Mauna Loa&quot;</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>c. toiu hutatu-no called two-gen</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>d. ano yama-ga FILLER mountain-NOM</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>e. sobie-teru-n-desu-keredomo soar-STATE-SE-POLITE-though</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>f. sono yama-to-iu-no-ga this mountain-QUOTE-called-NOMINL-NOM</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>g. huji-san-kurai-no takasa-ga aru-n-desu-ne Fuji-mountain-approximate-gen height-NOM exist-SE-POLITE-IP</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

“(In Hawaii Island,) there are two mountains called Mauna Kea and Mauna Loa, which are as high as Mt. Fuji.” (CSJ: S00F0014)
Important nouns in C-IUs

- An important noun is referred to in a C-IU when it is embedded in a relative clause.

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<td>a. sizen-o taisetuni-suru tokoro nature-acc preserve-do place</td>
<td></td>
<td>100</td>
<td>9</td>
</tr>
<tr>
<td>b. de-wa LOC-TOP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. ano: FILLER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. moo sinkokuna mondai-ni FILLER serious problem-to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. nari-tutuaru-yoo-desu become-PROG-seem-POLITE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. desukara so</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. yahari sizen-no yutakana tokoro-ni iki-masu-to after.all nature-NOM rich place-to go-POLITE-when</td>
<td>6</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

“Where people try to preserve the environment, foreign animals cause serious problems. So, When we go to this kind of place....”

(CSJ: S00F0014)
## Counterexamples

A trivial noun is referred in a P-IU when it is long.

### Example

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<tr>
<td>a. tikatetu-toka sorekara ma ano: basu-rosen-toka sorekara subway-and moreover FILLER FILLER bus-lines-and moreover</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>b. ma densya-toka-ga hattatu-si-te-nai-yoona tokoro-wa 100 0 train-and-NOM develop-do-and-NEG-like place-TOP</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>c. moo hontooni FILLER really</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>d. kuruma-wa moo hissu-jookten-toiuka car-TOP FILLER crucial-condition-you.may.call.it</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

“Where there is no subways, buses, and trains, we crucially need cars.”

(CSJ: S00F0014)
Construction Similar to P-IUs

Left-dislocation sentences

- Left-dislocation sentences functions like P-IUs.
  1. Preposed elements correspond to a coherent contour by themselves. (Keenan & Schieffelin 1976)
  2. L-dis sentences (re)introduce the idea into discourse.
  3. Preposed elements are important topic in the following proposition. (Givón 1983)

Example

A: What happened to Tom?
B: ??Concerning Tom, he left.
B’: ?Tom, he left.
B’’: His car, it broke down, and he’s depressed.
Conclusion

Summary

(i) One of P-IUs’ function in Japanese is to introduce new and important information.

(ii) C-IUs tend to refer to trivial information.

(iii) P-IUs in Japanese share the function and the phonetic characteristics with left-dislocation sentences in English and other languages.
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Conclusion and Further Issues

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Theoretical implications

(i) Chafe’s “one new idea constraint” can be revised into “one new and important idea constraint.”

(ii) The distinctions between new/old and important/trivial are more fundamental.
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(i) One new and important idea constraint?

Chafe (1994)

- Chafe argues that each IU can introduce only one new idea (one new idea constraint).
  But there are many exceptions. (Chafe 1994, Du Bois et al. 1993)
- Japanese speakers seem to introduce new and important idea by P-IU, which seems to relate to this constraint.

Our proposal

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(ii) New/old and important/trivial distinction

Fraurud (1996)

- Many of the definite NPs with non-human referents are antecedentless and appear only once.
  - 96% of the definite NPs with non-human referents are antecedentless.
  - 34% of the definite NPs with human referents are antecedentless.
- “Givenness account” (e.g. Ariel 1990, Gundel et al. 1993) cannot capture those facts.

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- Important/trivial distinction is also necessary.
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Our proposal

- Important/trivial distinction is also necessary.
(i) Other forms (constructions) in Japanese and other languages which introduce a new and important idea.

(ii) Other kinds of P-IUs which do not introduce new and important information.

(iii) Constructions which presuppose that the idea is already introduced in the discourse.
Thank You!

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Bibliography


Appendix

Example of C-IU

a. ..ryokoo-ni iku-to: travel-to go-when
b. moo ano goruhi-baggu-o katui-de golf-bag-ACC carry-and
c. ...ano: hikooki-ni noru-tteiuyoona airplane-to get.on-such.as

“So when (we) go travelling, (we) carry our golf bags and get on the airplane.”

(CSJ: S00F0014)
Appendix

Example of P-IU

a. atashi wa ne?
   I TOP IP

b. uti-de kii-ta no ne?
   home-LOC hear-PAST SE IP

c. sono are wa ne?
   that that TOP IP

d. hoosoo wa ne?
   broadcast TOP IP

“I heard that broadcast at home (with my family).”

(Iwasaki 1993: 40)
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