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# The scalar contrastive *wa* in Japanese

Osamu Sawada  
Kobe University

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## 1 Introduction

The relationship between contrastiveness and scalar implicature has recently been a controversial issue in studies on the Japanese contrastive particle *wa*. There are two main approaches to the relationship: a **lexicalist view** (e.g., Hara 2006; Sawada 2007; Schwarz & Shimoyama 2011) and a **non-lexicalist view** (e.g., Tomioka 2019, 2016). In the lexicalist view, the scalar meaning (the scalar implicature-like meaning) of *wa* is encoded in the lexical meaning of the contrastive *wa*, while in the non-lexicalist approach, it is triggered/drawn by Gricean reasoning (Standard Recipe (Geurts 2010)) (see Tomioka 2016 for an overview of the competing approaches). In this paper, based on new data (i.e., the phenomenon of the adjective doubling construction A-*wa* A and the related contrastive expressions), I argue that in at least some uses of the contrastive *wa*, the scalar meaning of the contrastive *wa* has been conventionalized, and it is difficult to analyze all types of contrastive *wa* in a uniform fashion, which is a similar line of thought as that expressed in Sawada (2007).

## 2 The dual use of the contrastive *wa*

Sawada (2007) posits that when the contrastive *wa* is attached to a non-scalar element, it has a polarity reversal function, as in (1), whereas when it is attached to a scale-invoking element, it functions as a scalar particle whose meaning has a mirror image of EVEN, as shown in (2):

- (1) *Taro-wa ki-ta.*  
Taro-CONT come-PST  
'Taro came.' (But the others didn't/but the others may or may not have come.)
- (2) (Context: Both amateur and professional tennis players participating in a tournament.)
- a. *Taro-wa shirooto-ni {-wa / ??-sae} kat-ta.*  
Taro-TOP amateur-DAT CONT / even win-PST  
'(lit.) Taro beat [an amateur]<sub>CT</sub>. / ???Taro even beat [an amateur]<sub>F</sub>.'
- b. *Taro-wa puro-ni {??-wa / -sae} kat-ta.*  
Taro-TOP professional-DAT CONT / even win-PST  
'(lit.) ??Taro beat [a professional]<sub>CT</sub>. / Taro even beat [a professional]<sub>F</sub>.'

In this view, there are two types of contrastive *wa*: the **scalar contrastive (CT) *wa*** and the **non-scalar contrastive *wa*** (*C* is a contextually determined set of alternatives):

- (3) a.  $[[wa_{CTnon.scalar}]] = \lambda p. \exists q [C(q) \wedge q \neq p \wedge (\diamond) \neg q]$   
b.  $[[wa_{CTscalar}]] = \lambda p. \exists q [C(q) \wedge q \neq p \wedge (\diamond) \neg q] \wedge \forall q [C(q) \wedge q \neq p \rightarrow q >_{unlikely} p]$

The non-scalar contrastive *wa* in (3a) conventionally implies that (it is possible that) the contextually determined alternative propositions are not true (e.g., Oshima 2005, To appear), while the scalar contrastive *wa* in (3b) conveys not only this conventional implicature (CI) but also a scalar CI that **the at-issue proposition is the least unlikely among the alternatives** (i.e., it has a low scalar value).<sup>1</sup>

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<sup>1</sup>In this paper, I do not go into an "ignorance" (uncertainty) inference of the contrastive *wa* (e.g., Hara 2006; Tomioka 2010; Hirayama 2019), but I assume that the ignorance inference can be captured by assuming that a possibility operator  $\diamond$  can be inserted in the meaning of *wa*, as in (3).

Although Sawada’s (2007) observation in (2) seems to be intuitively understandable, the problem is that it is possible to use the contrastive *wa* in (2b) in a polarity reversal context (i.e., Taro beat a professional, but he could not beat an amateur). Thus, the data alone do not provide conclusive evidence of the existence of the scalar contrastive *wa*.

### 3 The A-*wa* A construction

#### 3.1 The negative meaning of the A-*wa* A construction

I argue that the adjective doubling expression A-*wa* A offers stronger evidence for the existence of a scalar contrastive *wa*. As the examples in (4) show, although both the simple adjectival sentence and the adjective doubling expression denote that “this bread is tasty,” their meanings are not the same:

- (4) a. *Kono pan-wa oishii.*  
 This bread-TOP tasty  
 ‘This bread is tasty.’
- b. *Kono pan-wa oishii-wa oishii.*  
 This bread-TOP tasty-CONT tasty  
 ‘This bread is [tasty]<sub>CT</sub>.’ CI: It is not very tasty.

Unlike (4a), (4b) implies that the bread meets only the standard of “tasty” minimally; thus, it is not very tasty. The meaning triggered by A-*wa* A is a CI because it is not part of “what is said.” The main part of (4b) is “this bread is tasty,” and the negative implication triggered by A-*wa* A is non-at-issue (secondary) information. This is supported by the fact that the CI component cannot be challenged by saying “No, that’s false.” This sharply contrasts negative sentences like (5), where the negative meaning is part of “what is said” (at-issue) and it can be challenged by saying “no, that’s false”:

- (5) *Kono pan-wa sonnani oishiiku nai.*  
 This bread-TOP that tasty NEG  
 ‘This bread is not that tasty.’

#### 3.2 Form and meaning of the A-*wa* A construction

Let us now consider the form and meaning of the A-*wa* A construction in more detail. First, it is important to verify that the two adjectives are identical and function as a single adjective. Semantically, A-*wa* A has the same meaning as the single de-adjectival expression “A<sub>adverbial.form-wa aru</sub>”:<sup>2</sup>

- (6) *Kono pan-wa {oishii-wa oishii / oishi.ku-wa aru }.*  
 This bread-TOP tasty-CONT tasty / tasty.adverbial be  
 ‘This bread is [tasty]<sub>CT</sub>.’

*Oishiku* is the adverbial (conjunctive) form of the adjective *oishii* and modifies the verb *aru*.

If the first A and the later A do not match, the sentence becomes ungrammatical:

- (7) \**Kono keeki-wa oishii-wa amai.*  
 This cake-TOP tasty-CONT sweet

Note that the A-*wa* A construction is different from Japanese NP doubling expressions (which do not involve the contrastive *wa*) (Oho & Yamada 2011; Akita 2012):

<sup>2</sup>A-*wa* A can also be paraphrased by A-*koto-wa* A (e.g., *oishii-koto-wa oishii*), where *koto* functions as a nominalizer.

- (8) *Kono resutoran-wa Nihon-Nihon shi-tei-ru.*  
 This restaurant-TOP Japan-Japan do-STATE-NON.PST  
 ‘This restaurant is a typical Japanese restaurant.’ (Oho and Yamada 2011)

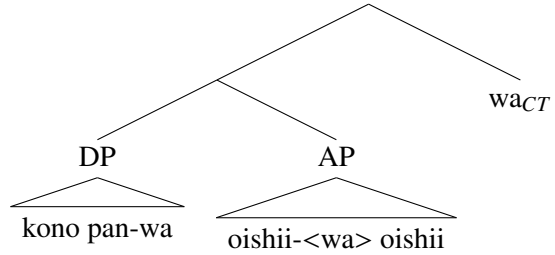
Intuitively, NP reduplication involves a prototype. Oho & Yamada (2011) claim that it is a gradable predicate that represents closeness to the norm. Although NP reduplication is related to degree, there is no contrastive scalar meaning in A-*wa* A. Note that the contrastive *wa* is obligatory in the A-*wa* A construction. If there is no *wa*, the sentence becomes ungrammatical (\**oishii-oishii*).

Let us consider how the CI meaning of A-*wa* A can be analyzed based on example (4b). I assume that A-*wa* A is a special contrastive expression that has the same at-issue meaning as A but in addition obligatorily introduces a set of stronger scalar alternatives, as in (9) ( $\theta$  stands for a contextually determined standard. ! indicates intensification and denotes that the distance between a degree and a standard is large. If ! is used multiple times, the distance becomes larger):

- (9) [[ [oishiii-<wa> oishiii]<sub>CT</sub> ]]=  
 At-issue:  $\lambda x. \exists d [d > \theta_{tasty} \wedge tasty(x) = d]$   
 Alternatives:  $\{\lambda x. \exists d_1 [d_1 > !\theta_{tasty} \wedge tasty(x) = d_1], \lambda x. \exists d_2 [d_2 > !!\theta_{tasty} \wedge tasty(x) = d_2], \lambda x. \exists d_3 [d_3 > !!!\theta_{tasty} \wedge tasty(x) = d_3]\}$

Linguistically speaking, the alternatives of *oishii-wa oishii* in (9) can be understood as *totemo oishii* ‘very tasty’, *mechakucha oishii* ‘extremely tasty’, etc. Note that although *wa* is morphologically attached to the adjective, it functions as a propositional operator, as in (10):

- (10) Logical structure of A-*wa* A (=4b)



Following the idea of alternative semantics (e.g., Rooth 1985), I assume that alternatives are interpreted in the same way as at-issue elements in a point-wise fashion, as in (11):

- (11) At-issue proposition:  $\exists d [d > \theta_{tasty} \wedge tasty(this.bread) = d]$   
 Alternative propositions:  $\{\exists d_1 [d_1 > !\theta_{tasty} \wedge tasty(this.bread) = d_1], \exists d_2 [d_2 > !!\theta_{tasty} \wedge tasty(this.bread) = d_2], \exists d_3 [d_3 > !!!\theta_{tasty} \wedge tasty(this.bread) = d_3]\}$

In the final part of the derivation, *wa* is combined with the at-issue proposition and induces CI, as in:

- (12)  $[[wa_{CT, scalar}]] = \lambda p. \exists q [C(q) \wedge q \neq p \wedge (\diamond) \neg q] \wedge \forall q [C(q) \wedge q \neq p \rightarrow q >_{unlikely} p]$   
 (13)  $[[wa]]([[oishiii-<wa> oishiii]]([[kono pan]])) =$   
 At-issue:  $\exists d [d > \theta_{tasty} \wedge tasty(this.bread) = d]$   
 CI:  $\exists q [C(q) \wedge q \neq (\exists d [d > \theta_{tasty} \wedge tasty(this.bread) = d]) \wedge \neg q] \wedge \forall q [C(q) \wedge q \neq (\exists d [d > \theta_{tasty} \wedge tasty(this.bread) = d]) \rightarrow q >_{unlikely} (\exists d [d > \theta_{tasty} \wedge tasty(this.bread) = d])]$

The alternative propositions in (11) correspond to *q* in (13). Note that based on Potts’ (2005) logic of CI, I assume here that the at-issue proposition (i.e., the argument of *wa*) is passed on to the at-issue dimension. In the at-issue dimension, the sentence denotes that “this bread is tasty”, but in the CI dimension, the speaker conveys that the bread’s being tasty is the least unlikely (i.e., the most likely) among the alternatives. In other words, the bread only meets the standard minimally.

### 3.3 Pragmatic scale

In the example above, the alternatives triggered by *A-wa A* are about the degree of A. However, the alternatives are not always related to the degree of A. Observe the following example:

- (14) [*Oishii-wa oishii*]-*no-desu-ga*                      *ranchi-to.shite-wa shoujiki moo chotto nedan-o*  
Tasty-CONT tasty-*noda*-PRED.POLITE-but lunch-as-TOP      frankly more a bit price-ACC  
*sage-ta.houga.ii-node-wa.*  
lower-better-node-Prt  
'It is [tasty]<sub>Cont</sub>, but frankly, it would be better to lower the price.' (From the Internet)

In this context, the alternative of *oishii-wa oishii* is "tasty and cheap" (not "very tasty"):

- (15) At-issue: It is tasty  
Alternative: It is tasty and cheap.

In this context, having the property of being tasty is construed as the minimum by the speaker.

### 3.4 Extension to the verb doubling construction

I show that the proposed analysis of the *A-wa A* construction can naturally be extended to the *V-(koto)-wa V* construction (cf. Nishiyama & Cho 1998; Potts et al. 2009), as in (16):

- (16) *Ame-wa {fut-ta / fut-ta-(koto)-wa fut-ta}.*  
Rain-TOP fall-PST / fall-PST-NMLZ-CONT fall-PST  
'It rained. / It [rained]<sub>CT</sub>.'

If *fut-ta-(koto)-wa fut-ta* is used, the implication that the amount of rain was very low arises because of the scalar meaning of *wa*. I will show that the meaning of *V-(koto)-wa V* can be analyzed in the same way as *A-wa A* by assuming that the verb used in the construction is a gradable verb.<sup>3</sup>

## 4 Embedded scalar contrastive *wa*

The issue of the conventionality of the scalar *wa* is relevant to the recent discussion of the embedded scalar implicature. Geurts (2010, 163) observes that to produce a **local scalar implicature**, a contrastive focus on the scalar item is often (but not always) necessary (cf. Tomioka 2019), as shown in (17):

- (17) a. I hope that some of my relatives will remember my birthday.  
Scalar implicature: ? I hope that not all of them will remember it.  
b. I hope that **SOME** of my relatives will remember my birthday.  
Scalar implicature: I hope that not all of them will remember it.

Geurts (2010) notes that if the contrastive stress is employed as in (17b), this sentence can be used to convey that the speaker would not like all their relatives to remember their birthday.

The necessity of contrastivity is clear in Japanese:

- (18) a. *Taro-wa kono keeki-wa oishii-to omo-tteiru.*  
Taro-TOP this cake-TOP tasty-that think-STATE  
'Taro thinks that this cake is tasty.'

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<sup>3</sup>The verb doubling construction can be paraphrased by *V-wa suru* (Nishiyama & Cho 1998):

- (i) *Ame-wa furi-wa shi-ta.*  
Rain-TOP fall.adverbial-CONT do-PST  
'It [rained]<sub>CT</sub>.'

- b. *Taro-wa kono keeki-wa {oishii-wa oishii-to / oishi.ku-wa aru-to} omo-tteiru.*  
 Taro-TOP this cake-TOP tasty-CONT tasty-that / tasty.adverbial-CONT be-that think-STATE  
 ‘Taro thinks that this cake is [tasty]<sub>CT</sub>.’  
 (Implicature: Taro thinks that the cake is not very tasty.)

In (18b) (but not in (18a), where contrastive stress is not involved) there is an implicature that Taro thinks that the cake is not very tasty.<sup>4</sup>

This tendency is observed in the normal contrastive *wa* as well. As example (19) shows, if the contrastive *wa* (with a stress) is added to *nan-nin-ka* ‘some,’ the local scalar implicature that “not all of the students failed the exam” becomes salient:

- (19) *Taro-wa nan-nin-ka-no gakusei-{wa/ga} shiken-ni ochi-ta-to omo-tteiru.*  
 Taro-TOP some-GEN student-CONT/NOM exam-to fail-PST-that think-STATE  
 ‘Taro thinks that [some]<sub>CT</sub> of the students failed the exam.’  
 (Local scalar implicature: Taro thinks that not all the students failed the exam.)

If *ga* (rather than *wa*) is used, the implicature becomes less salient (although it is available as a Gricean quantity implicature). Crucially, if *nan-nin-ka* is replaced with a **high scalar term**, such as *hotondo* ‘almost’, then the sentence with the contrastive *wa* (but not with *ga*) sounds odd, as shown in (20):

- (20) *Taro-wa hotondo-no gakusei-{wa/ga} shiken-ni ochi-ta-to omo-tteiru.*  
 Taro-TOP most-GEN student-CONT/NOM exam-to fail-PST-that think-STATE  
 ‘Taro thinks that ??[most]<sub>CT</sub> of the students failed the exam.’  
 (Local scalar implicature: Taro thinks that not all the students failed the exam.)

In this case, using *ga* plus a general Q-implicature is the only (at least preferable) option to produce an embedded scalar implicature. This supports the existence of a scalar contrastive *wa*.

## 5 Discussion and Conclusion

The phenomenon of A-*wa* A construction and related contrastive expressions suggest that there is a scalar *wa* in addition to the non-scalar *wa*. As discussed in Section 1, in recent years, various ideas and approaches have been proposed for the contrastive *wa*, and several important discussions have emerged (the discussions on ignorance inference, similarity with scalar implicature, etc.) However, the scalarity of the contrastive *wa* has not been sufficiently discussed in the literature. For example, in Hara’s lexical approach, a contrastive topic triggers stronger propositions than the at-issue proposition *p* and conventionally implicates that those alternatives may not hold. Although this theory can capture the similarity with a scalar implicature, it does not specify a scalar value (i.e., it does not posit that *p* is the least unlikely). Similarly, although the non-lexicalist (general scalar implicature-based) approach successfully captures the similarity with scalar implicature, there is no discussion of a low-degree scalar construal.

In this paper, I will further examine the conventionality of the scalar use of the contrastive *wa* and argue that it is difficult to explain all phenomena of the contrastive *wa* based on a single lexical item or a pragmatic principle. There are multiple types of contrastive *wa* (i.e., a scalar type and a non-scalar type) and we need to take the conventionality of the scalar meaning into consideration.

In the final part of this paper, I also discuss the scalar and non-scalar uses of the English *only* (Horn 2000; Coppock & Beaver 2014) and the Japanese *shika* ‘only’, showing that a similar phenomenon can be observed in other particles as well.

<sup>4</sup>The fact that the implication that the cake is not very tasty is anchored to the subject Taro shows that the CI meaning triggered by A-*wa* A can be non-speaker-oriented (cf. Potts 2005).

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