

## **Ellipsis of the Nominal Particle *ga* in Spoken Japanese: The Phonological Change in Voiced Conditions**

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### Introduction

In modern Japanese, the nominal particle *ga* can often be omitted in spoken language, while it rarely can in written language. There have been studies done on the constraints the ellipsis receives and the semantic conditions the ellipsis can or cannot occur, however, there have been little study done on the accent pattern of the phrases surrounding the particle. In this study, I investigate the phonological change the ellipsis causes to the phrases surrounding *ga*. More specifically, I am investigating if there is a change in the pitch pattern when the *ga* is omitted or not. I first introduce the study done in 1996 by Yatabe on the semantic conditions the ellipsis can occur, and then discuss the restrictions I place on the type of language and words I investigate. Finally, I discuss the method and results of the experiment.

### Yatabe (1996)

In his study in 1996, Yatabe discusses three types of *ga* ellipsis, 1) syntactic ellipsis, 2) lexical ellipsis, and 3) dialogic ellipsis. First, the syntactic ellipsis is a grammatical manipulation where the nominal particle is optionally deleted syntactically, and it receives the two constraints, 1) the semantic-role based constraint and the 2) non-focus constraint. Under the semantic-role based constraint, the noun the omitted particle marks and a noun with a lower semantic role cannot coexist in a clause. Yatabe defines the level of semantic roles as being in the following order, Agent, Recipient, Instrument, Location, and Theme, with the Agent being the highest. Under the non-focus constraint, a nominative particle that marks a focus noun cannot be omitted. The semantic-role based constraint is a weak constraint, and the non-focus constraint is a strong constraint. Sentences that violate the semantic-role based constraint may sound unnatural, but could be acceptable. Sentences that violate the non-focus constraint are usually unacceptable. Second, the lexical ellipsis obligatorily deletes the nominative particle that marks one of the designated lexical items. This also receives the semantic-role based and non-focus constraints. Third, the dialogic ellipsis optionally deletes a nominative case particle that marks a first- or second-person subject of the matrix clause. This type of ellipsis receives the non-focus constraint, but not the semantic-role based constraint.

### Restrictions

Tokyo dialect:

In this study, I investigate the Tokyo dialect which is often called the ‘standard Japanese’. Although there are many different dialects and different accent patterns in Japanese, the Tokyo dialect has been recognized as the ‘standard Japanese’, and with the influence of such technologies as television, other

dialects are used less and less especially among young people. In this study, I use the term ‘Japanese’ to refer to the Tokyo dialect unless specified otherwise.

Voiced-ness:

In order to simplify the analysis, I am looking only at nouns with voiced endings so that the breaks in the pitch contour is minimized. By words with voiced endings, I mean that the last consonant in the noun before *ga* is a voiced consonant. The consonants I chose are the possible voiced consonants in Japanese, which are, /b/, /d/, /g/, /n/, /N/, /m/, /z/, /◆/, /Z/, /dZ/, and /w/. Although /v/ is a possible voiced consonant, I am not including it because the occurrence is rare and is limited to loanwords. In this study, words like *hada* and *katsYdon* are possible candidates, but *hata* and *pasokon* aren’t.

As for the verb that follows the *ga* particle, I only chose verbs starting with a voiced consonant for the same reason.

CV patterns of the noun the particle marks:

I chose six common CV patterns for the nouns. All the nouns preceding *ga* used in this experiment have one of the following endings.

1) CVCV (e.g. fYvE), 2) CVV (e.g. ZoΣIδαI), 3) CVC (e.g. κIγEv), 4) CVCV] (e.g. bYζα]), 5) CV]CV (e.g. sYto]βY), and 6) CVCCV (e.g. πI◆αμIδδο)

The words in 3) will always have /n/ as the ending, since in Japanese /n/ is the only consonant that can become a coda. Also, when a word ending with /n/ is followed by *ga*, the /γ/ gets nasalized as /N/ and the phrase “/κIγEv/ /γα/” gets pronounced as /κIγENα/.

The list of sentences and CV patterns are listed in appendix A.

### Preparation for the experiment

Method and materials:

A production test was adopted where native Japanese speakers were asked to read twenty four sentences. The twenty-four sentences consist of two sentences with *ga* from each CV pattern and the no-*ga* counterparts of each sentences. <2 X 6 X 2 = 24>

All the sentences were carefully chosen to meet the conditions given in Yatabe’s study in 1996, and the nouns and the verb were chosen under the restrictions listed above. The sentences were given in two orders. The subject were divided into two groups, namely group A and group B, and were shown the sentences in the orders in appendix B. The sentences were printed on index cards, and the subjects were only able to see one sentence at a time. However, to allow subjects to be ready and to produce the sentences as naturally as possible, they were given couple of minutes to look at the cards before recording. Once the recording started, subjects read the cards one by one. The subjects were allowed to

say she read the sentence over if she made mistakes and recognized them, but the recording kept going if the subject wasn't aware of the mistake. There was a total of three subjects, and all of them were from areas where the Tokyo dialect was the prominent dialect. Subjects were also all females because spoken female language and male language have different sentence endings which could possibly affect the accent pattern.

**Predictions:**

The prediction is that the pitch pattern of the noun that takes the nominal particle is more uniform when the particle is existent. To be more specific, the noun will have a falling end when the particle isn't omitted, while the pattern will vary when the particle is omitted.

**Results:**

The following table (table 1.) shows the pitch patterns of the nouns produced by the three subjects. It shows the pattern of the ending of the noun and other observations if there were any visible difference.

	1	2	3
1-1-A	Falling end	Falling end Falling in the beginning	Flat end
1-1-B	Falling end	Falling end	Falling end
1-2-A	Falling end	Rise and then a falling end	Falling end
1-2-B	Falling end Sharp rise in the beginning	Rising end Scoop in the end	Falling end
2-1-A	Falling end Sharp drop in the beginning	Falling end	-----
2-1-B	A mountain and then a flat ending A smaller first drop	Rising end Mountain in the latter half	Flat ending A sharp drop in the beginning A mountain in the latter half
2-2-A	Falling end Two mountains	Falling end	Falling end Flat overall
2-2-B	Falling end	Falling end Scoop in the middle Mountain in the latter half	Falling end Flat overall
3-1-A	Falling end Sharp drop in the beginning Two mountains	Falling end Sharp drop in the beginning Two mountains	Falling end Two mountains
3-1-B	Flat end Sharp drop in the beginning Two mountains	Falling end Two mountains	Falling end Two mountains
3-2-A	Falling end Flat overall	Falling end Rise, then flat	Sharp rising end rise
3-2-B	Flat ending Flat overall	Flat ending Rise	Falling end Rise
4-1-A	Falling end Falling in the beginning and then a mountain	Falling end One mountain, flat, another larger mountain	Flat ending Two mountains
4-1-B	Falling end	Falling end	Flat ending

		Three mountains	Two mountains
4-2-A	Falling end Falling beginning then flat	Flat ending Two mountains then flat	Flat ending Two mountains then flat
4-2-B	Falling end Flat, mountain, then flat	Falling end Mountain then flat	Falling end Three mountains
5-1-A	Falling end Flat, sharp fall, fall	Falling end Flat, sharp fall	-----
5-1-B	Falling end Flat, sharp fall, then flat	Flat ending Flat, sharp fall, then mountain	-----
5-2-A	Rising end Flat, then two mountains	Rising end Scoop, flat, small scoop, then flat	Flat ending Two mountains
5-2-B	Flat ending Flat, then a mountain	Flat ending Two mountain	Flat ending Two mountains
6-1-A	Rising end Flat overall	Rising end Sharp drop in the beginning	Falling end Falling in the beginning, flat, then a small mountain
6-1-B	Rising end Flat, drop, then flat	Rising end Flat overall	-----
6-2-A	Flat ending Flat, then two mountain	Flat ending Flat, then three mountains	Falling end Flat, then two mountains
6-2-B	Flat ending Flat overall	Falling end Flat overall	Falling end Flat, mountain, flat, and two mountains

**Table 1.** Mountain=rise and then a fall. scoop=fall and then a rise. -----=mistakes.

Out of the seventy-two segments, four of them (produced by subject three) contained a mistake that was not recognized or repaired by the subject. Excluding these ones, sixty-eight segments were analyzed.

Pattern of the ending:

The pitch pattern of the ending of the segments are shown in table two.

	Falling (%)	Flat (%)	Rising (%)
A (with <i>ga</i> ) total of 34	23 (33.8%)	6 (8.8%)	5 (7.4%)
B( <i>ga</i> omitted) total of 34	18 (26.5%)	12 (17.6%)	3 (4.4%)

**Table 2.**

From these numbers, it cannot be said that nouns followed by *ga* always follow a falling pattern or that there is a clear difference between the pattern in A and B. However, the tendency of A having a falling ending is stronger, and the tendency of B having a flat ending is stronger. In table three, the result shown in table two are shown by each subject.

	Falling			Flat			Rising		
	1	2	3	1	2	3	1	2	3
A	9	9	5	1	2	4	2	2	1
B	6	5	7	5	3	3	1	3	0

**Table 3.**

The data of subjects one and two conform with the data in table two, and it shows an even stronger tendency, but the result of subject three contradicts the result of the other two subjects. Her results show

that B actually has a stronger tendency of having a falling pattern than A does, and that A has a stronger tendency of having a flat ending. However, her results had four mistakes out of twenty four segments (16.7%) and could change if all sentences were produced correctly. Therefore, by looking at the results by subjects one and two, it could be said that the nouns in sentences with the *ga* particle tend to have a falling ending as predicted while the nouns in sentences with the ellipsis tend to have a varied result, or a tendency of having a flat ending.

Conclusion:

The results confirmed with the prediction. In spoken Japanese, in voiced conditions sentences with *ga* have a stronger tendency of having a falling ending than when the *ga* is omitted. More specifically, if a sentence has a falling end when it has *ga*, it is likely for the ellipsis counterpart to have a flat or a falling end. In both sentence patterns, rising ending is the least likely to occur.

It might be that the falling end indicates that the noun is a nominal noun (subject), but when the subject is obvious, the particle could be omitted and the noun would have a more flat and neutral ending. It would be interesting to compare these data with sentences where it is more difficult to determine which noun is the subject. It would also be interesting to look at sentences with object-particle ellipsis, or perhaps sentences with both particles omitted. Since Japanese is not a word-order oriented language, would sentences with meanings such as

Jiro *ga* Taro *o* nagutta.

‘Jiro punched Taro’

Jiro *o* Taro *ga* nagutta.

‘Taro punched Jiro’

have different pitch patterns, and although in this example it is not possible to omit the *ga* nominal particle, in the following sentences, either or both particle can be omitted. What would happen to the endings in such cases?

Jiro (ga) Taro (o) naguttandatte.

‘I heard that Jiro punched Taro.’

Jiro (o) Taro (ga) naguttandatte.

‘I heard that Taro punched Taro.’

The results in this study only shows the change in the pitch pattern of the noun in sentences with or without the *ga* ellipsis in a voiced condition. Further study needs to be done in voiceless conditions, and other sentence patterns, such as conditions with or without objects. It will also be interesting to do a perception study in which the pitch pattern is manipulated so that the nouns will have different endings.

(3)...CVC

3-1 'If you can't make the curfew, find an apartment by yourself.'

- A) 門限が 守れないなら 自分で アパート でも 探さない。  
mogega mamojenaraja dzibva de apa:to demo saga}inasa:i  
curfew NOM keep-can't-if yourself by apartment such-thing find
- B) 門限 守れないなら 自分で アパート でも 探さない。  
mogen mamojenaraja dzibva de apa:to demo saga}inasa:i  
curfew keep-can't-if yourself by apartment such-thing find

3-2 'It is better not to talk to dad because he's in a bad mood.'

- A) お父さん 機嫌が 悪い から 話し掛けないほう が いいよ。  
otouasan kigeqa waju:i kaja hana}rikakena:ho: ga i:jo  
father mood bad because talk to not-comparison NOM good
- B) お父さん 機嫌 悪い から 話し掛けないほう が いいよ。  
otouasan kigen waju:i kaja hana}rikakena:ho: ga i:jo  
father mood bad because talk to not-comparison NOM good

(4)...CVCV:

4-1 'Please open the door when the buzzer rings.'

- A) ブザー が なったら ドア 開けてね。  
buza: ga natta:ja doa aketene  
buzzer NOM ring-if door open-please
- B) ブザー 鳴ったら ドア 開けてね。  
buza: natta:ja doa aketene  
buzzer ring-if door open-please

4-2 'I heard that (they/he/she) is getting an surgery in the U.S. because a donor can't be found in Japan.'

- A) 日本 では ドナー が 見つからないから アメリカで 手術 受けるんだって。  
nihon dewa dona: ga miteukajana:kajaja amerika de }udgutev uke:vadatte  
Japan LOC donor NOM find-can-not America LOC surgery receive heard
- B) 日本 では ドナー 見つからないから アメリカで 手術 受けるんだって。  
nihon dewa dona: miteukajana:kajaja amerika de }udgutev uke:vadatte  
Japan LOC donor NOM find-can-not America LOC surgery receive-heard

(5)...CV:CV

5-1 'because the stove is fixed, we no longer have to feel cold.'

A) ストープ が なおったから もう 寒い 思い しないで すむね。

stoto:bu ga naottakaja mo: samui omoi }inande sumune

stove NOM fixed-because now cold feeling don't without

B) ストープ なおったから もう 寒い 思い しないで すむね。

stoto:bu naottakaja mo: samui omoi }inande sumune

stove fixed-because now cold feeling don't without

5-2 'Be patient, even if you can't play games today (It's just one day).'

A) 今日 一日 くらい ゲーム が できなくても 我慢 しないで。

kjo: it}nait}i kɔjaɪ ge:mɯ ga dekiŋakotemo gaman}inasai

today one day only game NOM can't-do be patient

B) 今日 一日 くらい ゲーム できなくても 我慢 しないで。

kjo: it}nait}i kɔjaɪ ge:mɯ dekiŋakotemo gaman}inasai

today one day only game can't-do be patient

(6)...CVCCV

6-1 'you can get a badge at the reception desk.'

A) 受付 で バッジ が もらえるよ。

uketɔʔke de baddʒi ga moʔaɛɯjo

reception desk LOC badge NOM receive can

B) 受付 で バッジ もらえるよ。

uketɔʔke de baddʒi moʔaɛɯjo

reception desk LOC badge receive can

6-2 'I heard that a new pyramid was found in Egypt.'

A) エジプト で また 新しい ピラミッド が 見つかったんだって。

edʒipɯto de mata ataʒa}i: piʔamɯdo ga miʔɔkattaŋdatte

Egypt LOC again new pyramid NOM found-heard

B) エジプト で また 新しい ピラミッド 見つかったんだって。

edʒipɯto de mata ataʒa}i: piʔamɯdo miʔɔkattaŋdatte

Egypt LOC again new pyramid found-heard

NOM—nominative particle 'ga'

LOC—location marker

\* When the nominative particle *ga* occurs after a noun ending in /n/, it gets nasalized as in 3-1 and 3-2.

Appendix B: The order of sentences

	Group A	Group B		Group A	Group B
1	1-1-A	3-2-B	13	1-2-A	3-1-B
2	6-2-B	4-2-A	14	6-1-B	4-1-A
3	2-1-A	2-2-B	15	2-2-A	2-1-B
4	5-2-B	5-2-A	16	5-1-B	5-1-A
5	3-1-A	1-2-B	17	3-2-A	1-1-B
6	4-2-B	6-2-A	18	4-1-B	6-1-A
7	6-1-A	4-1-B	19	6-2-A	4-2-B
8	1-1-B	3-2-A	20	1-2-B	3-1-A
9	5-1-A	5-1-B	21	5-2-A	5-2-B
10	2-1-B	2-2-A	22	2-2-B	2-1-A
11	4-1-A	6-1-B	23	4-2-A	6-2-B
12	3-1-B	1-2-A	24	3-2-B	1-1-A