





meanings of diminutives: (i) whether the target of diminutivization is the speaker himself/herself or a third-person entity; and (ii) whether the scalar meaning triggered by diminutivization is semantic or pragmatic. I will provide a four-way typology of diminutives and suggest that there is no such thing as a diminutive that has a semantic scalar meaning and the property of self-diminutive shifting.

This paper has a number of theoretical implications for the theory of conventional implicature (CI) as well. It is crucial that a self-diminutive shift can occur in the honorific suffix *desu*, which also triggers a CI. I will argue that the phenomenon of diminutive shifting in Japanese can be further evidence for the idea that expressive content can apply to expressive content (McCready 2010; Gutzmann 2011). We will also suggest based on the meaning/distribution patterns of the self-diminutive shift that there is a rule-based/productive CI in natural language (in addition to word-based CIs, which are part of the conventional meaning of words (e.g. *frankly speaking, damn*)).

This paper will provide new perspectives for considering the semantic variations of diminutives and the nature of conventional implicature in natural language.

## 2. Environments of Self-diminutivization and Object Diminutivization

Studies of child language acquisition have shown that in the early stage of acquisition of Japanese as a first language, there is a tendency for babies to pronounce [tʃ](or [ʃ]) instead of [s] (e.g. *juusu* ‘juice’ → *juuchu/juusyū* ‘juice, baby talk’) (e.g. Murata 1970). It is possible that this phonological error committed by babies has been conventionalized in adult grammar as a device for creating a flavor of baby talk (e.g. Hamano 1998: 186; Mester and Itô 1989: 268; Okazaki and Minami 2011). However, as we observed in section 1, the phonological shift from [s] to [tʃ] can also be used for diminutivizing a third person entity (=2).<sup>1</sup> This is somewhat puzzling considering that both kinds of diminutivization can occur based on the same phonological shift. I propose the following descriptive generalization on the occurrence on the two kinds of diminutivizations:

(5) **Generalization on the occurrence of the two kinds of diminutivizations:**

If a diminutive shift occurs in a name honorific, it is interpreted as an object-diminutive shift; otherwise, it is a self-diminutive shift.

The following list of examples supports this generalization:

(6) Examples of diminutivization

	Normal form	Diminutive form
Name honorific suffix	Name-san (e.g. <i>Hanako-san</i> )	Name- <b>chan</b> (e.g. <i>Hanako-chan</i> ) (= object-diminutive)
Performative honorific	NOUN/ADJ- <i>desu</i> ‘performative honorific’	NOUN/ADJ- <i>dechu</i> ‘performative honorific. baby talk’ (= self-diminutive)
	VERB- <i>masu</i> ‘performative honorific’	VERB- <i>machu</i> ‘performative honorific. baby talk’ (= self-diminutive)
Noun	<i>usagi</i> ‘rabbit’	<i>uchagi</i> ‘rabbit. baby talk’ (= self-diminutive)
Adjective	<i>kusai</i> ‘smells bad’	<i>kuchai</i> ‘smells bad. baby talk’

<sup>1</sup> Many reference grammars/dictionaries point out that *chan* is phonologically derived from *san*.



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Second, the meaning triggered by diminutive shifting does not semantically interact with at-issue logical operators such as negation:

- (10) Are-wa **uchagi** -janai. (cf. *usagi* ‘rabbit’)  
That-TOP rabbit.Self.DIM-NEG  
At-issue: That is not a rabbit.  
CI: I am uttering the word *usagi* ‘rabbit’ like a baby.

Here, the meaning that ‘I am uttering the word *usagi* ‘a rabbit’ like a baby’ is out of the scope of negation. (Notice, however, that if the above negation is interpreted ‘metalinguistically’, the sentence can be understood as a denial of pronouncing *uĉagi* ‘rabbit.DIM’. We will discuss this point in section 5.) The same reasoning applies to the case of object-diminutive shifting:

- (11) Are-wa Hanako-**chan**-janai.  
That-TOP Hanako-CHAN-NEG  
At-issue: That is not Hanako.  
CI: I am treating Hanako like a child.

The fact that diminutive meaning does not interact with logical negation makes it similar to a presupposition. However, I argue that the meaning created by the diminutive shift is a CI rather than a presupposition. As we can see in (12), unlike presupposition, the diminutive meaning **can** project beyond presupposition plugs like *sinzi-teiru* ‘believe’:

- (12) Sensei-wa kore-wa Hanako-chan-no hon-da-to  
Teacher-TOP this-TOP Hanako-HON.DIM-GEN book-PRED-COMP  
sinzi-teiru.  
believe-TEIRU  
At-issue: My teacher believes that this is Hanako’s book.  
CI: I (= the speaker) have a positive feeling toward Hanako  $\wedge$  I am treating Hanako like a child.

Note that here in (12), the possessive marker *no* creates the ‘presupposition’ that ‘Hanako has a book’, but it does not project to the matrix clause (because it is embedded under the presupposition plug *sinzi-teiru* ‘believe’).

The same situation can be observed in the case of self-diminutivization. Even though self-diminutivization is embedded under the presupposition plug *omou* ‘think’ (verbs of thinking), it can project to the matrix level:

- (13) Hanako-chan-wa [**uchagi**-wa tomodati-da]-to omo-teiru.  
Hanako-chan-TOP rabbit.DIM-TOP friend-PRED-that think-TEIRU  
At-issue: Hanako thinks that a rabbit is her friend.  
CI from *uchagi*: I am uttering the word *usagi* ‘rabbit’ like a baby.

Although the status/existence of CIs is under debate, based on the above discussions, I will take the position that the meaning triggered by self/object diminutivizations is a CI.

#### 4. The Meaning of the Self-diminutive Shift in Japanese

##### 4.1 Compositionality of the Self-diminutive Shift

The question is how the meanings of the two kinds of diminutivization are interpreted. Let us first consider the meaning of the self-diminutive shift based on the following example:

- (14) Kore-wa hon-dechu. (cf. *desu*)  
 This-TOP book-PERF.HON.DIM  
 At issue: This is a book.  
 CI: I am talking to you in a polite way  $\wedge$  **I am speaking to you like a baby.**

Building on Mester and Itô's (1989) analysis of mimetic palatalization, I will argue that diminutive forms are morphologically complex. In this approach, the form *dechu* in (14) is considered to be derived by lexical association from a diminutive morpheme DIM that has a phonological feature of [+delay release]:

- (15) a. [+delay release] DIMINUTIVE  
       b. *desu*

The bearer of the DIM morpheme is the voiceless alveolar fricative [s].

Then what is the meaning of the DIM morpheme? I would like to propose that the diminutive morpheme in (14) has the following CI meaning:

- (16)  $[[\text{DIM}_{\text{PERF.HON}}]] = \lambda F_{\langle t^e, t^e \rangle} \lambda p. F(p) = 1 \wedge \exists d[d \langle !\text{STAND} \wedge \text{mature}(sp) = d \wedge d \langle !\text{actual degree of maturity of } sp] \wedge sp \text{ utters } p$

The DIM morpheme in (16) conventionally implicates that: (i) there is a degree *d* such that the degree of maturity of the speaker (*sp*) is less than a contextual standard by a large amount; (ii) *d* is significantly less than the actual degree of maturity of the speaker; and (iii) the speaker utters *p*.<sup>2</sup> The second component creates a large gap between the diminutive state and the actual state in terms of the degree of maturity of *sp*, and this creates a new utterance context wherein an adult speaker behaves like a baby.

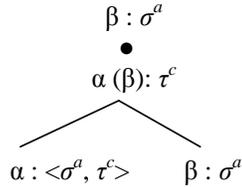
As for the meaning of the performative honorific *desu*, it can be represented as in in (17a) (See Potts and Kawahara 2004 for a detailed investigation of the meaning of *desu*.) Thus, if DIM and *desu* are combined, we get the meaning shown in (17b):

- (17) a.  $[[\text{desu}]] = \lambda p. sp \text{ utters } p \text{ in a polite way}$   
       b.  $[[\text{DIM}_{\text{PERF.HON}}]]([\text{desu}]) = \lambda p. sp \text{ utters } p \text{ in a polite way} = 1 \wedge \exists d[d \langle !\text{STAND} \wedge \text{mature}(sp) = d \wedge d \langle !\text{actual degree of maturity of } sp] \wedge sp \text{ utters } p$

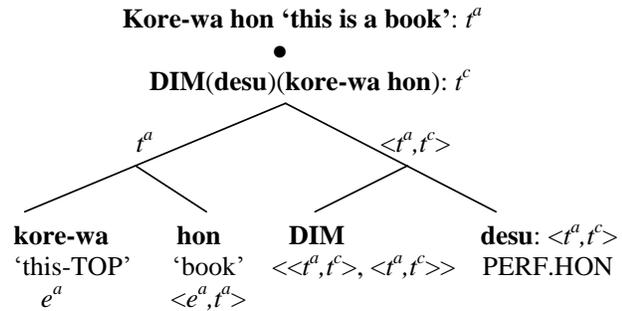
<sup>2</sup>  $\langle !$  stands for 'less than a standard by significant degree' (Kennedy and McNally 2005).

**DIM(desu)** is then combined with the proposition via a CI function application (Potts 2005) in (18a) as shown in (18b) (The superscript *c* stands for CI and the superscript *a* stands for at-issue):<sup>3</sup>

(18) a. CI application



b. Logical structure of (14)<sup>4</sup>



It is theoretically important that the suffix *desu* can be diminutivized, which also triggers a CI. Potts (2005) proposes the following generalization for the meaning of CIs:

(19) CI meanings never apply to CI meanings. (Potts 2005: 60)

However, recently McCready (2010) and Gutzmann (2011) have argued that there are cases where expressive content (CI) applies to expressive content:

(20) That [fucking bastard] Burns got promoted! (Gutzmann 2011: 124)

I think that the phenomenon of self-diminutive shifting in Japanese further supports the idea that expressive content can apply to expressive content in natural language.

#### 4.2 The Self-diminutive Shift in Other Categories

Recall that the self-diminutive shift is productive. This means that we should consider that DIM morpheme is polymorphic as in (21):

- (21) a.  $[[\text{DIM}_{\text{ADJ}}]] = \lambda G \langle e^a, d^a \rangle. \exists d [d \langle !\text{STAND} \wedge \text{mature}(\text{sp}) = d \wedge d \langle !\text{actual degree of maturity of sp} \rangle \wedge \text{sp utters } G]$   
 b.  $[[\text{DIM}_{\text{VERB.INTR}}]] = \lambda P \langle e^a, t^a \rangle. \exists d [d \langle !\text{STAND} \wedge \text{mature}(\text{sp}) = d \wedge d \langle !\text{actual degree of maturity of sp} \rangle \wedge \text{sp utters } P]$

Notice that because of the phonological component of DIM, the actual pronunciations of G and P are different (i.e. phonologically shifted). The crucial point here is that in the

<sup>3</sup> The CI function application says that an  $\alpha$  that is of type  $\langle \sigma^a, \gamma^c \rangle$  takes a  $\beta$  of type  $\sigma^a$  and returns  $\gamma^c$ . Notice that  $\beta$  is consumed twice. This rule ensures that the at-issue dimension is always insensitive to the presence of adjoined CI operators (Potts 2005: 65). See also Karttunen and Peters (1977) for the idea of multidimensionality of meaning.

<sup>4</sup> Note that morphologically, the diminutive form *dechu* combines with the noun *hon*. However, in the logical structure it takes a proposition as its argument.

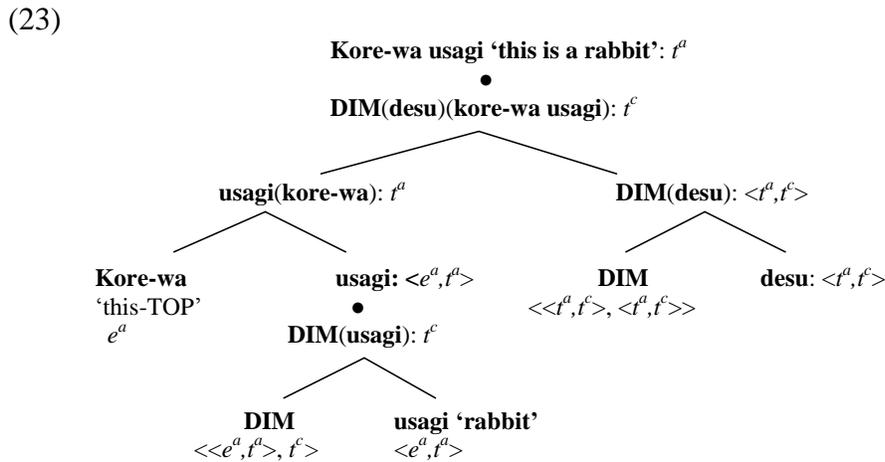
non-honorific diminutive forms like (21), the meaning of diminutivization only scopes over a word. These diminutivizations are ‘metalinguistic’ (e.g. Horn 1989) in the sense that the speaker only targets a particular word and pronounces it like a baby. This clearly contrasts with the case of diminutivization of the performative honorific.

### 4.3 Scope of Self-diminutivization

We have so far considered cases where diminutivization occurs only once within a single utterance. However, as the following example shows, there can be multiple occurrences of diminutive shifts in a single sentence:

- (22) Are-wa uchagi -dechu. (cf. *usagi* = ‘rabbit’)  
 That-TOP rabbit.DIM-PERF.HON.DIM  
 At-issue: That is a rabbit.  
 CI: I am talking to you in a polite way and I am talking to you like a baby.

In (22) diminutivization occurs two times within the same sentence, i.e. in the noun *usagi* and in the performative honorific suffix *desu*. We can represent the semantic/pragmatic structure of (22) as follows:



Note, however, that we don't have to always diminutivize every potential target within a sentence. Compare the following examples. (For the sake of simplicity, here I neglect the politeness meaning of *desu*):

- (24) a. Usagi-wa kawaii-dechu.                      b. ?? Uchagi-wa kawaii-desu.  
 rabbit-TOP cute-PERF.HON.DIM                      rabbit.DIM-TOP cute-PERF.HON  
 At-issue: A rabbit is cute.                              At-issue: A rabbit is cute.  
 CI: the speaker is talking like a baby.                      CI: I am uttering the word *usagi* like a baby.

(24a) is natural baby talk but (24b) is not, because the diminutivization in the latter case only targets the noun part, while the entire mode of speaking is adult talk. Thus, there is an inconsistency/discrepancy in terms of the mode of speaking. On the other hand, (24a)

is considered natural baby talk because diminutivization is done on a performative honorific, which affects the entire mode of speaking. Based on the above asymmetry I propose the following generalization:

- (25) The pragmatic effect of self-diminutivization can differ depending on where it arises.

### 5. The Self-diminutive Shift and Metalinguistic Negation

Let us now look at the above descriptive generalization in a different environment: negation. The interaction between negation and diminutivization further supports the generalization in (25). Observe the following example:

- (26) Are-wa uchagi-dewa nai-desu.  
That-TOP rabbit.DIM-DEWA NEG-PERF.HON  
(i) Metalinguistic reading: That is not [uchagi]. (=The pronunciation [uchagi] is not correct.)  
(ii) Descriptive reading (??): That is not a rabbit. (CI: I am uttering the word *usagi* like a baby.)

In (26) there is a metalinguistic reading, but there is no descriptive reading. The descriptive reading in (26ii) is odd because, although the speaker shifts the mode of speaking in the noun part, he/she does not shift his/her mode of speaking at the end of the sentence. Thus, the mode of speaking is inconsistent just as in (24b).

Let us now consider the opposite pattern:

- (27) Are-wa usagi-dewa nai-dechu. (descriptive negation)  
That-TOP rabbit-DEWA NEG-PERF.HON.DIM  
At-issue: That is not a rabbit.  
CI: I am uttering the proposition like a baby.

In (27) diminutivization occurs only in the performative honorific *desu*, and in this situation we can only get a descriptive negation reading (in baby talk mode).

If both *usagi* and *desu* are diminutivized, the sentence can only be interpreted as a descriptive negative sentence in baby talk mode:

- (28) Are-wa uchagi-dewa nai-dechu. (descriptive negation)  
That-TOP rabbit.DIM-DEWA NEG-PERF.HON.DIM  
That is not a rabbit.  
CI: I am talking like a baby.

There is no metalinguistic negation reading in (28) because it does not make sense to deny the baby talk pronunciation given the use of baby talk mode.

### 6. The Object-diminutive Shift: Lexicalization and (Non)-fictiveness

So far we have solely focused on the meaning of the self-diminutive shift. Let us now turn our attention to the meaning of object diminutivization based on the following examples:

- (29) a. Hanako-san  
 At-issue: Hanako  
 Implicature: I have a positive feeling toward Hanako.
- b. Hanako-**chan**  
 At-issue: Hanako  
 Implicature: I have a positive feeling toward Hanako  $\wedge$  I am treating Hanako as small like a child.

As we observed in section 2, an object-diminutive shift only occurs within the honorific name suffix *san*. Thus, we can say that *chan* is a lexicalized diminutive morpheme. Then how can we analyze the meaning of object diminutivization?

As in the case of self-diminutivization, object diminutivization measures its target based on the scale of ‘maturity’ in the domain of CI. In other words, object diminutivization is not a matter of physical size. This can be corroborated by the fact that a target can be actually tall/big:

- (30) Hanako-chan-wa                      shincho-ga      170 cm aru.  
 Hanako-HON.DIM<sub>OBJ</sub>-TOP   height-NOM   170 cm be  
 At-issue: Hanako is 170 cm tall.  
 CI: I have a positive feeling toward Hanako and I am treating Hanako like a child.

However, unlike the self-diminutive shift, the object-diminutive shift does not always have to posit a gap between a real degree and a diminutivized degree. In fact, when we use *chan* it is often the case that the target is actually a child. A diminutivized degree can correspond to the real degree of the target. Therefore, I propose the following denotations for *chan* and *san*:

- (31) a.  $[[\text{chan}]]: \langle e, f \rangle = \lambda x. \text{sp has a positive feeling toward } x \wedge \exists d[d < \text{STAND} \wedge \text{mature}(x) = d \wedge \underline{d < \text{actual degree of maturity of } x}]$   
 (where the underlined part is optional)
- b.  $[[\text{san}]]: \langle e, f \rangle = \lambda x. \text{sp has a positive feeling toward } x$

Notice that the underlined part in (31a) is optional. This makes it possible to use *chan* in a situation where a diminutivized degree corresponds to the actual degree of the target. Notice also that unlike cases involving the self-diminutive shift, in (31a) there is no *much* component (i.e. !). This ensures that the target does not have to be regarded as ‘extremely’ low on the scale of maturity (i.e. the maturity target does not have to be located at the level of a baby).

Then what happens if *chan* is attached to a first person pronoun, as in (32)?

- (32) Boku-chan ‘the speaker.male-chan’

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*Boku* is the first person pronoun for a male speaker. One might think that this is a case of the self-diminutive shift. However, we should analyze (32) as object diminutivization because here the speaker is not uttering the word *boku* in order to behave like a baby. We can summarize the two kinds of diminutive shifts as follows:

### (33) Self-diminutivization vs. object diminutivization

	<b>Self-diminutivization</b>	<b>Object diminutivization</b>
Productivity	Productive	Lexicalized (only occurs in the name honorific suffix <i>san</i> )
Compositionality	Compositional	Lexicalized ( <i>chan</i> is considered to be a single word)
Sound correspondence	[s] → [tʃ] [s] → [ʃ]	[s] → [tʃ] (However, some dialects may use the form <i>shan</i> as a way of expressing an object-diminutive meaning.)
Fictiveness of the diminutivized degree	diminutivized degree = Fictive	diminutivized degree = Fictive/non-fictive

## 7. Typology of Diminutives

Finally let us consider the meanings of the Japanese diminutive shifts from a broader perspective. I think that the Japanese diminutive shifts clearly suggest that there are two kinds of classificatory parameters for the meanings of diminutives: (i) whether the target of diminutivization is the speaker himself/herself or a third person entity, and (ii) whether the scalar meaning triggered by diminutivization is semantic or pragmatic.

Regarding the first parameter, it seems to me that the literature has often focused on object diminutivization. However, our examination of the Japanese diminutive shifts clearly shows that there is a mode of self-diminutivization as well.

Note that in the literature on the category of the diminutive, it is often connected with ‘hedging/politeness’ (Brown and Levinson 1987; Matsumoto 1985, 2001; Dressler and Merlini Barbaresi 1987; Sifianou 1992; Jurafsky 1996; Mendoza 2005). For example, it has been claimed that the Japanese degree morpheme *chotto* ‘a bit’ can be used to weaken the degree of illocutionary force and scholars have connected its meaning to the category of diminutive (Matsumoto 2001; Dressler and Merlini Barbaresi 1987; Jurafsky 1996):

- (34) *Chotto hasami aru?* (Mild request)  
 A bit scissors exist  
 At-issue: Do you have scissors?  
 Implicature: I am weakening the degree of illocutionary force of the request.

In our typology, it is possible to analyze this type of diminutive as a kind of object-diminutive shift. We can say that here the target of diminutivization is the illocutionary force (or the illocutionary act itself) (Sawada 2011).

The second parameter is concerned with the semantics/pragmatics interface. It is often claimed in the literature that the diminutive has a semantic meaning of smallness. For example, Dressler and Merlini Barbaresi (1987, 2001) claim that diminutive morphemes

have both the semantic feature of [smallness] and a pragmatic feature of [non-seriousness] (cf. Jurafsky 1996).<sup>5</sup> However, we have shown that there are diminutives whose scalar meanings are purely pragmatic (i.e. CI). The meaning of Japanese diminutive shifts does not contribute to the truth condition of a given proposition.

Based on these two semantic parameters, we can posit the following four-way typology of diminutives:

(35) Four-way typology of diminutives

	Self-diminutivization	Object diminutivization
Scalar meaning = semantic	??	- Southern Sierra Miwok
Scalar meaning = pragmatic	- Baby talk (Japanese) ([s]→[tʃ])	- The Japanese suffix <i>chan</i> - The expressive <i>chotto</i> 'a bit'

Note that the parameter on a scalar meaning is only concerned with whether it is semantic or pragmatic. Thus, in principle there can be a situation where an object-diminutive morpheme/shift has both a semantic scalar meaning of smallness/immaturity and some kind of pragmatic meaning (e.g. endearment, pity, etc.).

It seems to me that among the four possible types, there are no diminutives that have a mode of self-diminutivization and a semantic scalar meaning. This type of diminutive semantically denotes that the speaker is small/immature. However, I imagine that there are no such diminutives in natural language because there seems to be no strong functional motivation to create such diminutive morpheme/shift.

## 8. Conclusions

In this paper we have investigated the meanings and distribution patterns of the two kinds of diminutive shifts (a self-diminutive shift and an object-diminutive shift) in Japanese and considered what the phenomenon of Japanese diminutive shifting suggests for the semantic typology of diminutives.

Regarding the meanings of the two kinds of diminutivization, I argued that both kinds of diminutivization posit the same scale structure: they both trigger a CI scalar meaning that the degree of maturity of the target (either the speaker or a third party) is low. However, I also showed that there are differences between them in terms of productivity and the gap requirement (i.e. whether there must be a gap between the diminutivized degree and the actual degree with respect to the target). I also pointed out that unlike object diminutivization, the pragmatic effect of the self-diminutive shift is sensitive to where it arises: if self-diminutivization occurs with a performative honorific that specifies a manner of speaking, its meaning affects the entire mode of utterance. However, if it occurs with ordinary words, the meaning of the self-diminutive shift only scopes over the given lexical item, the result of which is to create a metalinguistic expression.

The Japanese diminutive shifts provide important perspectives for considering the semantic variations among diminutives. I proposed that there are two parameters for the

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<sup>5</sup> They further argue that the pragmatic meaning is more basic than the semantic meaning of [smallness].

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meaning of diminutives (one concerns the target and the other concerns the status of scalar meaning), and suggested that only certain combinations are possible.

Studying the Japanese diminutive shift provides important theoretical implications for the theory of CI as well. I claimed that the fact that diminutivization can occur in the honorific suffix *desu*, triggering a CI, can further support the idea that expressive content can apply to expressive content (McCready 2010; Gutzmann 2011). I also suggested that there can be a rule-based/productive CI in natural language, as opposed to the word-based CIs (e.g. *frankly speaking, therefore*). I hope this paper sheds new light on the meaning of diminutives and the nature of CI in natural language.

This paper has left a number of questions to be explored. First, there is a question as to what extent the distinction between the self-diminutive shift and the object-diminutive shift is explicit in other languages. It seems to me that cross-linguistically, it is common to use an object-diminutive morpheme in a child-directed situation. In that situation, it seems that a flavor of self-diminutivization also emerges pragmatically. Second, there is a question as to whether our analyses can extend to augmentatives (the opposite category from diminutives). One assumption is that augmentatives have a scalar meaning [big] and are used in a ‘non-seriousness/fictive’ situation (Dressler and Merlini Barbaresi 1994). Are there similar variations in the semantics of augmentatives? Finally, in this paper I proposed the existence of a productive/rule-based CI. We need to further investigate the nature of this kind of CI from both an empirical and a theoretical perspective.

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