

## **Chapter 2: Contracted forms and their anti-homophony blocking in Japanese**

### **2.1 Introduction**

Certain phonological alternations are sometimes blocked even when the conditions for the application are perfectly met. One case of such blocking occurs when the application of the phonological process to multiple inputs creates homophonous outputs. Such blocking is clearly evident in contraction phenomena in Japanese. In this chapter, I will review *shukuyakukei* or Japanese “contracted forms” (Kikuzawa 1935, Toki 1975, among others) which have drawn little attention in their phonological analysis. The contracted forms I reviewed in this chapter are what I will refer to as “nasal assimilation,” “labial contraction” and “gerund /te/ contraction.” I will demonstrate that in nasal assimilation and labial contraction, contraction is blocked when the application of the contraction to a set of words in transparadigmatic relation creates homophonous outputs. I will identify this phenomenon as “anti-homophony blocking,” with a detailed analysis of the contracted forms and this blocking in the next chapter.

### **2.2 Contracted forms – syncope in a derived environment**

The main data in this dissertation comes from *shukuyakukei* or “contracted forms” (Kikuzawa 1935, Toki 1975, among others) in derived environments, which are commonly used among Japanese speakers. Kikuzawa (1935) was the first researcher who used the word *shukuyaku* or “contraction” in a phonological study of modern Japanese.

Toki's (1975) work was ground breaking work concerning contracted forms in teaching Japanese as a foreign language. The definition of "contraction forms" varies depending on the researcher. Kikuzawa (1935) originally called *shukuyaku* "a phonological phenomenon in which two syllables merge into one syllable as a result of deletion or fusion" (Kikuzawa 1935:107, translated by Ichimura). However, since then, *shukuyaku(kei)* has been used to refer to more expanded notions. Otsubo (1982:51), for example, gives a broad definition of *shukuyakukei* as "a short form which corresponds to a particular long form" (translated by Ichimura). A narrower definition is given by Minegishi as "contraction of function words which accompanies with a reduction of the number of syllables or sounds" (Minegishi 1999:30, translated by Ichimura). I follow Minegishi's definition, with slight modification that I will consider that contracted forms are not strictly limited to function words. In more recent research, contracted forms in Japanese have been primarily discussed in the context of teaching Japanese as a foreign language, in discussions of whether contracted forms should be taught at all, and if so how they should be taught (Horiguchi 1989, Minegishi 1999, among others).

As observed by Shibatani (1990:175), the contracted forms generally arise from the deletion of vowels, and some forms stop at the level of vowel deletion, but others undergo further changes of the adjacent consonants such as assimilation and palatalization. Out of several patterns of contracted forms, I focus on "nasal assimilation" (where *r* in a syllable at a morpheme boundary assimilates to *n* before *n* in a suffix as a result of syncope of the vowel following *r*), "labial contraction" (deletion of a labial and the vowel before it) and "gerund /te/ contraction" (syncope of one vowel in two

consecutive vowels between the gerund /te/ and the auxiliary verb). In the examples below, syncopated vowels are written in boldface. The following are examples of each contracted form.<sup>12</sup>

(21) Contracted forms in derived environments

a. Nasal assimilation

Contracted form: /wakar **-anai**/ → wak**annai**  
understand NEG ‘don’t understand’

(Full form: /wakar **-anai**/ → wak**aranai**)

Contracted form: /kure **-nai**/ → k**unnai**  
give (me) NEG ‘don’t give me’

(Full form: /kure**-nai**/ → kurenai)

b. Labial contraction

Contracted form: /boku **-wa**/ → bok**aa**, bok**a**  
1-SG -TOP ‘as for me’

(Full form: /boku **-wa**/ → bok**uwa**)

Contracted form: /ik **-eba**/ → ik<sup>l</sup>**aa**, ik<sup>l</sup>**a**  
go -HYP ‘if (someone) goes’

(Full form: /ik **-eba**/ → ike**ba**)

c. Gerund /te/ contraction (allomorphs [te], [de])

Contracted form: /tabe **-te -oku**/ → tabet**oku**  
eat GER put (auxiliary verb)  
‘eat in advance’

(Full form: tabe**-te -oku**/ → tabete**oku**)

Contracted form: yom **-de -ik -u** → yonde**ku**  
read, GER, go, PRES  
‘continue to read’

(Full form: /yom **-de -ik -u**/ → yonde**iku**)

Note that as will be explained in section 2.5, /a/ in /wa/ and /a/ in /eba/ in (21b) are lengthened. They all occur in a derived environment, namely at a morpheme boundary,

<sup>12</sup>I will not discuss here what I call “obstruent contraction,” that is syncope which results in creating geminates of an obstruent, such as /doko-kara/ ‘where, from’ → *dokkara* since this phenomenon does not seem to be purely phonological because its occurrence is sensitive to the speed of the speech (“fast speech”), as well as word frequency (see Okada 2004 for details). I also exclude what I call “moraiic nasal formation” such as /boku-no-da/ ‘1-SG, POSS, COP’ → *bokunda*, /nani-mo/ ‘what, also’ → *nammo*, since this phenomenon is not only involved in the morpheme boundary but also in the word boundary. Hence analysis of this contraction is beyond the scope of this dissertation.

and they fail to occur in a nonderived environment. A vowel internal to a morpheme does not undergo syncope. Such nonderived environment blocking or derived environment effects (Mascaró 1976, Kiparsky 1982; 1993, Inkelas 1998, among others) are observed in the following examples of minimal pairs or near minimal pairs.

- (22) a. kurenai → \*kunnai  
 crimson  
 kure -nai → kunnai (nasal assimilation)  
 give (me) NEG
- b. uranai → \*unnai  
 fortune telling  
 ur -anai → unnai (nasal assimilation)  
 sell NEG
- c. dokuwa → \*dokaa, \*doka  
 monologue  
 boku -wa → bokaa, boka (labial contraction)  
 1-SG (male) TOP
- d. totteoki → \*tottoki  
 thing for a special occasion  
 tabe -te -oku → tabetoku (gerund /te/ contraction)  
 eat GER put (auxiliary verb)

The contracted forms may have originated as a result of “natural tendency of the simplification of pronunciation,” (Kikuzawa 1935) or “principle of economy,” (Toki 1990) but it is crucial to clarify that the contracted forms in derived environments are not part of “fast speech” but rather, they are part of the lexical phonology of Japanese, as evidenced by the nonderived environment blocking exhibited above. Fast speech is treated as a phonetic phenomenon in which gradient sound reduction occurs when the speed of the speech is high. Therefore, it should occur in a nonderived environment as well. High vowel devoicing in Japanese, for example, is a typical phenomenon of this kind. In high vowel devoicing, /i/ and /u/ get devoiced when they occur between

voiceless consonants or before a pause: *sukoshi* ‘a little’, *yakusoku* ‘promise’ (Hasegawa 1979). As for contracted forms, Toki (1975) disagrees with the conventional view that contracted forms occur when the speed of speech is high. He observed a conversation between an announcer and three guests on an educational TV program on NHK (the Japanese national broadcasting company) and found that some speakers used contracted forms more frequently than the others even when the speed of speech was low. He, therefore, concluded that there is no definite correlation between the use of contracted forms and the speed of speech.<sup>13</sup> It is also important to point out that although contracted forms are generally considered to only be used in informal settings, they occur in formal settings as well. Toki observed that the contracted forms were used frequently in a formal situation such as educational TV program. Thus, the occurrence of the contracted forms is not only limited to informal situations. I also argue that the use of contracted forms in formal situation is not a linguistic faux pas since, as Minegishi (1999) found out in her experiment, certain contracted forms are perceived as “natural” by the native speakers, even in a formal setting (see also Saito 1991). Nakamura et al. (2003) found that male speakers tend to use nasal assimilation more than female speakers, and nasal assimilation occurs where there is a close relationship between the speaker and listener. I will briefly touch upon the relationship between the level of occurrence of nasal assimilation and sociolinguistic factors such as gender, age and closeness between the speakers in an

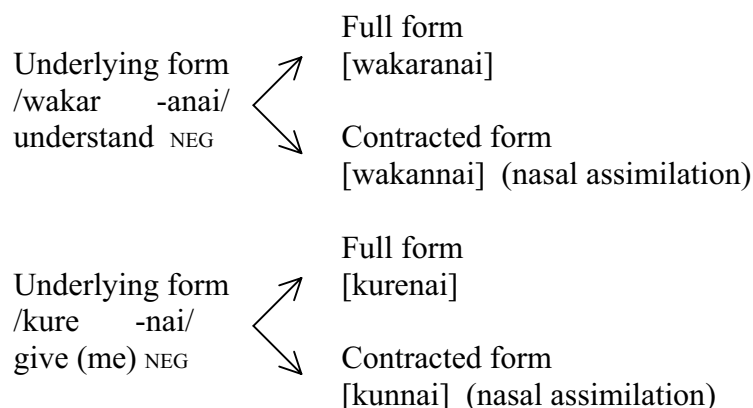
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<sup>13</sup>Hasegawa (1979) makes a distinction between “fast” speech and “casual” speech, and argues that fast speech is sensitive to the rate of the speech, whereas casual speech is more or less sensitive to sociological notions and lexical information, not to the rate of the speech. Her “casual speech” is not exactly the same as “contracted forms” used in this dissertation (although her casual speech includes some contracted forms). Hasegawa’s claim that casual speech is sensitive to lexical information could provoke a counterargument because there is a case to which her claim is not applicable (see Ichimura 2001 for details).

experiment on nasal assimilation in section 5.2.3. I will give little attention to the effects of sociolinguistic factors and although it should be noted that they do come into play.

The important thing here is the fact that contracted forms are optional. In general adult speakers use both full and contracted forms (see Horiguchi 1989).<sup>14</sup> The underlying form, which undergoes contraction, may surface without contraction, in which case I will call it the “full form.”<sup>15</sup> For example, the underlying form /wakar-anai/ in the example below is realized as a contracted form *wakannai* due to the nasal assimilation process but also it is realized as the corresponding full-form *wakaranai*.

(23) Coexistence of two forms



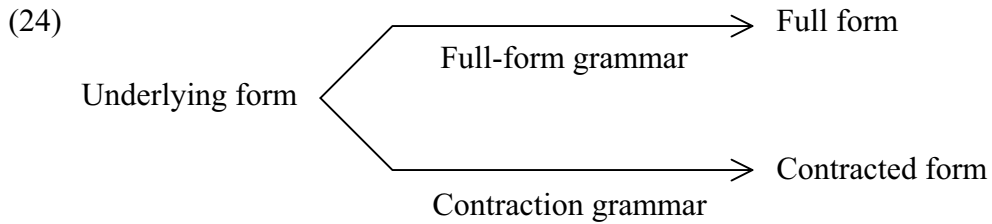
Contracted and full forms coexist not only among the speakers of the language (see Saito 1991), but also within an individual speaker. Contraction is not an obligatory

<sup>14</sup>It is important to make clear that the distinction between full and contracted forms is not the same as the distinction between polite and nonpolite forms. It is also acceptable to mix a contracted form and a polite form within a sentence. For example, in the example below, nasal assimilation (underlined) is used along with the polite copula *desu*.

(i) wakan nai desu yo  
 understand NEG COP-POL Sentence Ending  
 ‘I did not understand it, you know.’

<sup>15</sup>Horiguchi (1989), Kawase (1992) and Minegishi (1999) use either *genkei* or *genkeishiki* (original form) to refer to a noncontracted form which corresponds to a contracted form. However, I avoid this term because it gives the impression that a contracted form derives from the corresponding noncontracted form.

phonological process, and nonoccurrence of contracted forms does not jeopardize the intended meaning. I call the grammar from which a contracted form derives “contraction grammar” and the grammar from which a full form derives “full-form grammar.”



I have very little to say about the choice of full-form and contraction grammars sociolinguistically as this dissertation focuses phonological aspects of the grammars. In chapter 4, I will claim that full-form and contraction grammars consist of different orders of the same constraints within the framework of Optimality Theory. Among several approaches to the variation in grammar, I will show that a “nonfixed model” is the most suitable to explain the variation of the two grammars, the contraction and the full-form grammars in Japanese. In the “nonfixed model,” a certain constraint is rerankable within a single grammar, which in effect leads to two or more subgrammars (Anttila 1997, Anttila and Cho 1998, among others). To be more specific, in the case of nasal assimilation, one particular constraint has two possible positions within the single ranking, and which position this constraint is ranked leads to two subgrammars, the contraction and the full-form grammars.

### 2.3 Japanese verb paradigm

Before reviewing each contracted form, it is beneficial to introduce the Japanese verb paradigm, as I will use it often throughout the following discussions. Japanese conjugation classes and stem allomorphy, using examples of /kar(V)/ verbs, are shown in (25). In Appendix A, I will review the claims that two allomorphs, for example, the negative suffixes /nai/ which attaches to a vowel-final verb and /anai/ which attaches to a consonant-final verb, are derived by a phonological rule, either a deletion rule or an epenthesis rule, and argue that they are in fact both listed in the lexicon and a particular allomorph is selected by phonology. In other words, /nai/ and /anai/ are subject to lexical allomorphy (Kager 2003, among others) conditioned by phonology.

| (25) | <u>Category names</u> | <u>Consonant-final verb</u> | <u>Vowel-final verb</u> |                     |
|------|-----------------------|-----------------------------|-------------------------|---------------------|
|      | Negative              | kar <u>-anai</u>            | kare <u>-nai</u>        | kari <u>-nai</u>    |
|      | Polite Present        | kar <u>-imasu</u>           | kare <u>-masu</u>       | kari <u>-masu</u>   |
|      | Present               | kar <u>-u</u>               | kare <u>-ru</u>         | kari <u>-ru</u>     |
|      | Hypothetical          | kar <u>-eba</u>             | kare <u>-reba</u>       | kari <u>-reba</u>   |
|      | Potential             | kar <u>-e</u>               | kare <u>-rare</u>       | kari <u>-rare</u>   |
|      | Passive               | kar <u>-are</u>             | kare <u>-rare</u>       | kari <u>-rare</u>   |
|      | Imperative 1          | kar <u>-e</u>               | kare <u>-ro(yo)</u>     | kari <u>-ro(yo)</u> |
|      | Imperative 2          | kar <u>-ina</u>             | kare <u>-na</u>         | kari <u>-na</u>     |
|      | Polite Imperative     | kar <u>-inasai</u>          | kare <u>-nasai</u>      | kari <u>-nasai</u>  |
|      | Tentative             | kar <u>-oo</u>              | kare <u>-yoo</u>        | kari <u>-yoo</u>    |
|      | Causative             | kar <u>-ase</u>             | kare <u>-sase</u>       | kari <u>-sase</u>   |
|      | Past                  | kat <u>-ta</u>              | kare <u>-ta</u>         | kari <u>-ta</u>     |
|      | Gerund                | kat <u>-te</u>              | kare <u>-te</u>         | kari <u>-te</u>     |
|      |                       | 'clip'                      | 'wither'                | 'borrow'            |

Only *e* and *i* occupy the position at the end of a regular vowel-final verb.<sup>16</sup> There are several ways to describe each category name. For example, 'negative' and 'polite present' correspond to categories traditionally called 'irrealis' and 'adverbial'

<sup>16</sup>Vowels *o* and *u* can be in the final position for irregular verbs, for example, *ko-nai* 'come, NEG'.



respectively, and adverbials without *masu* such as *kar-i*, *kare*, *kari*, are called ‘infinitive’ as well. It may be argued that *-nai* should be further broken into *-na -i* ‘negative’ and ‘conclusive ending’ (Shibatani 1990) or ‘adjective indicative’ (de Chene 1985). For this reason, *-nai* is also called the ‘present negative’. However, here I will simply treat it as *-nai* because the internal structure of *-nai* is irrelevant to my discussion. ‘Present’ *-u/-ru* is also called ‘plain present’, ‘conclusive’, or ‘perfective indicative’. ‘Hypothetical’ is also called ‘conditional’ or ‘provisional’, and ‘tentative’ is also called ‘presumptive’, ‘hortative’ or ‘inchoative’. The difference between ‘imperative 1’ and ‘imperative 2’ is stylistic. In ‘imperative 1’, the difference between *-ro* and *-yo* is also stylistic: *-ro* is the spoken form and *-yo* is the written form.

## **2.4 Nasal assimilation and its anti-homophony blocking**

In this section, I will introduce and review nasal assimilation, one of the contracted forms. Several forms of nasal assimilation will be reviewed. It is demonstrated that nasal assimilation is blocked in order to avoid homophony creation even when the conditions for the application of nasal assimilation are perfectly met.

### **2.4.1 Nasal assimilation**

In this section, I further dissect nasal assimilation. In nasal assimilation, *r* in a syllable at a morpheme boundary assimilates to *n* before *n* in a suffix, as a result of syncope of the vowel following *r*. This is a purely phonological phenomenon, as it occurs independently

from the type of suffixes (/r/-/V/ combinations which undergo nasal assimilation are shown in the examples below in boldface).

(26) Nasal assimilation 1: a suffix starting with /n/ attaches to the present form /u/ or /ru/

- a. **kaer** **-u** -no → **kaenno**  
 go back PRES, Question particle  
 ‘Are you going back?’
- b. **okor** **-u** -no -wa **murinai** → **okonno** wa **murinai**  
 get upset PRES NOMI TOP reasonable  
 ‘It is reasonable to get upset.’
- c. **tabe** **-ru** no da → **tabennoda**<sup>17</sup> (Saito 1986:208)  
 eat PRES NOMI COP  
 ‘It is that (sub.) eats.’
- d. **fuzake** **-ru** -na → **fuzakenna**  
 make a fool of PRES NEG-IMP (attaches to PRES)  
 ‘Don’t fool around!’

(27) Nasal assimilation 2: a suffix starting with /(V)n/ attaches to a verb stem (consonant-final or vowel-final)

- a. **gambar** **-inasai** → **gambannasai**  
 hang on POL-IMP  
 ‘Hang on’
- b. **yar** **-ina** → **yanna**  
 do IMP  
 ‘Do it!’
- c. **kawar** **-anai** → **kawannai** (Toki 1990:231)  
 change NEG  
 ‘does not change’
- d. **tabe** -**tagar** **-anai** → **tabetagannai**  
 eat show signs of NEG  
 ‘does not show signs of eating’
- e. **taore** **-nai** → **taonnai**  
 fall down NEG  
 ‘does not fall down’

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<sup>17</sup>Saito (1986) gives examples of a variation of *no* which undergo nasal assimilation: *no-da* (Nominalizer, Copula), *no-ka* (Nominalizer, Question maker), *noni* (Conjunction), *noda* (Conjunction).



- (28) a. **wakar** -anai → wakannai  
 CVCVC (consonant-final verb) (Umemura 2003:133)  
 understand NEG
- b. **tari** -nai → tannai  
 CVCV (vowel-final verb) (Otsubo 1982:51)  
 suffice NEG
- c. **kure** -nai → kunnai  
 CVCV (vowel-final verb) (Toki 1990:231)  
 give (me) NEG

Thus, there are three verb patterns for nasal assimilation by negative suffixation: /r-anai/, /re-nai/ and /ri-nai/.<sup>20</sup>

Nasal assimilation only occurs to the combination of *r* and *n*. The examples below show that verbs ending in a consonant other than *r* (indicated in boldfaced letters) do not undergo nasal assimilation.

- (29) a. **sas** -anai → \*sannai (sannai < sar-anai ‘leave, NEG’)  
 sting NEG
- b. **kat** -anai → \*kannai  
 win NEG
- c. **nak** -anai → \*nannai (nannai < nar-anai ‘ring, NEG’)  
 cry NEG
- d. **yom** -anai → \*yonnai  
 read NEG
- e. **sow** -anai → \*sonnai (sonnai < sor-anai ‘shave, NEG’)  
 satisfy NEG

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NEG.’ However, I am not concerned with these verbs because they never ends with /ru/ or /ro/ before the negative suffix, and therefore they do not undergo nasal assimilation.

<sup>20</sup>There is a variation in the realization of verb + negative suffix /nai/ (and /anai/).

- (i) **wakar** -anai → wa.ka.ra.nee. (coalition of *ai*)  
 understand NEG. → \*wa.ka.ran. (truncation of *ai*)  
 → wa.ka.raN. (truncation of *ai*. N: placeless nasal)  
 → wa.kan.nee. (nasal assimilation)  
 → \*wa.kann. (nasal assimilation + truncation of *ai*)

\**wakaran* and \**wakann* are ill-formed as they violate CODACOND and NOCOMPLEXCODA respectively (See section 3.3 for these constraints). However, these surface forms are excluded in the current discussion since our focus in this dissertation is on syncope at the morpheme boundary.

Also, /r-V/ does not assimilate to *n* before coronal other than *n*. Coronals *t* and *d* in the desiderative /tai/ and suffix /dasu/ ‘to start’ do not trigger the assimilation to *n*. /r-V/ also does not assimilate to a nasal other than *n*. Nasal *m* in the ‘polite present’ /masu/ does not trigger assimilation. As shown in the parenthesis below, gemination of a consonant following the syncopated vowel, does not occur.

- (30) a.      wakar      -itai → \*wakantai, (\*wakattai)  
                  understand DESI  
                  wakar      -idasu → \*wakandasu, (\*wakaddasu)  
                  understand start  
                  wakar      -imasu → \*wakanmasu, (\*wakammasu)  
                  understand POL-PRES
- b.      araware -tai → \*arawantai, (\*arawattai)  
                  appear    DESI  
                  araware -dasu → \*arawandasu, (\*arawaddasu)  
                  appear    start  
                  araware -masu → \*arawanmasu, (\*arawammasu)  
                  appear    POL-PRES

There is evidently something about the combination of /r/ and /n/ which triggers nasal assimilation. I will give an analysis to this special status of /r/ and /n/ in section 3.4.

The accent pattern plays an important role in distinguishing meaning in nasal assimilation. For example, the difference between the following two examples is whether the word is lexically accented or not. In (31a), *nár* has a pitch drops from high to low at the accented syllable (indicated by an acute accent), whereas in (31b), *nar* is unaccented in which the pitch does not drop. Thus, the resultant forms of nasal assimilation are different and this helps a listener process the two forms.

- (31) a. **nár** -anai → **nánnai**<sup>21</sup>  
           become NEG  
       b. **nar** -anai → **nannai**  
           ring NEG

*nánnai* is never interpreted to be the nasal assimilation of *nar-anai*, and *nannai* is never confused with the nasal assimilation of *nar-ánai*. Another example of the role of accentuation for nasal assimilation with the negative imperative affix /-na/ (and its allomorph /-ina/) is:

- (32) a. **gambár -ina** -yo → **gambánnáyo**  
           hang on IMP Sentence Ending  
       b. **gambár -u** -na -yo → **gambánnayo**  
           hang on PRES NEG-IMP Sentence Ending

Again, the resultant forms of nasal assimilation are different and therefore, they are not homophonous.<sup>22</sup> In the following discussions, accent pattern will not be shown in the examples, but accent pattern will be taken into consideration when a pair in comparison is selected.

Nasal assimilation occurs in written forms as well. It sometimes appears in picture books and cartoon magazines for children. Note that the underlined *n*'s in *yánnai* and *wakánnai* are expressed by the Hiragana character *ん* (also underlined). Hiragana is syllabary and one letter corresponds to one syllable (C)V with exception of syllable-final /n/ which is also described by one letter.

<sup>21</sup>Note that the accented syllable of the full-form is different: *naránai*. The accented syllable shifts forward in the nasal assimilation form because moraic *n* is a special mora; there are four special moras: long vowel, nasal coda or moraic nasal, moraic obstruent and the second element of diphthong. As a special mora, *n* cannot bear an accent (See Saito 1986, Kubozono 1995, among others for detail).

<sup>22</sup>This was shown in a mini-experiment with 17 native speakers. They listened to each set of nasal assimilation in (31) and (32) and were asked what the nonnasal assimilation forms were. 15 out of 17 subjects answered the underlying forms of *nánnai* and *nannai* correctly. 2 subjects could not tell the underlying forms of *nánnai* and *nannai* without a context. All the subjects answered the underlying forms of *gambánnáyo* and *gambánnayo* correctly.

- (33) a. いっしょにあそんでやんない! (Kiyono 2001:16)  
 isshoni ason -de yannai! (< yar-anai)  
 together play GER give-NEG  
 ‘I won’t play with you!’
- b. ゲホッ、ゲホッ、わかんない (Yanase 2000:8)  
 geho, geho, wakannai (< wakar-anai)  
 ugh ugh understand-NEG  
 ‘ugh, ugh, I don’t understand.’

The nasal assimilation of /re-nai/ words also appear in written form.

- (34) 嘘! 信じらんない! 国民の70%が戦争反対だったのに (Moore 2003)  
 uso! shinji -rannai! (< shinji-rare-nai) kokumin -no 70% -ga  
 lie believe -POTEN-NEG people of the nation -GEN 70% -NOM  
 sensou hantai da -tta noni  
 war opposition COP PAST CONJ  
 ‘No way! I can’t believe it! The fact is that 70% of the people of the nation was opposing the war.’

Nasal assimilation also occurs in occasions which would usually be considered formal.

The Japanese prime minister Jun-ichiro Koizumi made the following comment at a press interview on the Iraq War of 2003 after the Peace Prayer Ceremony in Nagasaki city (quoted in the web site of Asahi Newspaper of August 9, 2003.

<http://www.asahi.com/politics/update/0809/005.html>):

- (35) イラクが国際社会の声を聞いて査察を受け入れれば、戦争は起こんなかった。  
 Iraku -ga kokusaishakai -no koe -o kii -te sasatu -o ukeire  
 Iraq -NOM international society -GEN voice -ACC listen -GER inspection -ACC accept  
 -reba sensoo -wa okonna -katta (< okor-ana-katta)  
 -HYP war -TOP occur-NEG -PAST  
 ‘If Iraq had accepted the inspection (by the United Nation) following the voices of the international society, the war would not have occurred.’

In this example, nasal assimilation occurs in a formal press interview of the prime minister.

It is important to state here that some /r-anai/ words are less susceptible to nasal assimilation.

- (36) ser -anai → ?\*sennai  
 bid, NEG  
 vs. sor -anai → sonnai (nasal assimilation occurs)  
 shave, NEG

Similarly, it is not always the case that /re-nai/ words which do not have a /r-anai/ counterpart undergo nasal assimilation.

- (37) a. sugure -nai → ?\*sugunnai  
 excel NEG  
 b. osore -nai → ?\*osonnai  
 fear of NEG

To my knowledge, a corpus of verbs that undergo nasal assimilation does not exist. Therefore, as a native speaker of Japanese, I have created a list of /CV.rV.nai/ and /CV.CV.rV.nai/ words and their nasal assimilation using my own intuition, along with the cooperation of two other Japanese native speakers (see Appendix B). I do not expect that other Japanese speakers completely agree with our judgment on the occurrence of nasal assimilation due to the individual variation on judgment. However, we can have some idea on the percentage of nasal assimilation of /r-anai/ and /re-nai/ words (excluding /re-nai/ words which have a /r-anai/ counterpart since the nasal assimilation of these /re-nai/ words is always blocked). The result is that /r-anai/ words undergo nasal assimilation at 98.7% (155/157) and /re-nai/ words at 62.2% (23/37). This may be an indication that nasal assimilation of /re-nai/ words is used more strictly (in more causal situation, for example). Nevertheless, what's crucial here is that the nasal assimilation of /re-nai/ words which have a /r-anai/ counterpart is clearly and completely blocked as shown in the next section.



### 2.4.2 Anti-homophony blocking of nasal assimilation

In this section, I will examine several cases where nasal assimilation is blocked even when the phonological conditions for nasal assimilation are met. I argue that this blocking exists in order to avoid homophony creation, that is, it is an anti-homophony blocking.

Toki (1990) points out that *kari-nai* and *ori-nai* do not undergo nasal assimilation, however, an explanation for the nonoccurrence is not given, so I will attempt to provide one here.

- (38) a. **kari** -nai → \*kannai  
       borrow NEG  
       b. **ori** -nai → \*onnai  
       get off NEG (Toki 1990: 231)

It appears that *kari-nai* and *orinai* should undergo nasal assimilation because the phonological environment for nasal assimilation is appropriate, namely, there is an *r* in a syllable at a morpheme boundary, that is directly followed by *n* in a suffix when /i/ gets deleted, just like *tari-nai* ‘suffice, NEG’ which undergoes nasal assimilation as *tannai*. Not only some /ri-nai/ words but also some /re-nai/ words are blocked in nasal assimilation.

- (39) a. **wakare** -nai → \*wakannai  
       get separated NEG'  
       b. **okure** -nai → \*okunnai  
       become late NEG  
       c. **nare** -nai → \*nannai  
       get used to NEG  
       d. **umare** -nai → \*umannai  
       be born NEG<sup>23</sup>

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<sup>23</sup>One could argue that *umare-nai* (< *umare-ru*) is a passive form, *um-are-nai* ‘bear, PASS, NEG (< *um-are-ru*). However, following Iwanami (2000), I treat it as an independent lexical item as Japanese dictionaries generally do.

Again, the phonological environment for these words does not seem to be any different from *kure-nai* ‘give (me), NEG’ which undergoes nasal assimilation *kunnai*. The examples above, however, do not point towards the generalization that only /r-anai/ words undergo the assimilation and the assimilation of /re-nai/ and /ri-nai/ words is blocked. As we saw in (28), /ri-nai/ and /re-nai/ words do undergo nasal assimilation.

Further observation reveals that these words whose negative forms do not undergo nasal assimilation have /r-anai/ counterparts. That is, if a /re-nai/ word or a /ri-nai/ word has a /r-anai/ counterpart, only nasal assimilation of the /r-anai/ word occurs. Nasal assimilation of the /re-nai/ word or the /ri-nai/ word is blocked.

(40) Blocking of the nasal assimilation of /re-nai/

- a.     **wakar**    **-anai** → **wakannai**  
understand NEG  
**wakare**     **-nai** → \***wakannai**  
get separated NEG
- b.     **okur** **-anai** → **okunnai**  
send NEG  
**okure**      **-nai** → \***okunnai**  
become late NEG
- c.     **nar**     **-anai** → **nannai**  
become NEG  
**nare**      **-nai** → \***nannai**  
get used to NEG
- d.     **umar**    **-anai** → **umannai**  
get buried NEG  
**umare** **-nai** → \***umannai**  
be born NEG

- (41) Blocking of the nasal assimilation of /ri-nai/  
 kor -anai → konnai  
 have stiffness NEG'  
 kori -nai → \*konnai  
 be sick of NEG<sup>24</sup>
- (42) Blocking of the nasal assimilation of /re-nai/ and /ri-nai/  
 a. kar -anai → kannai  
 clip NEG  
 kare -nai → \*kannai  
 wither NEG  
 kari -nai → \*kannai  
 borrow NEG
- b. or -anai → onnai  
 bend NEG  
 ore -nai → \*onnai  
 break NEG  
 ori -nai → \*onnai  
 get off NEG

I can observe from the pairs above that if the /re-nai/ and /ri-nai/ counterparts undergo nasal assimilation, the outputs would neutralize the contrast with their /r-anai/ counterparts in input. The diagram below shows that in nasal assimilation and the blocking of (40a), if contrast neutralization (or homophony) is created by distinct underlying forms, it leads to ambiguity in mapping onto the unique input.

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<sup>24</sup>It is possible to add here *kor-e-nai* ‘come, POTEN, NEG’ whose nasal assimilation is also blocked.

- (43) wakar -anai  
understand NEG
- wakare -nai  
get separated NEG
- wakannai
- karera -wa zenzen wakannai  
they TOP at all ??
- ↑  
Ambiguous
- { ‘They don’t understand at all.’  
or  
‘They don’t get separated at all.’

However, the application of the phonological process to one of the inputs, *wakare-nai*, is blocked and the ambiguity is avoided. In other words, a homophony threat drives such blocking.<sup>25</sup> In section 5.3, I will examine the possible influence of word frequency and word familiarity on this blocking, and demonstrate that there is no correlation between blocking of nasal assimilation and word frequency and that high word familiarity does not warrant the occurrence of nasal assimilation.

<sup>25</sup>Contextual or syntactical information cannot help nasal assimilation, for example, of /kari-nai/, to be realized.

- (i) a. asa hayaku siba -o kar-anai -de kudasai  
morning, early lawn -ACC clip(mow) -NEG -GER IMP-AUX  
‘Please do not mow the lawn early in the morning.’  
→ asahayaku siba-o kannai-de kudasai
- b. damatte hon -o kari -nai -de kudasai  
without saying book -ACC borrow -NEG -GER IMP-AUX  
‘Please do not borrow books without saying so.’  
→ damatte hon-o \*kannai-de kudasai

Even in the following sentence where *kari-ru* is already introduced, nasal assimilation of *kari-nai* is blocked.

- (ii) kinoo kare-wa hon -o kari -ru -yooni iw -are -ta -ga boku -wa kitto kare-wa  
Yesterday he -TOP book -ACC borrow -PRES -CONJ tell -PASS -PAST-but I -TOP sure he -TOP  
hon -o kari -nai -to omoo  
Book -ACC borrow -NEG -Comp. think  
‘yesterday, he was told to borrow a book, but I think he won’t borrow it.’  
→ kinoo kare-wa hon-o kari-ru-yooni iwa-re-ta-ga boku-wa kitto kare-wa hon-o \*kannai-to omoo.

A contextual cue does not entitle nasal assimilation to *kari-nai*.

Among several transitive-intransitive verb pairs, the negative forms of the following pairs are potentially under the threat of homophony. However, in this case, nasal assimilation in intransitive verbs, /re-nai/ words, is always blocked.

(44) Blocking of nasal assimilation in /re-nai/: transitive vs. intransitive

- a.     **kosur**            **-anai** → **kosunnai**  
           rub (transitive) NEG  
           **kosure**        **-nai** → \***kosunnai**  
           rub (intransitive) NEG
- b.     **war**               **-anai** → **wannai**  
           break (transitive) NEG  
           **ware**           **-nai** → \***wannai**  
           break (intransitive) NEG

Shibatani (1990) argues that in these transitive-intransitive verb pairs, the transitive suffix is  $\emptyset$  and the intransitive suffix is /-e/. So, if *kosur-e-nai* ‘rub (intransitive)’, for example, underwent nasal assimilation, it would wipe off the intransitive suffix /-e/. Therefore the blocking of nasal assimilation of *kosur-e-nai* is possibly due to a violation of the requirement that a morpheme must be realized.

Another example of this, as Saito (1986) examined, is when there is a pair between a /-anai/ word and its potential form, with the potential morpheme /-e/ (which attaches to a consonant-final verb), the potential form does not undergo nasal assimilation.

- (45) **tomar -anai** → **tomannai**  
       stop    NEG  
       **tomar -e**    **-nai** → \***tomannai**  
       stop    POTEN NEG

This examples of blocking is different from previous examples as one more morpheme /-e/ is involved in for /re-nai/ (/r-e-nai/, to be exact) words. If *tomar-e-nai* underwent nasal assimilation, it would eliminate the entire potential morpheme. As Saito (1986) points

out, /rare/, the other allomorph of the potential suffix which attaches to a vowel-final verb, behaves differently from /-e/, since it does not result in blocking.

- (46) tabe -rare -nai → taberannai  
eat POTEN NEG

Therefore, it is not that a potential morpheme does not undergo nasal assimilation. In section 3.5, I will discuss this nonoccurrence of nasal assimilation using a requirement that a morpheme be realized.

The /re-nai/ words which undergo nasal assimilation do not have a /r-anai/ (and /ri-nai/) counterpart.

- (47) Occurrence of nasal assimilation in /re-nai/
- a. kure -nai → kunnai  
give (me) NEG  
No counterparts  
\*kur -anai → N/A  
\*kuri -nai → N/A
  - b. taore -nai → taonnai  
fall down NEG  
No counterparts  
\*taor -anai → N/A  
\*taori -nai → N/A
  - c. araware -nai → arawannai  
appear NEG  
No counterparts  
\*arawar -anai → N/A  
\*arawari -nai → N/A

This indicates that in order for a /re-nai/ word to undergo nasal assimilation, it cannot have a /r-anai/ counterpart, because such /r-anai/ word would block nasal assimilation. As for /ri-nai/ words, similar to /re-nai/ words, the /ri-nai/ words which undergo nasal assimilation do not have /r-anai/ (and /re-nai/) counterparts.

- (48) Occurrence of nasal assimilation in /ri-nai/
- a. **tari** -nai → **tannai**  
 suffice NEG  
No counterparts  
 \*tar -anai → N/A  
 \*tare -nai → N/A<sup>26</sup>
- b. **kototari** -nai → **kototannai**  
 get enough NEG  
No counterparts  
 \*kototar -anai → N/A  
 \*kototare -nai → N/A

The /ri-nai/ words which undergo nasal assimilation are not many (see the Appendix B) and all of them are derivations of *tari-nai* such as *kototari-nai* ‘get enough, NEG’. Saito (1991) raises the question concerning whether nasal assimilation *tannai* should be treated as a contracted form of *tari-nai* (< *tari-ru* ‘suffice, PRES’) or that of *tar-anai* (< *tar-u* ‘suffice, PRES’). I follow Otsubo (1982) in analyzing *tannai* as a contracted form of *tari-nai* for the following reasons. Tanaka (1991) explains that the negative form of *tar-u* is limited to idiomatic expressions such as *shita tar-azu* ‘tongue, suffice, NEG’ (*azu* or *zu* is an old negative suffix) ‘with a lisp’ or *ichi-jikan tar-azu* ‘one-hour, suffice, NEG’ ‘nearly one hour’. *Iwanami Kobugo Jiten* by Iwanami (2000) and *Shinmeikai Kokugo Jiten* by Sanseido (1997), two popular Japanese dictionaries, explain that *tar-u* is either the written form of *tari-ru* (the former) or that it is characteristic of the dialects of Western Japan (the latter). Saito (1991), on the other hand, mentions the possibility of excluding nasal assimilation of /ri-nai/ words altogether because of the blocking of nasal assimilation of /ri-nai/ words such as *ori-nai* ‘get off, NEG’ → \**onnai* and *kari -nai* ‘borrow, NEG’ →

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<sup>26</sup>Note that *tare-nai* here is without an accent nucleus, in other words, it is level accent. This is different from the existent *taré-nai* ‘drip, NEG’. Thus, *taré-nai* does not form a minimal pair with *tari-nai* (unaccented).

\**kannai*, other than /*tari-nai*/ and its derivations. I assume that the fact that there is a very limited number of examples of nasal assimilation of a verb ending with /*ri*/ + negative suffix /*-nai*/, also contributes to Saito's hesitation to treat *tannai* as a contracted form of *tari-nai* (< *tari-ru* suffice'). Kitahara (1990) and Iwanami (1999) list only six words which take /*ri-nai*/ form, 3 of which are *tari-ru* 'suffice' and its compounds: *miti-tari-ru*, *koto-tari-ru*. However, this does not mean that there is a phonological reason to exclude /*ri-nai*/ words from nasal assimilation. There are many examples of nasal assimilation of /*ri*/ before nasals other than the negative morpheme /*-nai*/: for example the polite imperative /*-inasai*/ (for consonant-final verbs), as shown briefly earlier:

- (49) a.     **gambar** -**inasai** → **gambannasai**  
           hang on   POL-IMP  
       b.     **kaer**    -**inasai** → **kaennasai**  
           go back   POL-IMP  
       c.     **suwar** -**inasai** → **suwannasai**.  
           sit down POL-IMP

Therefore, I argue that nasal assimilation of the negative suffix is applicable to /*ri-nai*/ words without limitation, but that the nasal assimilation of all the /*ri-nai*/ words other than *tari-nai* and its derivations, are blocked by the /*r-anai*/ counterparts, for example *kari-nai* 'borrow, NEG' → \**kannai* vs. *kar-anai* 'clip, NEG' → *kannai*, due to homophony avoidance.<sup>27</sup>

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<sup>27</sup>In terms of other /*ri-nai*/ words, some adjectives take /*ri-nai*/ forms such as *kagirinai* 'unlimited', *kawarinai* 'not changed', *kumorinai* 'not cloudy' but the location of accent nucleus is different from /*ri-nai*/ verbs, for example, *kagirinái* 'unlimited' vs. *kagir-ánai* 'limit, NEG', therefore, they can not make minimal pairs with /*ri-nai*/ verbs. These adjectives do not undergo nasal assimilation. The reason, I argue, is again due to a violation of the requirement that a morpheme must be realized. *Kagirinai* 'unlimited', for example, is derived from three morphemes: *kagir -i -nai* 'limit, NOMI, NEG'. The nasal assimilation of this adjective, *kaginnai* wipes off the nominalizer *-i*.



The table below is a summary of nasal assimilation and the blocking. It clearly shows blocking of nasal assimilation of /re-nai/ and ri-nai/ words when they have a /r-anai/ counterpart.

**Table 4**  
Nasal assimilation and its blocking

|                       | CV <b>r</b> -anai → CV <b>nn</b> ai                    | CV <b>re</b> -nai → CV <b>nn</b> ai                        | CV <b>ri</b> -nai → CV <b>nn</b> ai              |
|-----------------------|--|--|--|
| No counterpart exits. | kawar -anai → kawannai<br>change <sub>NEG</sub>        | N/A  | N/A  |
|                       | N/A  | kure -nai → kunnai<br>give me <sub>NEG</sub>               | N/A  |
|                       | N/A  | N/A  | tari -nai → tannai<br>suffice <sub>NEG</sub>     |
| A counterpart exists. | wakar -anai<br>understand <sub>NEG</sub><br>→ wakannai | wakare -nai<br>get separated <sub>NEG</sub><br>→ *wakannai | N/A  |
|                       | kor -anai<br>have stiffness <sub>NEG</sub><br>→ konnai | N/A  | kori-nai → *konnai<br>be sick of, <sub>NEG</sub> |
|                       | kar -anai → kannai<br>clip <sub>NEG</sub>              | kare -nai → *kannai<br>wither <sub>NEG</sub>               | kari -nai<br>borrow <sub>NEG</sub><br>→ *kannai  |

It is clear that only one of the multiple inputs undergoes nasal assimilation, namely anti-homophony blocking, and the nasal assimilation in the others is blocked. It would be interesting to see which undergoes nasal assimilation in a pair solely between /re-nai/ word and /ri-nai/ word, but to my knowledge, such a pair does not exist.

In chapter 3, I will give a thorough phonological analysis to nasal assimilation and its anti-homophony blocking. In the rest of this chapter, other contracted forms and their blocking will be reviewed before we move on to the analysis.

## 2.5 Labial contraction and its anti-homophony blocking

This section introduces another case of contraction caused by syncope at a morpheme boundary (between a root and an affix, or between two suffixes) and its blocking. In this contraction, the labial in the topic particle *wa* or in the hypothetical particle *eba/reba* (*eba* attaches to a consonant-final verb and its allomorph *reba* attaches to a vowel-final verb) is deleted along with a vowel preceding the labial (Toki 1975, Otsubo 1982, Horiguchi 1989, Shibatani 1990, Toki 1990, Saito 1991, Kawase 1992, Minegishi 1999, Umemura 2003, Nakamura et al. 2003).<sup>28</sup> Then, the remaining vowel *a* can be optionally lengthened (Shibatani 1990).<sup>29</sup> There are two patterns in labial contraction depending on the vowel before a labial: 1) simple deletion of nonfront vowel (*a, o, u*) and a labial, and 2) deletion of front vowel (*i, e*) and a labial along with palatalization of the consonant before the front vowel.

- (50) a. Simple deletion of a nonfront vowel  
 boku -wa → bokaa, boka  
 1-SG (male) TOP ‘it is that I’ (Shibatani 1990:176)
- b. Deletion with palatalization of a front vowel  
 ik -eba → ik<sup>j</sup>aa, ik<sup>j</sup>a<sup>30</sup>  
 go HYP ‘if (sub.) goes’ (Otsubo 1982:52)

<sup>28</sup>I do not think it is coincidental that historically /w/ has been debuccalized in Japanese. *Wi, we* and *wo* have changed to *i, e* and *o* respectively. A historical change *kwa* → *ka* (as well as *kwi* → *ki* and *kwe* → *ke*) started in the Kamakura period (A.D. 1192-1333) and completed in the Edo period (A.D. 1603-1867). *Kwa* exists in only limited numbers of dialects in Shikoku and Kyuushuu regions (Okimori 1989). Even the only surviving *w*-sound *wa* tends to be deleted as seen in this section

<sup>29</sup>In the next chapter, I argue that this is in fact shortening of the long vowel, not lengthening of the short vowel.

<sup>30</sup>Some researchers treat this as a glide formation (Poser 1986, among others). However, in the labial contraction, this phenomenon always occurs with a consonant which is palatalized. I treat it as palatalization and transcribe using C<sup>j</sup>.

The past literature on the contracted forms tends to classify these two labial contractions into separate categories due to the difference of the suffix type. Horiguchi (1989), for example, treats the following contracted forms separately but phonologically these processes are the same phenomena: *de-wa* ‘GER, TOP’ → *dʒaa* or *dʒa*, *na-k-er-eba* ‘NEG, predicate copula, dummy copula, HYP’ → *naker<sup>i</sup>aa* or *naker<sup>i</sup>a*, *na-ku-te-wa* ‘NEG, predicate copula, GER, TOP’ → *nakutʃaa* or *nakutʃa*, *kore-wa* ‘this, TOP’ → *kor<sup>i</sup>aa* or *kor<sup>i</sup>a*. For this reason, I treat these contracted forms as one phenomenon, which I call “labial contraction.”

### 2.5.1 Simple deletion of nonfront vowels

In labial contraction with a nonfront vowel, the front vowel simply syncopated along with the labial. The only labial in this pattern is *w* (The other pattern in section 2.5.2 involves labial *b* as well). As we will see in the next section, in the second pattern, both *w* and *b* are involved in syncope with palatalization.

- (51) Nonfront vowels + [+labial] + a → aa *or* a
- a.     ik -u    -koto -**wa** → ikukotaa, ikukota  
           go  PRES NOMI, TOP ‘it is that (sub.) goes’
  - b.     honto(o)<sup>31</sup> -**wa** → hontaa, honta  
           truth            TOP ‘it is that the truth is’
  - c.     boku        -**wa** → bokaa, boka  
           1-SG (male) TOP ‘it is that I’                    (Shibatani 1990:176)

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<sup>31</sup>*Hontoo* ‘truth’ is often shortened to *honto*.

- d. ooki -ku                      -wa → ookikaa, ookika  
big predicate copula TOP
- e. ii -ta -ku                      -wa → ookikaa, ookika<sup>32</sup>  
say DESI predicate copula TOP

This phenomenon also occurs with nouns ending with /a/, another nonfront vowel. However, such nouns behaves differently from nouns ending in other nonfront vowels /u/ and /o/. Shibatani (1990) points out that the vowel cluster here is not due to compensatory lengthening, but to the fact that the lengthening of *a* is obligatory.

- (52) hana -wa → hanaa, \*hana                      (Shibatani 1990:176)  
flower, TOP

Shibatani does not give an explanation for the unacceptability of \**hana*. I will tackle this in the next chapter.

### 2.5.2 Deletion of front vowels with palatalization

In this pattern, the labials which are deleted are /b/ in the hypothetical suffix /eba/ (and its allomorph /reba/) and /w/ in the topic /wa/. If a front vowel is deleted in labial contraction, the consonant before the deleted vowel is palatalized.

- (53) Cons + front vowels + [+labial] + a → palatalized cons + aa or a  
Coronals
- c. -ni -wa → n<sup>j</sup>aa (or naa), n<sup>j</sup>a (or na)  
at TOP '(sub.) is that at'                      (Toki 1975:58)
- d. tat -eba → tačaa, tača  
stand HYP 'if (sub.) stands' (Saito 1991:91)

<sup>32</sup>Otsubo (1985) lists another type of *wa* which undergoes labial contraction.

- (i) wakar -u -wa → wakaraa (Otsubo 1982:51)  
understand PRES Sentence Ending

There is no homophony creation with this form and other forms such as a topic-marked noun.

- (ii) wakar -i -wa → wakar<sup>i</sup>aa  
understand NOMI TOP

- e. ki **-te -wa** → kitʃaa, kitʃa  
come GER TOP ‘It is that (sub.) come’ (Umemura 2003:133)
- f. nom **-de -wa** → nondʒaa, nondʒa  
drink GER TOP ‘It is that (sub.) drinks’ (Toki 1990:229)
- g. kore **-wa** → korʃaa, korʃa  
this TOP ‘it is that this’ (Toki 1990:229)
- h. wakari **-wa -si -nai** → wakarʃaa, wakarʃa sinai  
understand TOP do NEG ‘It is not that (sub.) understand’ (Saito 1991:91)
- i. sage **-reba** → sagerʃaa, sagerʃa<sup>33</sup>  
pull down HYP ‘if (sub.) pulls down’ (Toki 1990:230)
- j. tika -k -er -eba<sup>34</sup> → tʃikakerʃaa, tʃikakerʃa<sup>35</sup>  
near Predicate copula Dummy copula HYP ‘if (sub.) is near’  
(Horiguchi 1989:113)

#### Dorsals

- k. ik **-eba** → ikʃaa, ikʃa  
go HYP ‘if (sub.) goes’ (Otsubo 1982: 52)
- l. oyog **-eba** → oyogʃaa, oyogʃa  
swim HYP ‘if (sub.) swims’

#### Labials

- a. yom **-eba** → yomʃaa, yomʃa  
read HYP ‘if (sub.) reads’ (Shibatani 1990:176)
- b. yorokob **-eba** → yorokobʃaa, yorokobʃa  
be glad HYP ‘if (sub.) is glad’

Like nasal assimilation, labial contraction sometimes appears in written form, as in the following example, taken from a picture book for children.

- (54) あたしゃ、もりへ かえって もう ひとねむり。 (Iwamura 1986)  
ataʃa mori -e kaet -te mou hitonemuri (< atasi-wa)  
I-TOP forest to go back GER more one sleep  
‘I will go back to the forest and take one more nap.’

<sup>33</sup>This is the only example in which syncope does not occur at a morpheme boundary in all of contracted forms in Japanese I discuss in this dissertation, and therefore, it is potentially an exception for contraction by syncope in a derived environment. However, since /reba/ (which attaches to the vowel-final verb) and /eba/ (which attaches to consonant-final verb) are allomorphs, I assume that there is a morpheme boundary effect between /r/ and /e/ in /reba/.

<sup>34</sup>See Nishiyama (1999) for the morpheme structure of *-k*, predicate copula, and *-er*, dummy copula.

<sup>35</sup>*tʃikakerʃa{a}* is further contracted to *tʃikakʃa{a}*.

Labial contraction is very apparent in personal pronouns which undergo both simple deletion of nonfront vowel and deletion of front vowel with palatalization when the pronouns are followed by the topic *wa*.

(55) Nonfront vowels

- a. anta -wa → antaa  
2<sup>nd</sup> - SG TOP
- b. boku -wa → bokaa, boka  
1-SG (male), TOP
- c. koitsu -wa → koitsaa, koitsa  
this one TOP

Front vowels

- d. bokutati -wa → bokutatʃaa, bokutatʃa  
1-SG (male) TOP
- e. watasi -wa → wataʃaa, wataʃa  
1-SG TOP

Poser (1986) claims that this type of labial contraction is morphologically governed, and that ordinary nouns do not undergo this contraction. However, Shibatani (1990) gives an example of the ordinary noun *tori* ‘bird’ which undergoes labial contraction: *tori-wa* → *torʃaa*. Although this matter calls for further investigation, the labial contraction with a nonfront vowel, as discussed above, is at least not governed morphologically.

Labial contraction only applies to a morpheme boundary between a vowel and a labial. It does not apply to morpheme internally.

- (56)
- a. dokuwa → \*dokaa, \*doka  
monologue
  - b. niwa → \*nʃaa, \*nʃa  
garden
  - c. satewa → \*satʃaa, \*satʃa  
I wonder...

### 2.5.3 Anti-homophony blocking of labial contraction

Like nasal assimilation, we find cases where labial contraction is blocked. In the examples below, neither the nonlengthened form nor the lengthened form of the labial contraction is realized.

- (57) a. kasoku -wa → \*kasokaa, \*kasoka  
acceleration, TOP
- b. eigo -wa → \*eigaa, \*eiga  
English, TOP

Once again, these words seem to share the same phonological environment with *boku -wa* ‘1-SG, TOP’ which undergoes labial contraction *bokaa* or *boka*, where the nonfront vowel *u* (or *o*) gets deleted along with the labial *w*.

Similar to the blocking of nasal assimilation, these words with nonfront vowels form a pair with words with /a/ counterparts whose labial contraction is realized without blocking. If both members of the pair underwent the labial contraction, the lengthened forms of labial contraction would be homophonous.

- (58) a. kasoku -wa → \*kasokaa  
acceleration TOP  
kasoka -wa → kasokaa (\*kasoka)  
depopulation TOP
- b. eigo -wa → \*eigaa  
English TOP  
eiga -wa → eigaa (\*eiga)  
movie TOP

*Kasoku-wa* and *eigo-wa* do not contract into the nonlengthened forms \**kasoka* and \**eiga*, either. For their /a/ counterparts *kasoka-wa* and *eiga-wa*, the lengthening is mandatory as shown in (52): *kasokaa* (\**kasoka*) and *eigaa* (\**eiga*). Then, the nonlengthened forms \**kasoka* and \**eiga*, contracted from *kasoku-wa* and *eigo-wa*, would not create

homophony because their /a/ counter parts do not result in the same form. We would expect, without the threat of homophony, that the nonlengthened forms should have occurred, as they did in *boka* (< *boku-wa*). However, that is not the case. These nonlengthened forms are evidently the same realization as *kasoka* ‘depopulation’ and *eiga* ‘movie’, but without the topic *wa*.

- (59) a. *kasoku* -*wa* → \**kasoka* (homophonous with *kasoka* ‘depopulation’)  
           acceleration TOP  
       b. *eigo* -*wa* → \**eiga* (homophonous with *eiga* ‘movie’)  
           English TOP

This is an example of anti-homophony blocking in “paradigmatic” relations.

## 2.6 Gerund /te/ contraction

In this section, gerund /te/ contraction is introduced. There is no anti-homophony blocking in this phenomenon. Nevertheless, this contraction is discussed briefly in this section because gerund /te/ contraction is another good example of Japanese contracted forms which are characterized as a contraction driven by syncope at a morpheme boundary like the other two contracted forms. In Ichimura (2001:13), syncope of one vowel in two consecutive vowels between the gerund /te/ and an auxiliary verb, which I call here “/te/ contraction,” is briefly introduced in order to demonstrate the syncope ranking between the vowels. It is a common contracted form also discussed in Toki (1975), Otsubo (1982) and Toki (1990), Saito (1991), Kawase (1992), Minegishi (1999), Umemura (2003), Nakamura et al. (2003): *mitē* + *ageru* ‘see- GER, give’ → *mitageru*



(Toki 1990:228). In this section, I would like to discuss in detail this syncope at the morpheme boundary.

First, I will discuss the phenomenon of /te/ contraction in detail. /te/ contraction is a phenomenon in which the gerund /te/ and an auxiliary verb attached to it gets contracted by the deletion of one of the two vowels in the boundary. The gerund /te/ has two allomorphs, *-te* and *-de*: *-de* before nasal and *-te* before the rest. There are two types of /te/ contraction. One is when a consonant follows the gerund /te/. In the examples below, the vowel /e/ of the gerund /te/ (*te* and its allomorph *de*) gets deleted and the stranded *t* and *d* are resyllabified the following consonants, resulting in the palatalization of *s*.

- (60) a. mi -te simaw -ta → mitʃimatta<sup>36</sup>  
 see GER finish PAST  
 ‘finished seeing’
- b. yom -de simaw -ta → yondʒimatta  
 read GER finish PAST (Shibatani 1990:177)  
 ‘finished drinking’

Another type is when an auxiliary verb starting with a vowel such as *-ik*, *-ok*, or *-ar* attaches to the gerund /te/. One of the vowels in the boundary is chosen to get deleted, however, which vowel is chosen depends on the particular case/environment.

- (61) a. tabe -te -ik -u → tabeteku (/i/ deletion)  
 eat GER go PRES  
 ‘eat before going’
- b. tabe -te -ok -u → tabetoku (/e/ deletion)  
 eat GER put PRES  
 ‘eat in advance’ (Umemura 2003:133)

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<sup>36</sup> *mitʃimatta* and *yondʒimatta* are further contracted to *mitʃatta* and *yondʒatta* respectively.

- c.     tabe **-te** **-age** -ru → tabetageru (/e/ deletion)<sup>37</sup>  
 eat   GER give PRES  
 ‘eat for (somebody’s) sake’
- (62) a.   yom **-de** **-ik** -u → yondeku (/i/ deletion)  
 read GER go PRES  
 ‘read before going’ (Otsubo 1982:51)
- b.     yom **-de** **-ok** -u → yondoku (/e/ deletion)  
 read GER put PRES  
 ‘read in advance’ (Toki 1990: 229)
- c.     yom **-de** **-ager** -u → yondageru (/e/ deletion)  
 read GER give PRES  
 ‘read for (somebody’s) sake’ (Toki 1990: 229)

In the following discussion, I will focus on the allomorph *-te* because the *-te/-de* alternation is not important to my argument in this section. One thing to notice from these examples is that syncope is not conditioned by morphology because there is no morphological pattern in the syncope: *i* in the auxiliary verb (suffix) *-ik* gets deleted in (61a, 62a) while /e/ in gerund /te/ gets deleted in (61b, c, 62b, c).

/te/ contraction only applies at the morpheme boundary between /te/ and an auxiliary verb in (63a, b). It does not apply at a word boundary in (63c, d)

- (63) a.   tabe **-te** **-ok** -u → tabetoku  
 eat   GER put PRES  
 ‘write in advance’
- b.     tabe **-te** **-ager** -u → tabetageru  
 eat   GER give PRES  
 ‘eat for (somebody’s) sake’

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<sup>37</sup> Other examples of auxiliary verbs starting with /i/, /o/ and /a/ are:

- (i) a.   kai **-te** **-ir** -u → kaiteru  
 write, GER, exist, PRES ‘is writing’
- b.     kai **-te** **-oide** → kaitoide  
 write, GER, come ‘write and come back’
- c.     kai **-te** **-ar** -u → kaitaru  
 write, GER, exist, PRES ‘have already written’

- c.     tabe -te # uk -u → \*tabetuku, \*tabeteku  
       eat GER float PRES  
       ‘eat, then float’
- d.     tabe -te # ak -u → \*tabetaku, \*tabeteku  
       eat GER open PRES  
       ‘eat, then open’

Below is another example in which the contraction applies to an auxiliary verb (64a) but the contraction is blocked in a word boundary when *ik* is used as a verb (64b).

- (64) a.     tabe -te -ik -u → tabeteku  
       eat GER go PRES  
       ‘eat before going’
- b.     tabe -te # ik -u → \*tabeteku  
       eat GER go PRES  
       ‘eat, then go’

The syncope does not apply morpheme-internally.

- (65) a.     teika → \*teka  
       price
- b.     totteoki → \*tottoki  
       thing kept for a special occasion

Again in this contracted form, the contraction is driven by syncope at the morpheme boundary. To my knowledge, there are no cases of anti-homophony blocking identified in /te/ contraction.

## 2.7 Summary

In this chapter, I have introduced three types of contracted forms in Japanese, nasal assimilation, labial contraction and gerund /te/ contraction. The contracted forms occur as a result of syncope across a morpheme boundary. In nasal assimilation with the negative suffix, if a /re-nai/ word or a /ri-nai/ word has a /r-anai/ counterpart, only nasal

assimilation of the /r-**a**nai/ word occurs. Nasal assimilation of the /re-nai/ word or the /ri-nai/ word is blocked, because it otherwise would create homophony. In labial contraction of a pair of words with the topic morpheme, /wa/, the word ending with a nonfront vowel undergoes labial contraction. Labial contraction of the word ending with a front vowel is blocked, because it otherwise would create homophony. This is what can be called anti-homophony blocking. /te/ contraction, though it does not have cases for anti-homophony blocking, is another example of contraction driven by syncope at the morpheme boundary.

In chapter 3, among three contracted forms, I will provide an in-depth analysis of nasal assimilation and its anti-homophony blocking within the framework of Optimality Theory.