

REFERENCE INTRODUCTION IN SPEECH AND GESTURE – A COMPARISON OF DUTCH AND JAPANESE

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ABSTRACT

This paper compares the manner in which native speakers of Dutch and Japanese use linguistic devices as well as gestures to introduce referents in narratives. Based on Givón's (1983) principle of topic continuity, the analyses examine story-retelling narratives produced by native speakers of Dutch (N=12) and Japanese (N=15). Of particular interest is the impact of morphological and syntactical characteristics of the language spoken on the choice of linguistic devices and the production of gesture in marking the information status of animate characters. The results reveal both a universal principle and cross-linguistic variation in reference introduction in two modalities. It is concluded that speech and gesture are tightly linked in marking the information structure of discourse, which is guided by universal pragmatic principles and language-specific properties that characterize the manner in which information status is mapped onto form.

1. INTRODUCTION

In producing narrative, speakers are required to convey information about referents and events clearly so that meaningful messages can be decoded efficiently by listeners. In order to facilitate the process, speakers indicate whether the information carried by a referent at the time of utterance is new, given, presupposed or not. Although the discourse-pragmatic principles underlying the marking of the information status have been found to be universal, languages vary in the devices available to indicate the relevant information status. This paper examines the influence of language-specific properties of the language spoken on the choices of linguistic devices used to mark the information status of animate characters, and the production of gestures that occur in synchrony with speech.¹

¹ The present chapter derives from a larger study investigating how foreign language learners cope with introducing and maintaining reference in narrative discourse by means of speech and gesture (Yoshioka 2005).

2. MARKING OF INFORMATION STATUS IN DISCOURSE

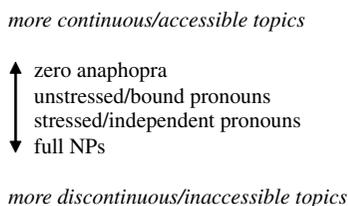
Languages provide various linguistic devices to mark the information status of a referent in discourse. One such device is referring expressions. When speakers refer to the same entity in narratives, the choice of referring expressions shifts, as shown in Example (1):

- (1) There was a boy. One day he found a frog, and (\emptyset) named it “Froggie”.

In this English example, three referring expressions “a boy”, “he” and a zero-anaphora (\emptyset) are used to refer to the identical character. The question of how these devices are used to express the information structure of discourse by speakers of different languages has been pursued by a number of scholars. Various views and notions have been proposed (for example, Ariel 1988; Chafe 1994; Clark and Haviland 1977; Givón 1983, 1984; Halliday and Hasan 1976).

We will briefly review Givón’s (1983, 1984) position here. Givón argues that a topic continuing from the preceding clause will be more predictable, and, as a result, may be easier for the listener to process than new or re-introduced topics. Givón presents the “quantity universal”, which states that “more continuous, predictable, non-disruptive topics will be marked by *less marking material*; while less continuous, unpredictable/surprising, or disruptive topics will be marked by *more marking material*” (Givón 1984: 126, italics in the original). Figure 1 is the graphical representation of this principle.

Fig. 1: Topic continuity and referential forms (based on Givón 1983)



The quantity universal has been investigated in various languages, and there is general consensus on this view in the literature (e. g. Clancy 1980; Givón 1983; Hinds 1983). For instance, full NPs (noun phrases) (more marking material) are more likely to be used to introduce referents than pronouns or zero-anaphora (less marking material) in both English and Japanese.

However, languages vary in the availability and the possibilities of the use of certain referring expressions. In most of the Indo-European languages, nominal determiners, such as definite and indefinite articles, are obligatory and are used to distinguish the information status of a referent. Observe the following example:

- (2) A boy had a dog and a frog. The frog was kept in a jar.

In (2), when “frog” is newly introduced, it is marked by an indefinite article as “a frog”. Upon the second mention, the same referent is marked with a definite article as “the frog”. The two articles clearly distinguish the information provided by the two NPs as new and given. However, such local (at the word level) newness marking by article systems is not a universal practice. In languages such as Polish, Chinese, Japanese and Finnish, these devices are not available. Accordingly, other means of marking the information status of referents are adopted. In Japanese, numeral classifiers such as *hiki/piki*, a counter for animals, may be utilized in the place of an indefinite article, although its use is not obligatory. On the other hand, it has been suggested that the information status of a referent in Japanese narrative may be reflected in the choice of post-positional particles. Studies report that the nominal particle *ga* in Japanese is associated with the introduction of a referent (for example, Hinds 1983; Maynard 1987).

Referring expressions are not the only devices used to mark the information status of a referent. They can be combined with optional clause structure variations. It has been claimed that the position of information in a clause is governed by a universal principle: new information is likely to be placed towards the end of utterances and the given information towards the beginning (e.g. Lambrecht 1994). In order to realize this principle, speakers may use various clausal constructions such as existentials or inversions, as these allow newly introduced referents to appear towards the end of utterances. For instance, with the use of so-called “dummy subjects”, the referents in (3) and (4) are introduced post-verbally (that is, away from the beginning of the utterances) in English and Dutch respectively. Inversions, as in (5), may also be used to introduce referents post-verbally.

- (3) There is an owl living in a tree.
 (4) *Er zit een kikker in een pot.*
 there sit a frog in a pot
 “There is a frog in a jar”
 (5) The boy looked into a hole, and out came an owl.

Studies show that the post-verbal position is often preferred for the introduction of new referents in narrative discourse (Hickmann *et al.* 1996; Hickmann and Liang 1990).

While Givón's view is based on the horizontal distance between the present and the last mention of a referent in discourse, the choice of referential forms may also be influenced by differences in the referential importance of characters. For instance, Chafe (1994) shows that protagonists are more likely to be introduced with proper names than peripheral characters in narratives.

Thus, reference to entities, in particular animate entities, in narrative discourse is governed basically by two factors: one concerns the continuity/predictability of topics, which may be expressed by the choice of referring expressions or the use of clausal constructions. The other concerns the importance of characters. However, cross-linguistic variation is observed in the way referents are introduced, owing to the grammatical characteristics of the language spoken.

3. GESTURE IN DISCOURSE

The newness of a referent is marked not only linguistically but also by gesture. Here, we focus on gestures that accompany speech. These co-speech gestures, or simply gestures, are mostly produced without any conscious effort on the part of the speaker, yet expressions in speech and gesture have been found to be temporally, pragmatically and semantically integrated (see, for example, Kendon 2004 and McNeill 1992 for reviews).

In the present work, the definition of gesture is restricted to the movements of hands and arms in order to achieve some communicative intent. Although gesture has long been studied as a part of non-verbal communication, the focus of such research has been on what is expressed by bodily behaviour that is not expressed in speech. In contrast, a new line of research has developed over the last two decades that investigates how speakers use speech in coordination with gesture to express meaning in various aspects of language use. A number of views have been presented concerning the possible functions and the mechanism of gesture in speech production and interaction (e. g. Goldin-Meadow 2003; Kendon 2004; Kita 2003; McNeill 1992, 2000).

Within research on gesture, of importance to the present investigation are a series of studies conducted by McNeill and his colleagues. They

have investigated the production of gesture in relation to the information structure of discourse, reporting that speakers are more likely to produce gestures when a referent is introduced than later in the narrative when the information carried by the referent is no longer new (McNeill 1992; Levy and McNeill 1992). McNeill (1992) explains the higher frequency of gesture production for new information than given information in terms of Givón's aforementioned quantity universal. The basic assumption underlying McNeill's view is the same as that adopted by Givón: when the information/topic is unpredictable and non-continuous (new), the speaker will provide more material through both speech and gestures. Previous findings support this view, providing evidence that the newly introduced referents are more likely to be accompanied by gestures than those already introduced (e.g. Gullberg 2003; Levy and McNeill 1992; McNeill 1992).

4. CHARACTERISTICS OF DUTCH AND JAPANESE

There are some essential differences between Dutch and Japanese in morphology and syntax that may influence the choice of linguistic devices used by the speakers to mark the introduction of referents. As shown below, the amount of information encoded in referential expressions differs in the two languages. The essential differences between the two languages relate to the availability of articles and pronouns, the possibility of using zero-marking, and the amount of information encoded in nouns and verbs.

As one of the Indo-European languages, Dutch has various finite verbs, rich verb inflections, articles and a complex pronominal system. As with other Germanic languages, the use of articles is obligatory. Dutch articles encode (in)definiteness and common gender (*de*, *het*), while pronouns encode number, gender and case-marking. In contrast, Japanese shares typological characteristics with Altaic languages, such as agglutinating verb morphology and a lack of grammatical gender (Iwasaki 2002). Japanese does not have an article system or authentic third-person pronouns. The equivalents of "he", "she" and "they" are absent in Japanese (Kuno 1973).

In Dutch, the use of zero-anaphora in the subject role is constrained by its grammar. Its use is limited to finite coordinate clauses. In contrast, the use of zero-anaphora is pragmatically driven in Japanese. In Japanese, a so-called pro-drop language, the grammatical subject does not have to be expressed. Generally, contextually retrievable information is often marked with zero-anaphora.

It is generally assumed that Dutch has an underlying SOV word order with an obligatory verb-second rule for the main clause (Koster 1975). Dutch verbs encode number and gender. The basic word order of Japanese is also SOV. However, while variations do occur by scrambling, items being right-dislocated to the position after the verb are very rare. Unlike Dutch verbs, Japanese verbs do not encode number or gender.

Given the aforementioned structural differences between Dutch and Japanese and the close interrelationship between speech and gesture, we will examine the impact of these differences on bi-modal reference introduction. Thus, the present study addresses the following questions.

- (1) Do native speakers of Dutch and Japanese reveal cross-linguistic variation in the manner in which they introduce referents in speech?
- (2) Is the cross-linguistic variation reflected in the production of gesture?

5. DATA

In order to examine the questions, we collected video recordings from 15 Dutch and 15 Japanese speakers. The task used for the data elicitation was retellings of a word-less picture book, *Frog, where are you?* (Mayer 1969), containing 24 separate frames. It is a story about a little boy and his dog who go out in search of the boy's pet frog, which has escaped from a jar. They experience various adventures on the way and are finally reunited with the frog. The value of wordless storybooks in eliciting narratives has been established in previous cross-linguistic studies (e.g. Berman and Slobin 1994; Hickman and Liang 1990). *Frog, where are you?* was considered suitable for the question addressed for the present study, as many animate referents are introduced in the story.

With respect to the procedure of data collection, the participants were videotaped individually in a room that had a video camera set up prior to the session. As the narrator came into the room, they were given a printed copy of the story and asked to memorize the storyline as thoroughly as possible so that they could retell it to a third person who did not know the story. No time constraint was placed on memorizing the story. When the participants decided that they were ready, they retold the story to a native listener. The listener's task was to listen to the story, and ask questions if necessary.

The framework adopted for data analysis can be described as one based on recency or distance (Givón 1983). In the current analysis, an

introduced referent is defined as the first mention of the referent in the narrative. For the analysis of speech data, we also take into consideration the centrality of the characters in the story. McGann and Schwartz (1988) use features such as degree of agency, frequency of appearance and first appearance to distinguish major from peripheral characters. We will adopt these features in identifying the importance of characters in narratives.

With respect to coding, each introduction was coded for the manner in which the information status of a referent is marked at the local level (the word level, such as the choice of referential expressions) and the global level (the location of the newly introduced referent in reference to verbs). The coding of gesture data focuses strictly on the frequency of gesture that accompanies the first mention of animate characters. We did not take into account the form of gesture (see Discussion concerning this point).

6. RESULTS

6.1. CROSSLINGUISTIC ANALYSIS OF REFERENCE INTRODUCTION IN SPEECH

6.1.1. Local and global marking of reference introduction

There were a total of 215 cases of introductions of animate characters: 87 in Dutch and 128 in Japanese. In the Dutch data, the combination of indefinite article and a noun phrase (NP) was observed in all cases of reference introduction. For instance, in (6), a Dutch indefinite article *een* “a(n)” is used to mark the information status of the referent as “new”.

- (6) *Een uil komt uit.*
a owl come out
“An owl comes out”

The position in an utterance is also used to mark the introduction of a referent in Dutch narratives. When speakers mention a referent for the first time, they place the referent in the post-verbal position in 80 percent of the time, as in (7). In (7), the newly introduced referent, *een uil* [an owl], appears post-verbally.

- (7) *En daar komt dan een uil uit*
and there come then an owl out
“Then there, an owl comes out”

Thus, Dutch native speakers mostly use grammatical means (indefinite articles and syntactic position) to mark the information status of referents as “new”.

In contrast, Japanese speakers are not equipped with the grammatical means to mark the introduction of referents as clearly as in Dutch narratives. For instance, although Japanese speakers, like Dutch speakers, also use NPs for reference introduction, the NPs themselves do not necessarily mark the referent as new because Japanese lacks articles. In fact, NPs are also used when referents are re-introduced into narratives (Yoshioka 2005). The nominal particle *ga* has been claimed to be associated with the introduction of referents (Hinds 1983). In the present study, 53 percent of the newly introduced referents are marked by this particle. However, it is not necessarily the case that *ga* only marks the information status of a referent. There are other cases where *ga* is used. For instance, *ga* is preferred in subordinate clauses irrespective of the information status of the referent in subject role. In (8), the boy and the dog represent given information.²

- (8) *Shonen to inu ga okitara, kaeru ga inakunatteimashita*
 boy and dog NOM wakeup:COND frog NOM exist: NEG-become-ASP:PAST
 “when the boy and the dog woke up, the frog had gone”

Given its multiple usages, *ga* is thus not strictly a marker of the newness of a referent. Furthermore, given that Japanese is a strict verb-final language, the post-verbal position is not used to introduce referents.

Instead, Japanese speakers frequently use pragmatic means to mark newness. Two linguistic means are observed in the data. One is the use of the discourse confirmation marker *ne*, and the other is the repetitive mention of the introduced referent. For instance, in (9), the speaker uses the discourse confirmation marker *ne* after the first mention of a referent, as if to attract the listener’s attention to what has just been mentioned. In such cases, the listener frequently responds linguistically by uttering a short confirmation, as in (9). Sometimes the listener may respond gesturally by imitating the action of the speaker, or by a combination of both linguistic and gestural responses.

- (9) *nanka otoko no ko ga ne*
 INJ male GEN child NOM PP
un
 Yeah
bin no naka ni kaeru o katteta no
 jar GEN inside DAT frog ACC keep-ASP:PAST SE

² The abbreviations used in the examples throughout this paper are: TOP=topic marker, ACC=accusative marker, TE=te (conjunctive) form, PAST=past, AUX=auxiliary marker, COP=copula, ADV=adverbial form, ASP=aspect marker, SE=sentence extender, GEN=genitive case marker, INJ=interjection, NP=noun phrase.

“Well, a boy, you see”
 “yeah”
 “kept a frog in a jar”

The Japanese native speakers also frequently repeat the introduction of new referents, as if to firmly establish their identities. In (10), the first mention of a referent is followed by the repetitive mention of the same referent in the following utterance.

- (10) *Otoko no ko to sono inu ga iru no ne*
 male GEN child and that dog NOM exist-NONPAST SE PP
Otoko no ko to inu ga ite
 Male GEN child and dog NOM exit:TE
 “There is a boy and ehm, a dog, you see”
 “There is a boy and a dog, and”

It is worth noting that these pragmatic means to mark the newness of referents in Japanese are observed more frequently when the main characters are introduced than the peripheral ones. No repetitive reference introduction was observed in the Dutch data.

6.1.2. Importance of characters and reference introduction

The literature suggests that the semantic/syntactic roles assumed by animate characters upon their introductions may be influenced by the relative importance they assume in a story. It has been reported that the subject in a clause tends to express (1) information that is not new or (2) new but trivial (Chafe 1994). Put differently, referents with less importance are more likely than those with more importance to assume the subject role. Accordingly, the present data are analysed in terms of the syntactic roles assumed by newly introduced referents.

The importance of characters in the present study is measured by the number of appearances in the story and by whether the first mention of the referent is likely to be accompanied by a proper name or a classifier, based on the analysis by McGann and Schwartz (1988). According to these criteria, the referent with the highest referential importance is the “boy”. This referent is the only character that appears in all of the 24 different pictures that constitute the story. There are two other characters that assume relatively important roles, the “dog” and the “frog”, both pets of the main character. The former is important because it goes on a search for the lost frog with the main character. The boy, dog and frog constitute the main characters. The rest of the animate characters that appear in the story are considered peripheral. There are six possible peripheral characters to be mentioned, although some speakers omitted some of them from their narratives.

Table 1 compares the syntactic roles assumed by the newly introduced main and peripheral characters in Dutch and Japanese narrative.

Tab. 1: Comparison of syntactic roles assumed by the newly introduced animate characters in Dutch and Japanese narratives

	Main characters		Peripheral characters	
	subject	Non-subject	subject	non-subject
Dutch	18 %	82 %	51 %	49 %
Japanese	69 %	31 %	57 %	43 %

The results reveal that, although the two groups of speakers similarly prefer to introduce peripheral characters in the subject role, differences are observed with respect to the manner in which the main characters are introduced. The main characters in the Dutch narratives tend to assume the “non-subject” role (82 percent), the expected pattern according to the literature. In contrast, Japanese speakers prefer to introduce the main characters in the “subject” position of a clause (69 percent). These referents assume the subject role in existential constructions, as in (11).

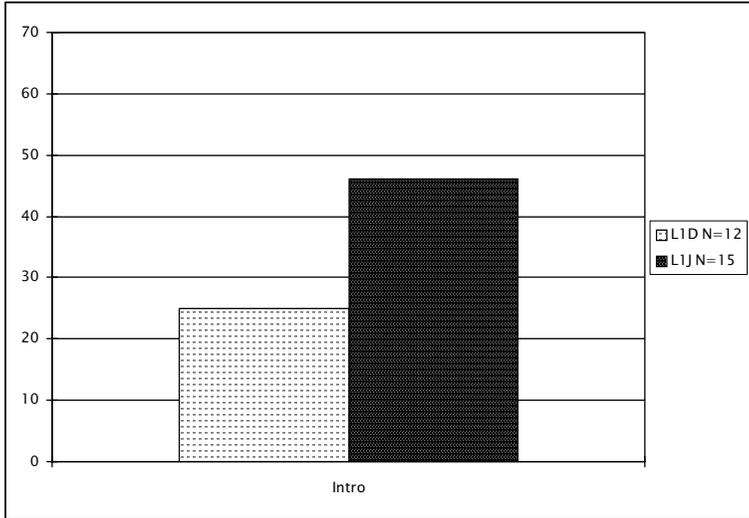
- (11) *Otoko no ko to inu ga ite*
 male GEN child and dog NOM exist:TE
 “There is a boy and a dog”

In (11), the two main characters, the boy and the dog, together assume the subject role of the verb of existence, *iru* [to be]. Note that the introduced animate referents are marked by the nominal particle *ga*. The assignment of the subject role to the newly introduced main characters, despite the universal principle that new information is likely to be placed towards the end of utterances, seems to be motivated by the need of Japanese speakers to distinguish the perceived importance of the various characters by the linguistic means available. Further discussion will be provided later. The frequent use of *ga* for the main characters has been noted in previous research (Nakahama 2003).

6.2. CROSSLINGUISTIC ANALYSIS OF REFERENCE INTRODUCTION IN GESTURE

There were a total of 82 gestures produced accompanying the introduction of animate characters in Dutch and Japanese narratives: 22 in Dutch and 60 in Japanese. 25 percent of the introductions of the new referents in Dutch narratives are accompanied by gestures, while the figure for Japanese is 46 percent (Figure 2).

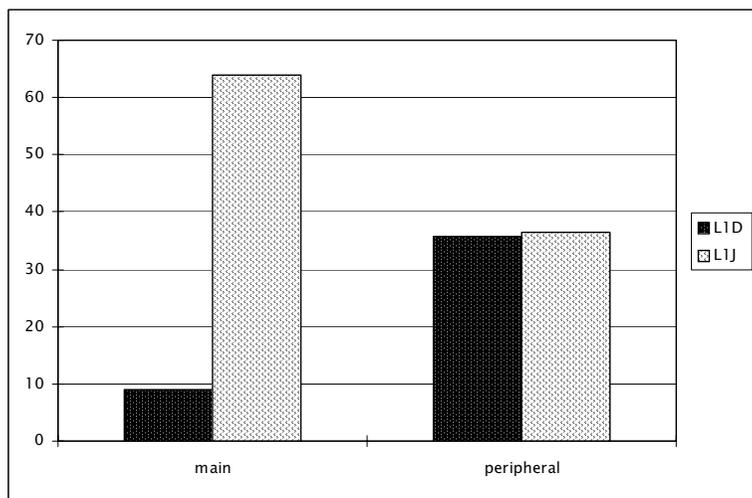
Fig. 2: Frequency of gesture accompanying the first mention of animate characters in Dutch and Japanese narratives



The frequency of gestural accompaniment of the first mention of referents is further analysed for the main and peripheral-characters. Figure 3 shows the frequency of gesture accompanying the first mention of these referents in the Dutch and Japanese narratives.

Figure 3 shows that around 35 percent of the first mentions of the peripheral characters are similarly accompanied by gesture in both Dutch and Japanese narratives. In contrast, differences are observed in gestural marking of the main characters. Whereas the Dutch speakers in the present study rarely produced gesture accompanying the first mention of the main characters (around 10 percent), the corresponding ratio for the Japanese groups is over 60 percent. In other words, more than half of the first mentions of main characters in Japanese narratives are marked not only in speech but also by gesture. On the other hand, Dutch speakers rarely mark the newness of the main characters in gesture.

Fig. 3: Frequency of gesture accompanying the first mention of main vs. peripheral characters in Dutch and Japanese narratives



7. DISCUSSION

The current study was conducted to examine the manner in which speakers of Dutch and Japanese refer to newly introduced animate characters in speech and gesture. Based on the theoretical framework of recency of topic maintenance (Givón 1983), the data were examined focusing on the manner in which Dutch and Japanese speakers mark the information status of referents in both speech and gesture. The results reveal that Dutch speakers prefer to use grammatical means, that is, the use of an indefinite article and the post-verbal position, to mark the information status of a referent as “new”. On the other hand, Japanese speakers prefer to use pragmatic means, such as repetition and the use of the discourse particle *ne* [~right?], to mark the information status of a referent. The repetition of the introduced referents in Japanese narratives is in accordance with previous findings (Clancy 1980). Furthermore, the results also reveal that, while Dutch speakers prefer to introduce the main characters in the non-subject position in the clause, Japanese speakers tend to use the subject position for the same purpose, despite the fact that this position is usually assumed by the given topic (Chafe 1994).

The observed differences in the preferences between Dutch and Japanese speakers may be due to the grammatical properties of the two languages. For instance, the availability of dummy subjects and the possibility of inversions in Dutch allow speakers to manipulate the syntactic roles assumed by introduced referents, and accordingly, to distinguish their information status linguistically. If needed, such constructions are used to mark the introduced referents as “new”. In contrast, Japanese speakers do not have such options, because of the lack of dummy subjects and the relatively strict verb-final word order. Thus, they may resort to other means to mark the information status of a referent.

The most interesting case is the introduction of the main characters. Although it is possible in Japanese to assign the non-subject role to a referent upon its introduction, this requires placing a given topic in the subject position. At the very beginning of a story, where the main characters are likely to be introduced, this strategy is rarely adopted. Instead, the nominal marker *ga* is frequently used to mark their information status. The results of the present analyses suggest that, in Japanese narratives, the very beginning tends to carry important information about protagonists. If that is the case, it is safe to assume that both the speaker and the listener may allocate extra attention to reference introduction at the very beginning of narratives. We speculate that this allocation of extra attention may be reflected in the production of gesture accompanying the introduction of the main characters in Japanese narratives (see below for further discussion on this point).

With respect to gestural introduction of referents by Dutch and Japanese speakers, the results reveal similarities as well as differences. In accordance with the previous literature (McNeill 1992), the first mentions of animate characters are accompanied by gesture in both groups, although not all the introductions are accompanied by gesture. Furthermore, Dutch and Japanese speakers similarly produce gestures marking the introduction of peripheral referents around 35 percent of the time. However, differences are observed with respect to gestures accompanying the introduction of the main characters. While Dutch speakers rarely produce gestures in such cases, the trend is opposite in Japanese narratives, where more than 60 percent of the first mentions of the main characters are accompanied by gesture.

The crosslinguistic variation observed in gestural reference introduction has an interesting implication about the relationship between speech, gesture and language. If gesture is produced independently of speech, it can be expected that, regardless of the language spoken, the frequency of gesture production should show no cross-linguistic variation. This holds particularly true for this study, given the fact that all narrators read the

same wordless picture story as input. However, the results suggest otherwise, thus offering support for the view that speech and gesture are tightly linked in language use (Kendon 2004; McNeill 1992, 2000). However, this does not explain the crosslinguistic variation observed in the results. A question remains as to what might cause the difference.

One plausible explanation for this crosslinguistic variation concerns the differences in morphology between Dutch and Japanese. As mentioned above, Japanese lacks article systems and the active use of pronouns. Once a referent is introduced as an NP, the same referent in the subsequent utterances can only be referred to either by another NP or by a zero-anaphora (\emptyset). When the latter form of reference is used, the identity of the intended referent becomes highly ambiguous to the listener, as the surface linguistic forms provide little help in Japanese, in which verbs do not encode number or gender. In such cases, contextual clues are the sole means for the listener to correctly identify the speaker's intended referent.

Given that main characters are more likely to be referred to with zero-anaphora than the peripheral ones, one of the tasks Japanese speakers have is to ensure that the identities of the main characters are firmly established in the mind of the listeners at the beginning of a narrative so that they will be able to correctly identify the intended referent when the form of reference is subsequently switched from NP to zero-anaphora. For the purpose of attracting the attention of the listener to the newly introduced characters, pragmatic means such as repetition or the use of the discourse marker *ne* may be highly effective. Similarly, gesture accompanying the mentions of such characters may also prove useful. This may be the reason why the Japanese speakers in the present study frequently produced gestures accompanying the first mention of the main characters. However, with respect to peripheral characters, there is less need to produce such gestures, because these characters are less likely to be referred to by zero-anaphora over a stretch of utterances. Hence, the frequency of gesture was lower.

In contrast, Dutch speakers may not feel such an urgent need to establish the identities of the main characters at the very beginning of the story, as they are provided with many different attenuated linguistic forms which help the listeners to correctly identify the intended referents. This may explain the low frequency of gesture in the data, in particular for the main characters.

Thus, the present results reveal that, although gestures accompanying the introduction of referents may be guided by the principle of the quantity universal (Givón 1983), as previously claimed (McNeill 1992), the frequency of gesture production may vary crosslinguistically. This raises

a question that might be of interest to all those who are involved in Japanese language teaching, that is, what does being a “native” speaker entail? In our daily practice of language teaching/learning, teachers strive to ensure that their learners attain proficiency with “native speakers” as their ideal target. Nativeness is usually defined in terms of phonology, lexicon, morphology, syntax and pragmatics of language use. However, the present findings suggest that defining native speakers only in terms of the quality of speech may be too limiting. This is an exciting line of inquiry that needs further investigation.

In addition, the results suggest that gestures may draw attention to certain words in the flow of utterances. Speakers use their body parts (for example, pointing, gaze, the use of the torso) to signal referents to the listener. Whether or not that signal is picked up by listeners is a question that is beyond the scope of the present study. However, if the listeners do pay special attention to words that are highlighted by gesture, this technique may prove useful in the classroom. For instance, when using a black (or white) board in a classroom, teachers tend to point to an item written on the board. The effect of pointing may be enhanced if the pointed item is also expressed in speech simultaneously.

Lastly, one aspect of gesture that is not examined in the present study concerns the form of gesture. Although no systematic investigation was performed, observations were made that gestures vary in their forms when they accompany the introduction of animate characters. Whether the form of gesture is in any way related to the components of narratives, such as the nature of the story, or the importance of a character, or to the characteristics of the language spoken, is a question that cannot be answered at this moment. However, it is an interesting direction for future research.

The present study investigated the manner in which speakers of Dutch and Japanese introduce referents in speech and gesture. Although gestures have long been associated with the idea of non-verbal bodily behaviour, the present results show that speech and gesture are tightly linked in marking the information structure of discourse, which is guided by universal pragmatic principles and language-specific properties whose impact is reflected in the two modalities of expressions.

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