

# WHO AM I TALKING TO WHEN I'M TALKING TO MYSELF? A CROSS-LINGUISTIC STUDY\*

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## 1. Background

*Self-talk* is the phenomenon of talking to oneself. Holmberg (2010) has observed that speakers can refer to themselves with either *I* or *you* when talking to themselves, as illustrated in (1)a and (1)b, respectively.

- (1) [Context: Martina is talking to herself]
- |    |                               |                               |
|----|-------------------------------|-------------------------------|
| a. | <b>I</b> 'm such an idiot.    | <i>I-centered self-talk</i>   |
| b. | <b>You</b> 're such an idiot. | <i>You-centered self-talk</i> |
- (Ritter & Wiltschko, 2021)

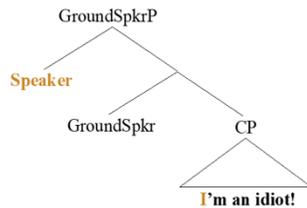
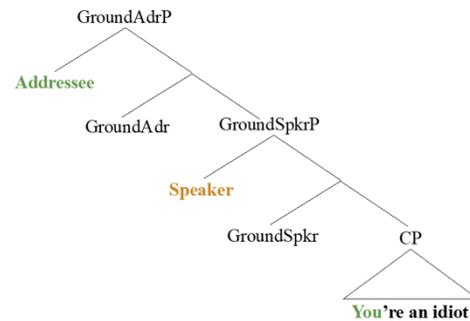
These two varieties of self-talk are subject to different constraints. For instance, only *you*-centered self-talk can be used with a vocative (2), or with addressee-oriented sentence-final particles, such as *eh* and *huh* (3), but only *I*-centered self-talk is compatible with verbs of cognition (4).

- |     |    |   |                                 |
|-----|----|---|---------------------------------|
| (2) | a. | *Martina <sub>i</sub> , <b>I</b> <sub>i</sub> 'm such an idiot.   | <i>Vocatives</i>                |
|     | b. | Martina <sub>i</sub> , <b>you</b> <sub>i</sub> 're such an idiot. | (Ritter & Wiltschko, 2021)      |
| (3) | a. | * <b>I</b> 'm too tired to do this, <b>eh/huh</b> ?               | <i>Sentence-Final Particles</i> |
|     | b. | <b>You</b> 're too tired to do this, <b>eh/huh</b> ?              | (Ritter & Wiltschko, 2021)      |
| (4) | a. | * <b>I</b> can't take this anymore.                               | <i>Verbs of Cognition</i>       |
|     | b. | <b>You</b> can't take this anymore.                               | (Holmberg, 2010: 60 (14))       |

Ritter & Wiltschko (2021) argue that speakers who use *I*-centered self-talk are thinking out loud, while those who use *you*-centered self-talk are having a conversation with themselves as the addressee. Assuming Wiltschko's (2021) Interactional Spine Hypothesis, they propose that these empirical differences indicate that the two types of self-talk are structurally distinct: *I*-centered self-talk only has the layer of Interactional Structure associated with the speaker, whereas *you*-centered self-talk has both the speaker- and addressee-oriented layers. This structural difference is illustrated in (5).

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(5) a. *I-centered self-talk*b. *You-centered self-talk*

(Ritter &amp; Wiltschko, 2021)

Ritter & Wiltschko's (2021) analysis of self-talk is based entirely on English data, whereas the present study set out to probe the properties of self-talk with a cross-linguistic lens. Our focus was on the following questions: (i) does self-talk pattern identically across languages? (ii) Are pronouns that encode formality and/or social content used in self-talk? We investigated Mandarin and Japanese in order to explore the properties of self-talk in two broad types of languages: Type 1 languages (such as Mandarin) are those that have a binary formality distinction in the 2nd person (i.e. formal vs informal). Other languages of this type are German (6) and French (7). Based on informal native-speaker judgements, we have observed that using the formal 2nd person pronoun sounds unnatural in the context of self-talk.

(6) a. #**Sie** sind ein Idiot. *German*  
 2.PL COP DET idiot  
 'You (FORMAL) are an idiot'

b. **Du** bist ein Idiot.  
 2.SG COP DET idiot  
 'You (INFORMAL) are an idiot.'

(7) a. #**Vous** êtes des idiots. *French*  
 2.PL COP DET idiot  
 'You (FORMAL) are an idiot'

b. **Tu** es un idiot.  
 2.SG COP DET idiot  
 'You (INFORMAL) are an idiot.'

Type 2 languages are those with extensive, sociolinguistically-loaded pronoun inventories, such as Japanese and Korean. In preliminary fieldwork on these two languages, we observed that *you*-centered self-talk is unnatural, as in (8) and (9) below.

- (8) # あなた / お前 は 馬鹿 だ! *Japanese*  
**anata / omae** wa baka da  
 2 / 2 TOP idiot COP  
 ‘You’re an idiot!’
- (9) # 너는 정말 바보-야! *Korean*  
**ne-nun** cengmal papo-ya  
 2-TOP really idiot-be.PRES.COMP  
 ‘You’re such an idiot!’

While both Mandarin and Japanese are pro-drop languages, pro-drop in Japanese is particularly prevalent due to the pressure to avoid pronouns for reasons of politeness (Helmbrecht 2013). In self-talk, one would not necessarily expect politeness norms to be active. This is because the self does not require the same degree of societally-defined formality as a distinct interlocutor. The study of these two languages thus permits us to explore the interaction between pro-drop and politeness in the unique environment that self-talk presents. English, with its single 2nd person pronoun *you*, serves as a baseline for comparison with Type 1 and Type 2 languages.

## 2. Methodology

Self-talk presents a unique challenge in terms of gathering data because it is often simply realized as inner speech, which is not audible. Nevertheless, it is sometimes spoken aloud (e.g., when the speaker is alone and knows no one is listening). Since it would be difficult to naturalistically recreate such contexts in a lab, it seems that introspective speaker-judgements are our only tool. However, too much meta-reflection on how one talks to oneself can quickly lead to judgement fatigue. The present study thus adopted a novel methodology: a comic-captioning activity. This methodology enabled us to gather data on this unique phenomenon in a way that did not require drawing the participant’s attention to the properties of self-talk.

Participants were asked to complete an online survey<sup>2</sup> in which they had to provide captions for comics that were missing dialogue. In each question, they were presented with one or more panels of a comic (with one panel that had a blank speech or thought bubble) and asked to either (a) generate their own caption, or (b) pick one or more appropriate responses from a list of dialogue options. If they felt that none of the given options were possible, they were also able to write their own. *You*-centered responses and *I*-centered responses were never both available in the list of pre-set options so as to avoid direct comparison between the two. Such comparison might make the purpose of the study obvious and potentially influence judgements. Comics which targeted *you*- and *I*-centered responses were balanced across the study. Filler comics with simple two-person dialogues (i.e., non-self-talk contexts) served as a control.

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Since participants were able to select more than one dialogue option, choosing to *not* select a given response was interpreted as a dispreference for that response in that context. That is, we interpreted cases where a provided response was not selected as indicating that the response in question was infelicitous or ungrammatical. The comics were designed to feature a variety of self-talk contexts, including talking aloud to oneself, thinking to oneself, talking to oneself in the mirror, positive and negative emotional contexts. Figure 1 shows two single-panel comics, and one two-panel comic from the study. (All comics were drawn by the first author.)



**Figure 1.** Sample of comics from the study.

There were 43 responses for the English study (23 female, 18 male, 1 nonbinary, 1 genderqueer, age bracket modes 18-24 and 25-34), 84 responses for the Mandarin study (64 female, 17 male, 3 undisclosed; age bracket mode 18-24), and 16 for the Japanese study<sup>3</sup> (12 female, 4 male; age bracket mode 35-44)<sup>4</sup>. Mandarin and Japanese versions of the baseline English study were created with the assistance of native speaker consultants to ensure that the translations were natural, while still remaining as close as possible to the English version.

### 3. Results and Discussion

Several intriguing patterns emerged from this investigation. First, *I*-centered self-talk appears to be the default cross-linguistically. A dispreference for *you*-centered self-talk was observed across all three languages. However, *you*-centered self-talk was dramatically less preferred in Japanese compared to English. Second, we observe that there was a striking avoidance of formal pronouns in self-talk in Mandarin, aligning with the French and German judgements. Finally, we identify the mirror as a context of particular interest in self-talk, in that it licenses the use of *you*-centered self-talk, even in

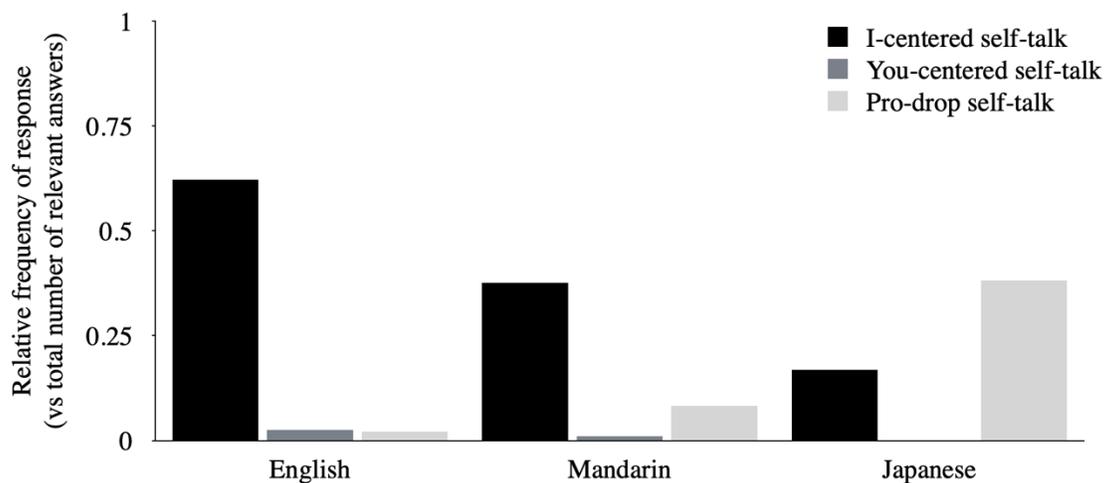
<sup>3</sup> In an effort to balance participant numbers across languages, data collection is still ongoing.

<sup>4</sup> There were 46 total responses for the English study, 138 total responses for the Mandarin study, and 18 total responses for the Japanese study. Some study responses had to be discarded for the following reasons: failure to complete the study and re-consent (44 in Mandarin study), not being a native speaker of the target language (3 in English study, 9 in Mandarin study, 2 in Japanese study), or providing completely irrelevant answers (1 in Mandarin study).

languages (and for speakers) that otherwise disprefer it. We note in passing that our study also provides empirical evidence of interspeaker variation in self-talk, as already observed in Holmberg (2010). In this section we present each of these findings in detail. In section 3.1, we discuss the general patterns in the acceptability of *I*- and *you*-centered self-talk, both across speakers and across languages. In section 3.2, we focus on the avoidance of formal pronouns, and in section 3.3, we discuss the mirror context, which facilitates *you*-centered self-talk.

### 3.1 Default of *I*-centered self-talk

*I*-centered self-talk was found to be the default mode of self-talk in all three languages (English, Mandarin, and Japanese). Figure 2 illustrates this by presenting the relative frequency of 1st-person vs 2nd-person pronouns in responses generated by the participants. The frequency of response is measured as the total number of responses with a positive occurrence of a given item (e.g., the occurrence of a 1st person pronoun referring to the speaker) divided by the total number of relevant responses.



**Figure 2.** Pronoun use in participant generated responses.

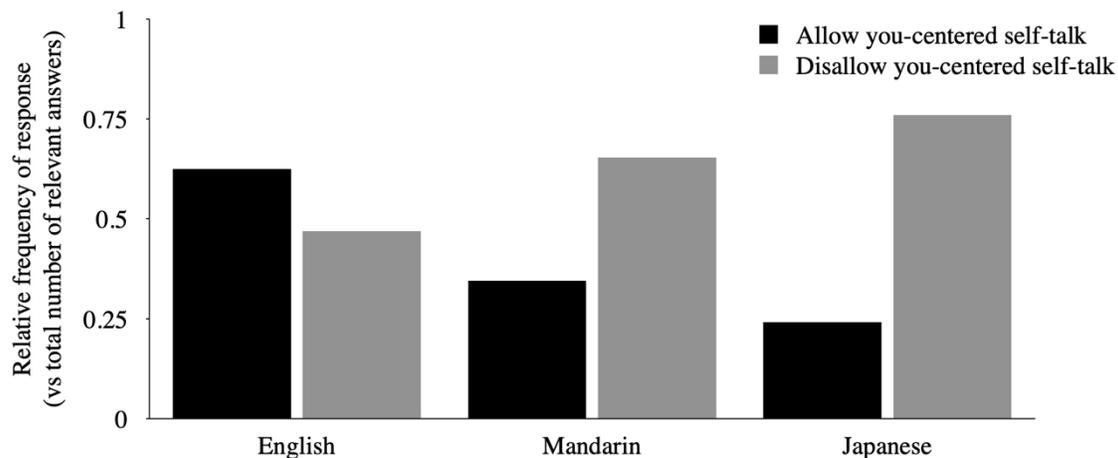
As seen in Figure 2, participants used *I*-centered self-talk almost exclusively in captions they composed themselves. This suggests that *I*-centered self-talk is the mode of self-talk that most speakers default to. An additional note about the Japanese data must be made, however. Because Japanese is a pro-drop language<sup>5</sup>, and self-talk with a dropped pronoun

<sup>5</sup> As mentioned earlier, Mandarin is also a pro-drop language. However, we do not observe the same bias towards pro-drop responses in the Mandarin data. It must be acknowledged that, because of the vastly different participant numbers, it could be that this is an artefact of the low participant numbers for Japanese. However, pronouns in Mandarin are not avoided for politeness to the same degree as they are in Japanese. This might explain the observed pattern, though it is not clear that norms of politeness should hold when talking to oneself. These early results therefore suggest that there are some sociolinguistic conventions (such as pronoun avoidance) which may carry over into self-talk, even if the original sociolinguistic pressure is not present.

was the most frequent mode of self-talk, it was impossible to classify the majority of Japanese responses as either *I*-centered or *you*-centered self-talk (since there is no grammatical indication as to whether *pro* is 1st or 2nd person in Japanese). However, the crucial point is that while we observe many instances of participants writing free responses with an overt 1st-person pronoun,<sup>6</sup> we don't have a single instance of such a response with an overt 2nd-person pronoun. That is, despite pro-drop being the most common variety of self-talk in Japanese, we still observe the preference for *I*-centered self-talk in Japanese responses that contain an overt pronoun.

The preference for *I*-centered self-talk (Figure 2) is consistent with Ritter & Wiltschko's (2021) structural analysis: given that *I*-centered self-talk is structurally less complex (in that it only has the structure associated with the speaker, and not that associated with the addressee), we expect the less complex form to be more common.

Focussing on *you*-centered self-talk, we observe that it does not appear to be equally acceptable in the different languages investigated in this study. Specifically, it was most accepted by English participants (with more responses selected in favour of *you*-centered self-talk than against it), and least accepted by Japanese participants. However, *you*-centered self-talk was found to be dispreferred for many speakers across all three languages, as illustrated in Figure 3. This seems to indicate that treating yourself as an addressee is a marked option, which is reflected in the grammar.



**Figure 3.** Cross-linguistic permissibility of *you*-centered self-talk based on responses to questions which presented a set list of dialogue options to the participant.

There is a general avoidance of sociolinguistically-loaded pronouns (Helmbrecht 2013), and unsurprisingly these forms are also avoided in self-talk: for instance, Japanese 2nd-person pronouns are rich in sociolinguistic content, and thus are less available for self-talk than English *you*, which lacks sociolinguistic content (see also section 3.3).

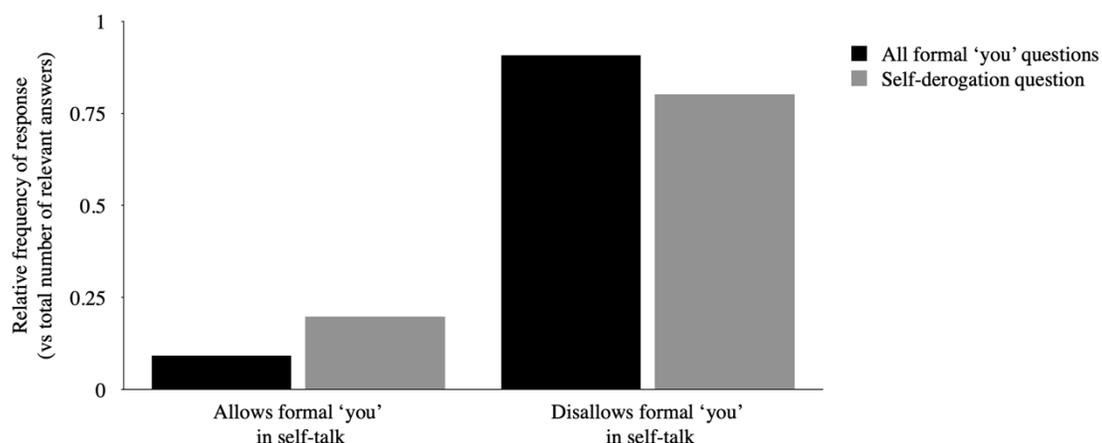
<sup>6</sup> Japanese speakers employed a variety of 1st-person pronouns in their responses. Teasing apart the complexities behind what motivates the use of different 1st-person pronouns requires a more targeted study and is beyond the scope of the current investigation.

Significantly, one cannot simply make claims about all speakers of a given language when it comes to self-talk, as shown in Figure 3. For instance, even though native English speakers appear to be much more likely to accept *you*-centered self-talk than speakers of Mandarin or Japanese, not all English participants found it acceptable. Thus, while we set out to uncover language-wide patterns in self-talk in this study, we must remain aware of the fact that it is a phenomenon which, at least in some cases, exhibits interspeaker variation.

### 3.2 Avoidance of formal pronouns

Intuitively, the use of formal forms is unusual in self-talk, except for in specific circumstances. For instance, if a professor were to say to themselves, *Alright Professor, you've got this*, it would seem exceptionally odd unless said in a very specific context (for example, if the professor were looking at themselves in a mirror, wearing academic regalia and motivating themselves before an important talk).

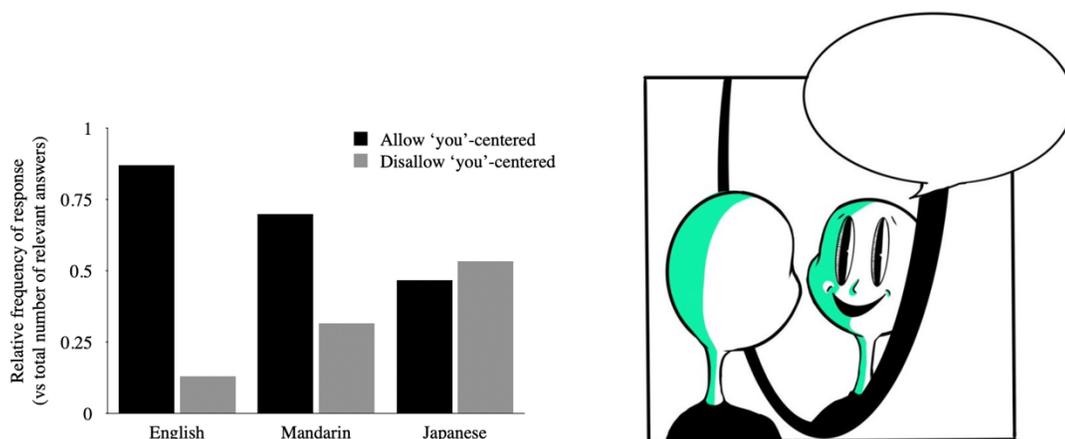
Paralleling the native speaker intuitions for French and German presented in (6) and (7), we found that formal 2nd person pronouns were avoided in Mandarin self-talk. In the preliminary fieldwork conducted to develop the study, some native Mandarin speakers informed us that using the formal 2nd person pronoun *nín* was possible in some specific self-talk circumstances (e.g., self-derogation). To test this, we included a comic in the study that supplied a context which the consultants thought would license the use of formal *nín* in self-talk: a student receiving a horrible test score and berating themselves about it. However, most participants still did not select the formal pronoun even in this context. Figure 4 illustrates the responses to questions where the formal pronoun *nín* was presented as part of the set list of dialogue options (this compares responses to all three questions which had an option involving *nín*, and the single question which had an ironic self-derogation context).



**Figure 4.** Avoidance of formal *you* (您 *nín*) in Mandarin *you*-centered self-talk.

### 3.3 Mirror self-talk

In Section 3.1, we discussed how *you*-centered self-talk seems to be avoided in Mandarin and Japanese, at least compared to English. However, in self-talk contexts where the character engages with their reflection in a mirror, we see a sudden increase in the permissibility of *you*-centered self-talk in Mandarin and Japanese (Figure 5). In Mandarin, we see a complete reversal of the proportion of participants favouring *you*-centered self-talk (i.e., in the mirror context, more participants allow *you*-centered self-talk than disallow it). In Japanese, we still observe a general dispreference for *you*-centered self-talk even in the context of the mirror. However, the difference between the relative preference vs. dispreference is much smaller than in Figure 3. Data is given for a specific comic (right) that was presented with the pre-set *you*-centered option (*You can do it!*).

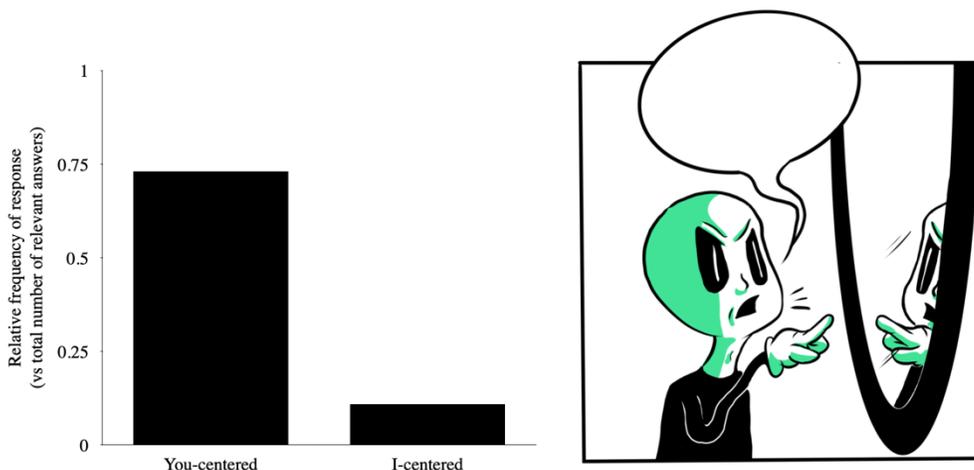


**Figure 5.** Permissibility of *you*-centered self-talk in the context of a mirror.

We argue that the mirror facilitates *you*-centered self-talk by producing an externalized representation of the self (i.e., a reflected image). This reflection of the self can then serve as the addressee, permitting more sociolinguistically-loaded 2nd-person pronouns.

We further observed that in addition to facilitating *you*-centered self-talk, the mirror facilitates pointing. While pointing at the self (without a mirror) during self-talk would seem bizarre, pointing at one's reflected image in a mirror while addressing that reflection is certainly acceptable. Unfortunately, we only have data concerning the availability of pointing for English (a comic-captioning activity was used as a filler in another study<sup>7</sup> of 36 native English speakers conducted by the first author). As seen in Figure 6, participant-generated captions for a comic featuring a character pointing at their reflection were almost entirely *you*-centered, a markedly different result than that in Figure 2. We are currently testing this cartoon with Mandarin and Japanese participants.

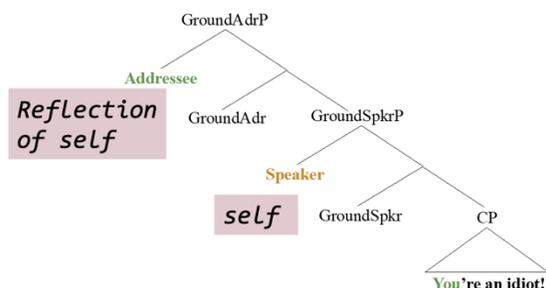
<sup>7</sup> University of Calgary Ethics ID Number: REB22-0169.



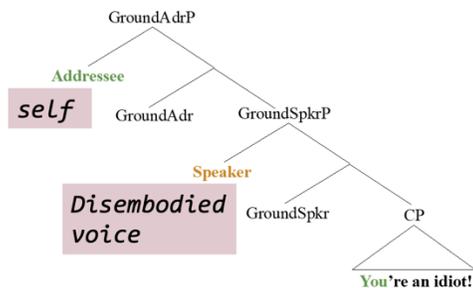
**Figure 6.** Pronoun use with pointing at reflection in English free responses.

We conclude that the mirror provides an environment that facilitates both social deixis (e.g., sociolinguistically-loaded pronouns) and spatial deixis (e.g., pointing). Based on this, we suggest that there are two different kinds of *you*-centered self-talk: (i) mirror-assisted self-talk in which the self is the speaker and the image of the self is the addressee, and (ii) non-mirror-assisted self-talk, in which the self is the addressee, and the speaker role is assumed by an internalized disembodied voice, i.e., a voice that is talking to the self. This voice can either be an inner critic or an inner coach, but is crucially not identified as the self. That is, in such contexts, the self takes on the perspective of the addressee and treats the speaker as “tak[ing] on the voices of others” (Gacea, 2020: 34). Thus, only when the *self* is the speaker can formal or sociolinguistically-loaded pronouns be felicitously used. These two structural configurations are given in (10).

(10) a. Mirror-assisted self-talk  
(self is addressee)



b. Mirror-less self-talk  
(self is speaker)



#### 4. Conclusion and future research

The present study revealed that the use of self-talk differs across languages, albeit with some broad cross-linguistic patterns, and that there is significant interspeaker variation. What this means is that any claims made for self-talk in a given language must take into account the fact that self-talk is subject to speaker-specific idiosyncrasies.

With respect to our first question, does self-talk pattern identically across languages, the answer, broadly, is a qualified yes. We observed that *I*-centered self-talk is the default across English, Mandarin, and Japanese, but that *you*-centered self-talk is avoided to different degrees across languages, being most accepted in English and least accepted in Japanese. In all three languages, this situation is reversed in the context of a mirror. We argue that the mirror facilitates *you*-centered self-talk due to the fact that it produces an externalized image of the speaker, which can serve as the addressee. This is a critical point in answering our second primary question, are pronouns that encode formality and/or social content used in self-talk. We observed that while Japanese does not generally permit *you*-centered self-talk, it is more permissible in the context of a mirror. We attribute this to the fact that the mirror enables deixis, including spatial deixis (e.g., pointing) and social deixis (e.g., sociolinguistically-loaded content). Based on this discovery of different behaviour in mirror contexts, we argue for two kinds of *you*-centered self-talk, one in which the self is the speaker, and the externalized image is the addressee (mirror-assisted self-talk), and another in which the self is the addressee, and a disembodied inner voice assumes the role of the speaker. Crucially, this means that the self bears at most one interactional role in a given self-talk interaction.

Given that the Japanese pronoun inventory is extensive, a careful analysis is required to tease apart the contextual intricacies of how each Japanese pronoun might be used in self-talk. Future research will have to investigate different self-talk contexts in finer detail: the present study, due to its exploratory nature, included a wide variety of contexts (e.g., emotionally positive and negative contexts, contexts with and without a mirror) but we had relatively few examples of each context in order to keep the study to a manageable size. This opens the door to more targeted investigations that could focus, for instance, on how emotional context influences pronoun choice in self-talk. It is also unknown exactly what motivates the observed interspeaker variation: for instance, why do some English speakers find the use of *you* odd in self-talk, while others accept *you*-centered self-talk? Why do some Japanese speakers find *you*-centered self-talk appropriate in the context of a mirror while others do not? The sources of these differences remain to be investigated.

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