Prosody of Positive/Negative Conjunctions in Japanese

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Hi! I can't make it.

Prosody 08 Cornell

Goals

- To discuss how semantics of conjunctions affects prosody across clauses/sentences.
- The result shows that positive/negative semantic relation affects prosody across clauses/sentences in Japanese differently from English.
- In Japanese, two clauses/sentences in positive semantic relation are more detached from each other than those in negative semantic relation.

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Negative conjunctions block phonological rules in English (Nespor and Vogel (1986) *Prosodic Phonology*)

- Phonological rules across sentences may apply when there exists a positive semantic relation (*and, therefore, because*) between two sentences. (U-Restructuring)

(1)a. [$_U$ It's late] [$_U$ I'm leaving] -> [$_U$ It's la[*ɾ*] I'm leaving]

- Phonological rules across sentences cannot apply when there exists a negative semantic relation (*but, or*) between two sentences. (No U-Restructuring)

(1)b. [$_U$ It's late] [$_U$ I'm not leaving though] -> *[$_U$ It's la[*ɾ*] I'm not leaving though]

Eng. juncture: positive conjunction < negative conjunction

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Juncture: positive conjunction < negative conjunction Universal?

- Is this the case in Japanese? No.
- The result of our experiments shows that in Japanese, positive semantic relation does not help to join two prosodic domains any more than negative semantic relation.
- Two prosodic domains are more detached in the examples of positive semantic relation than in those of negative semantic relation.

Jap. juncture: positive conjunction > negative conjunction

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Experiments

- Sixteen Japanese speakers were asked to read the printed sentences.
- Each of eight examples consists of two clauses/sentences in positive/negative semantic relation, the second clause/sentence starting with an accented/unaccented word.
- We calculated pause duration and pitch difference between the last mora of the first clause/sentence (C1/S1) and the first mora of C2/S2 (and pitch difference between the first and the second mora in C2/S2 in unaccented case).
- [$_{C1/S1}$ ... μ_n] [$_{C2/S2}$ μ_1 μ_2 ...]   Pause between μ_n and μ_1
  p(itch)1 pause p2 p3   Pitch reset: $\mu_1-\mu_n$ (Major Phrase)
  Initial lowering: $\mu_2-\mu_1$ (Minor Ph)

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(2)a. C1-because C2 (Accented)
Atsukatta-node nama-o nonda.
hot-was-because draft-Acc drank
'As it was hot, I drank draft beer.'

b. C1-though C2 (Accented)
Samukatta-noni nama-o nonda.
cold-was-though draft-Acc drank
'Though it was cold, I drank draft beer.'

(3)a. C1-because C2 (Unacc)
Yasukatta-node momo-o tabeta.
cheap-was-because peach ate
'As it was cheap, I ate a peach.'

b. C1-though C2 (Unacc)
Takakatta-noni momo-o tabeta.
expensive-was-though peach ate
'Though it was expensive, I ate a peach.'

(4)a. S1-because S2 (Accented)
.. yoku yatta-yo. Misu-shinakatta-ne.
well done-Prt miss-did-not-Prt
'S/he did well. She made no mistake.'

b. S1-though S2 (Accented)
.. yatta-yo. Misu-shita-kedo-ne.
done-Prt miss-did-though-Prt
'S/he did well. She made mistakes, though.'

(5)a. S1-because S2 (Unacc)
Osoku-natta-ne. Nemuku-natta-yo.
late-became-Prt sleepy-got-Prt
'It's late. I got sleepy.'

b. S1-though S2 (Unacc)
..-natta-ne. Nemuku-nai-kedo.
-became-Prt sleepy-not-though
'It's late. I'm not sleepy, though.'

(6)a. S1-because S2 (Unacc)
... juuniji-dayo. Nemuku-natta-yo.
twelve-became-Prt sleepy-got-Prt
'It's midnight. I got sleepy.'

b. S1-though S2 (Unacc)
... juuniji-dayo Nemuku-nai-kedo.
twelve-became-Prt sleepy-not-though
'It's midnight. I'm not sleepy, though.'

Pause and pitch reset: positive > negative

- Positive relation (2a) has longer pause between two clauses than negative (2b). (pos > neg)
- We found no statistically significant difference in pause and pitch difference between positive (3a) and negative (3b).
- Positive (4a) shows greater pitch reset between two Ss than negative (4b). (pos > neg)
- Positive (5a) has longer pause between two sentences than negative (5b) (and shows greater Initial Lowering in another example (6). (pos > neg)

These differences between positive semantic relation (2a), (4a), (5a), and (6a) and negative (2b), (4b), (5b) and (6b) are statistically significant with $p < 0.05$.
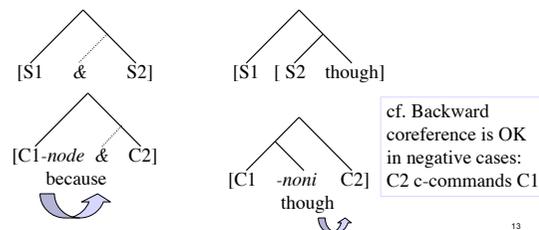
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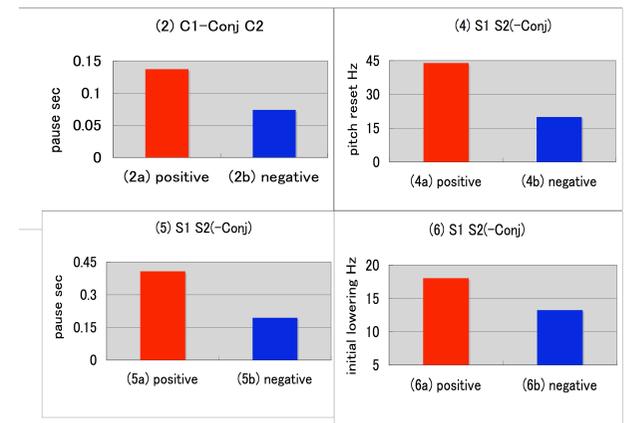
Discussion

• These findings show that positive/negative semantic relation affects prosody across clauses/sentences in Japanese differently from English.
• Longer pause duration in (2a) and (5a) shows that in Japanese, two clauses/sentences in positive semantic relation are more detached from each other than those in negative semantic relation: [C/S1-pos   C/S2] vs. [C/S1-neg C/S2]
• Greater pitch reset in (4a) or greater Initial Lowering in (6a), the same type of example as (5a), suggests that two sentences in positive semantic relation are detached by a prosodic boundary between two Major phrases or two Minor phrases: ($_{Maj/MinP}$ C/S1-pos) ($_{Maj/MinP}$ C/S2) vs. ($_{Maj/MinP}$ C/S1-neg C/S2)

Further Questions

Why Japanese is different from English?

What aspects of grammar determine the juncture between two clauses/sentences in a language?

We try to argue that this difference between English and Japanese comes from the difference of branching direction.

Number of Syntactic Brackets

From Brackets to Silent Demibeats (Tokizaki 2008a, b; cf. Selkirk 1984)

$\left\{ \begin{array}{l} [\\ ] \end{array} \right\}$ --> $\underline{x}$

(1) a. [[It's late] [I'm leaving]] -> $\underline{xx}$ It's la[ɾ] $\underline{xx}$ I'm ..

 b. [[It's late] [[I'm not leaving] though] -> *.. la[ɾ] $\underline{xxx}$ I'm ..

The numbers of silent demibeats between S1 and S2 are larger in negative case than in positive case in English: pos < neg

(2) a. [Atsukatta-node [nama-o nonda]] -> ..-node $\underline{x}$ nama-o ..

 b. [Samukatta-noni [nama-o nonda]] -> ..-noni $\underline{x}$ nama-o ..

The numbers of silent demibeats between C1 and C2 are the same in positive and negative case in Japanese: pos = neg

Asymmetry in juncture

● Right-branching structure: long juncture (phrase-like)
● Left-branching structure: short juncture (word-like)
 (Rendaku, Tokizaki and Kuwana 2007, Tokizaki 2008a, b)

[S1   &   S2]   [S1 [S2   though]

[C1-*node* &   C2]   [C1   *-noni*   C2]
      because   though

cf. Backward coreference is OK in negative cases: C2 c-commands C1

Phonological and syntactic evidence

● Right/left-branching asymmetry: Rendaku

 [nise [tanuki shiru]] -> nise tanuki jiru (*danuki)

 [[nise tanuki] shiru] -> nise danuki jiru

● Positive/negative: Backward coreference

 She is poor and Alice is unhappy.

 She is poor but Alice is happy.

Conclusion

● In Japanese, positive conjunctions make longer juncture between two clauses/sentences than negative conjunctions.
● Negative conjunctions do not universally make long juncture between two clauses/sentences.
● In English, *though* makes another syntactic boundary between sentences, which blocks Flapping etc.
● In Japanese, conjunctive particles do not make another boundary.
● Positive conjunctions make right-branching structure with long juncture while negative conjunctions make left-branching structure with short juncture.

References

Nespor, M. and I. Vogel. 1986. *Prosodic Phonology*. Foris.

Selkirk, E. 1984. *Phonology and Syntax*. MIT Press.

Tokizaki, H. 2008a. *Syntactic Structure and Silence*. Hitsuji syobo.

Tokizaki, H. 2008b. Symmetry and Asymmetry in the Syntax-Phonology Interface. *Phonological Studies* 11.

Tokizaki, H. and Y. Kuwana. 2007. "Do OV languages have simple syllable structure?" Paper presented at ALT 7, Paris.