

## 第一言語・第二言語の日本語および第二言語の英語会話における母音・鼻音の非言語音による修復の開始

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キーワード：会話分析、第一言語・第二言語会話、修復、無限定の質問

### 要旨

本研究は、日本語の第一言語・第二言語会話、および英語の第二言語会話における無限定の質問としての母音もしくは鼻音の非言語音による修復開始のプラクティスを検討する。本研究の目的は、会話参加者が第二言語会話において話すこと、聞くこと、理解することに関する問題にいかに対処しているかを理解することである。さらに、無限定の質問として使用される非言語音の音声的特徴を調査し、日本語の第一言語・第二言語会話と英語の第二言語会話で使用される様々な非言語音のイントネーションの類似点と相違点を明らかにする。本研究で使用した会話データは、(a) 日本語日常会話コーパス (CEJC) に収録された日本語の第一言語会話と、(b) 日本の国際寮に入寮している留学生や大学生による日本語と英語の第二言語会話である。

分析者による聴覚的な分析、および音声分析ソフトウェアを用いた音響的分析により、日本語の第一言語会話における「え？」や「ん？」といった非言語音は上昇調で産出され、一方、「は」という非言語音は平板調で産出される場合があることが明らかになった。また、英語の第二言語会話において、英語を第二言語とする話者が「ん？」を用いて修復の開始を行っていることがわかった。この結果から、「ん？」という鼻音の非言語音は、第一言語・第二言語日本語会話において、日本語を第一言語とする話者によって修復を開始するために用いられていること、そして、英語を第二言語とする話者によっても用いられていることが明らかになった。

### Abstract

This study examines repair practices in both first language (L1) and second language (L2) interaction in Japanese and L2 interaction in

English, focusing on non-lexical vowels and nasal vocalizations as open-class repair initiators to determine how participants address problems in speaking, hearing, and understanding during second language interaction. Additionally, this study investigates the phonetic features of non-lexical vocalizations used as open-class repair initiators, identifying similarities and differences in intonation among the various non-lexical vocalizations utilized in L1 and L2 Japanese conversation and in L2 English conversation. The data analyzed in this study consisted of two sets of mundane conversations: (a) L1 Japanese conversation extracted from the Corpus of Everyday Japanese Conversation (CEJC) and (b) L2 conversation in Japanese and L2 conversation in English by international university students residing in a dormitory in Japan.

Through the auditory and acoustic analysis, I found that in L1 Japanese conversation the non-lexical vocalizations “e?” and “n?” were produced by the participants with rising intonation and another type of vocalization, “ha,” was produced with level intonation. However, the analysis also showed that only “n?” was used by speakers of Japanese as a second language in L2 Japanese conversation and by speakers of English as a second language in L2 English conversation. Hence, the non-lexical nasal vocalization “n?” was employed to initiate repair by L1 speakers of Japanese in both L1 and L2 interaction in Japanese and by L2 speakers of English in English interaction.

# Repair Initiation with Non-Lexical Vowels and Nasal Vocalization in L1 and L2 Japanese Interaction and in L2 English Interaction

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Keywords: Conversation Analysis, First and Second Language Conversation, Repair, Open-Class Repair Initiator

## 1. Introduction

The purpose of this study was to investigate how repair practices are organized in L1 and L2 conversation in Japanese and L2 conversation in English with a special focus on one area that came to the fore during the analysis due to the participants' frequent orientation to it: other-initiation of repair with the non-lexical vowels and nasal vocalizations. Through the examination of repair practices, this study contributes to the understanding of how participants address problems or troubles in speaking, hearing, and understanding during L1 Japanese interaction and during L2 interaction in English and Japanese.

Furthermore, through auditory and acoustic analysis, this study examines the phonetic features of non-lexical vocalizations which are deployed as variants of open-class repair initiators in L1 and L2 interaction

in Japanese and L2 interaction in English. The conversation analysis conducted in this study presents the intonation contours of non-lexical vocalizations through analyzing the pitch curve of specific utterances utilized for the purpose of repair.

The visual analysis illustrates some similarities or differences of intonation among the various examined non-lexical vocalizations that are utilized in L1 and L2 conversation in Japanese and L2 conversation in English. Consequently, the analysis allows us to better understand the phonetic characteristics of these vocalizations for other-initiation of repair in the languages studied here.

This paper first introduces the tenets of conversation analysis (CA), then reviews repair organization, L2 repair, auditory and acoustic approaches in CA, the method, analysis, and finally the conclusion.

## **2. Background**

### **2.1. Conversation Analysis (CA)**

Conversation analysis (CA) is an approach to the study of the organization and orderliness of interaction. In the late 1960s, inspired by Goffman (1959, 1967, 1983) and Garfinkel (1967), CA was founded by Harvey Sacks, Emmanuel Schegloff, and Gail Jefferson with their original perspectives and methods. CA researchers typically utilize video- and audio-recorded naturally occurring conversation data in natural settings. The original transcription system (Atkinson & Heritage, 1984) was initially developed by Gail Jefferson. CA has become a distinct field of study concerned with the organizational structures of talk in both institutional

and mundane interaction.

## 2.2. Repair Organization

Repair organization in CA is a mechanism of conversation that is designed for addressing various types of troubles which arise in talk-in-interaction (Schegloff, Jefferson, & Sacks, 1977). In CA, repair refers to the various ways of dealing with troubles in speaking, hearing, and understanding of the talk. Repair sequences occur when interlocutors focus their attention on what they themselves treat as troublesome or problematic in preceding turns, which is referred to as a trouble source. It has been found that repair may be initiated by the speaker producing an utterance with a trouble source (self-initiated repair) or by other participants (other-initiated repair). The repair then may be carried out by the speaker who has produced the problematic utterance (self-repair) or by another speaker (other-repair). As Schegloff et al. (1977) noted, it is important to consider a division between who initiates the repair (e.g., self-initiated repair or other-initiated repair) and who carries out the repair proper (e.g., self-repair or other-repair). Thus, it can be categorized into four repair types: self-initiated self-repair (SISR), self-initiated other-repair (SIOR), other-initiated self-repair (OISR), and other-initiated other-repair (OIOR). Furthermore, it should be emphasized that self-initiated repair and other-initiated repair have consistent and distinct placements in relation to the trouble source (Schegloff et al., 1977, p. 365). The practices of repair initiation following a trouble source turn (i.e., other-initiated repair) are directly relevant to this study.

Other-initiated repairs are typically spread over two turns, with the

recipient (i.e., the trouble source recipient) initiating the repair in the turn following the trouble source. Then, the repair is completed by the speaker who has produced the problematic utterance (i.e., the trouble source speaker). As Schegloff et al. (1977) discuss, other-initiation of repair involves various techniques that are categorized based on their degree of strength or power in identifying the trouble source. That is, a weak repair initiator does less to identify or clarify what the trouble source is, whereas a strong one does more to pinpoint it. It has been found that techniques used for repair initiation exhibit orderliness ranging from weakest to strongest in their ability to identifying a trouble source (Schegloff et al., 1977). According to Wong and Waring (2021), these repair initiators can be ordered from weakest to strongest according to the following categories: (a) open-class repair initiators (Drew, 1997), such as “huh?”, “what?”, “pardon?”, “sorry?”, and “excuse me?” in English; (b) Wh-interrogatives (e.g., who, when, and where.); (c) partial repetition of the trouble source + Wh-interrogatives; (d) partial repetition of the trouble source; (e) full repeat of the trouble source utterance in rising intonation; (f) candidate understanding (e.g., replacement, continuation, and insertion); and (g) you mean + candidate understanding or candidate understanding + you mean (p. 343). Basically, open-class repair initiators, which are relevant to the current study, only indicate that there is some sort of trouble in the preceding turn without identifying what the trouble is.

As mentioned above, some examples of open-class repair initiator are “huh?” and “what?” in English. The following extract is taken from a study by Schegloff et al. (1977).

Extract (1) [CD: SP, Schegloff et al., 1977, p. 367]

01 D: Wul did'e ever get married 'r anything?

02 → C: Hu: h?

03 D: Did jee ever get married?

04 C: I have // no idea.

In line 01, D poses a question to the recipient. C initiates repair by producing the utterance, “Hu: h?” with rising intonation. This other-initiation of repair leads to D’s self-repair in the next turn. Here, the trouble source speaker D carries out the repair proper by repeating the prior utterance in line 01, excluding both the turn-initial utterance “Wul” (well) and the turn-final utterance “'r anything?” (or anything?). That is, the trouble source speaker D treats these utterances as superfluous and completes the self-repair by repeating part of the preceding turn but without these items.

According to Kendrick’s (2015) corpus analysis, “what?” and “huh?” are the most common ways that participants initiate repair in informal social interactions among English speakers from the United Kingdom and the United States (p. 168). Meanwhile, other phrases like “pardon?”, “what’s that?”, “what did you say?”, and “sorry?” are less frequently used for this purpose (p. 168). What should be highlighted here is that these types of other-initiation of repair leave open exactly what in the prior turn the repair initiator is having difficulty with (Drew, 1997, p. 72). That is, open-class repair initiators do not mark the trouble source and the nature of the problem, thus these are considered the weakest for locating a trouble source. Additionally, it has been reported that utterances em-

ployed as open-class repair initiators commonly occur with rising intonation (Egbert, Golato, & Robinson, 2009; Kendrick, 2015; Schegloff, 1997).

Considering the actions that open-class repair initiators perform, they are employed not only to address troubles (e.g., hearing, understanding, etc.), but also to simultaneously perform other actions such as topical misalignment (Drew, 1997), preliminaries to dispreferred responses (e.g., Kendrick, 2015; Schegloff et al., 1977; Schegloff, 2007) and so forth. Drew (1997) found that open-class repair initiators are used when a new topic is introduced without a disjunctive marker (e.g., anyway, by the way, etc.). That is, even though trouble source recipients may have heard and understood what was said in the previous turn, they initiate repair in order to deal with difficulties or something of an “interactional hiatus” (p. 79), which is apparently caused by the trouble source speaker appearing to have “shifted topic abruptly” or failing to “produce a sufficiently fitted or affiliative response to the prior turn” (p. 98).

In a survey of open-class other-initiations of repair across 21 languages, Enfield et al. (2013) discovered that speakers use a primary interjection strategy (e.g., “hā: /hm” in English, “ha:” in Icelandic, “hā:” in Lao, “e” in Spanish, etc.), which typically involves a monosyllable vowel or similar sound (e.g., “a”, “e”, among others), sometimes with nasalization, and typically done with rising, questioning intonation. Their investigation found that open-class other-initiations of repair can be observed across 21 languages, and that these open-class other-initiations of repair are conventionalized and “are subject to well-formedness constraints and they need to be learned” (Enfield et al., 2013, p. 353). Hence, the organization of repair may be considered as “a generic order of organization in



talk-in-interaction which is used (with local variations) across linguistic and cultural communities” (Kitzinger, 2013, p. 251).

### **2.3. Repair in Second Language Conversation**

Recently, an increasing number of CA studies have investigated second language (L2) conversations taking place in a plethora of diverse settings and contexts (e.g., Brouwer, 2004; Gardner & Wagner, 2004; Hosoda, 2006; Koshik, 2002; Koshik & Seo, 2010; Kurhila, 2004). These studies examined language use in educational institutions, such as second language settings, as well as everyday life situations. It was shown that repair mechanisms of L2 conversation can be described using the same analysis method as with L1 conversation (Gardner & Wagner, 2004, p. 3). In some of these contexts, the participants engaged in communication using a lingua franca, a contact language between speakers who do not share a first language (Mauranen, 2017).

Within the context of L2 use, Wong and Waring (2021) argue that language pedagogy is often associated with repair, highlighting the necessity for ESL/EFL teachers to possess a fundamental understanding of repair organization, systematic patterns, and features (p. 313). The authors emphasize that comprehending the attributes of other-initiation of repair may help minimize cross-cultural misinterpretation (p. 345).

### **2.4. Auditory and Acoustic Approaches in CA**

According to Walker (2013), there are two types of phonetic analysis: (a) auditory analysis, which involves careful and repetitive listening, and (b) acoustic analysis, which involves analysis of machine-generated

acoustic records. In CA, auditory analysis is common, however, there is a growing trend towards using a combination of auditory and acoustic analysis. Accurate use of acoustic analysis can offer “important objective, corroborative evidence for what can be subjectively perceived in the speech signal, as well as provide the basis for visible representations of relevant features” (Walker, 2013, p. 459). As Walker points out, three issues develop as the field evolves and draws new researchers. First, since technology advances and audio-visual databases become more accessible, it is crucial “not to lose sight of one of the core characteristics of CA: that any analysis arises out of, and accounts for, the details of single episodes of interaction” (Walker, 2013, p. 473). Second, the development of computers and software has enabled researchers to make use of acoustic analysis efficiently and accurately. To ensure accurate analysis, it is important to have a fundamental understanding of speech production and perception. Praat, a free software package for speech analysis, and other such software options for acoustic analysis should not replace meticulous parametric analysis, but rather serve as a computer-based tool. Lastly, it is necessary to consider “the speech signal in its entirety”, including features of frequency, articulatory and phonatory quality, as needed (Walker, 2013, p. 473).

In the emerging field of conversation analysis and interactional linguistics (CA-IL), it has been discovered that intonation contours have relationships with action boundaries and TCU construction (e.g., Ford & Thompson, 1996), in addition to the design of various social actions such as repair practices (e.g., Benjamin & Walker, 2017; Curl, 2005; Enfield et al., 2013; Ha & Grice, 2017; Rossi, 2015). An intonation contour typically

refers to audible falling, rising, or stable (level) variations of pitch over a period of time in a unit (Cantarutti, 2023). The contour is created by patterns of changes in  $f_0$ , which is an acoustic parameter that characterizes the frequency of molecular vibrations in the air. Benjamin and Walker (2017), for instance, examined the phonetic and sequential characteristics of other-repetition in repair initiation. Their analysis identified various phonetic features and sequential patterns associated with other-repetition, shedding light on how speakers manage repair sequences in interactional settings. Additionally, Enfield et al. (2013) found that the spoken languages in their sample displayed a fundamental interjection technique for open-class other-initiation of repair (i.e., using a huh-like interjection to initiate repair). Their finding demonstrated that the phonetic form of this interjection is remarkably similar across 21 languages. As Enfield et al. (2013) noted, further work is necessary “to determine the extent to which the interjection takes a conventional form that fits the phonemic and prosodic system of a given language (as is known to be the case with interjections more generally)” (p. 375).

### 3. Method and Data

#### 3.1. Method

In this study, a conversation analysis (CA) framework is employed to examine the structural aspects of L1 and L2 conversation, including non-verbal behaviors and factors related to the environments in which the conversations takes place. As Liddicoat (2011) describes, the basic CA framework involves three processes: (a) the collection of naturally

occurring talk, (b) the creation of transcripts depicting the talk-in-interaction, and (c) the observation and analysis through repeated examination of the recorded data and transcripts.

First, the use of naturally occurring data is preferred for analysis due to the complexity of constructing specific contexts through interaction. CA research is typically based on naturally occurring settings of everyday life, allowing analysts to observe and review interactions for comprehensive analysis. Therefore, this study utilizes the naturally occurring interaction found in the international dormitory and in the CEJC.

Second, the transcripts collected should be transcribed using the CA transcription system (Atkinson and Heritage, 1984), capturing a wide range of verbal and nonverbal resources for communicating during talk-in-interaction (e.g., inbreaths, outbreaths, pauses, sound stretches, cut-offs, pitch rises and falls, and so forth.). Furthermore, what needs to be emphasized here is that analysts transcribe conversations as closely as possible to illustrate how participants produced it in their original interaction (Liddicoat, 2011; Wong & Waring, 2021). In the transcripts presented in this study, the transcript lines of Japanese conversations are divided into three distinct levels: The first line presents utterances in romanized Japanese, the second line provides a word-by-word translation in English, and the third line is an idiomatic translation into English.

Finally, CA analysts take into account the emic perspective of the interactants to examine language and social interaction from an insider's perspective (Pike, 1967). The CA approach also involves "unmotivated looking" (Psathas, 1995), which examines data without the presence of pre-established hypotheses so as to avoid any projection onto the data of

the analyst's biases. Therefore, this research project was launched without preconceived ideas about what would be found in the data. Next, the analytical process entails repeated listening and careful observation, which serves to ground the findings firmly in the data. Moreover, in CA, we consider why participants are performing the particular actions that they are at the specific moment of the interaction, namely answering the question "Why that now?" (Schegloff & Sacks, 1973, p. 299).

In this study, participants' language proficiency levels are not measured by standard language proficiency tests, but they can be judged by directly observing their language use in the interaction as they continuously assess each other's language as they design their talk for the others in the ongoing interaction.

### 3.2. Data

The data analyzed for this study are composed of two conversational datasets: (a) L1 Japanese conversation taken from the Corpus of Everyday Japanese Conversation (CEJC), and (b) L2 conversation in Japanese and English among visiting international university students at a dormitory in Japan.

The CEJC dataset used in this study was released in March 2022 with the purpose of including a wide range of mundane conversation (Koiso et. al., 2020). The CEJC includes both audio and video data to enhance the comprehension of real-life social behavior mechanisms. The data consist of 577 conversations, totaling over 200 hours. The recordings were made by volunteer 862 participants, who had provided informed consent. The participants documented audio recordings of conversations

**Table 1** *Overview of Three Conversations in the Dormitory*

Data	Main language	Participants	Length of time	Place
Japanese L2	Japanese	3	37 minutes	A kitchen
English L2 #1	English	4	40 minutes	A kitchen
English L2 #2	English	6	60 minutes	A common area

with their family members, acquaintances, or colleagues in diverse circumstances such as restaurants, friends' houses, and their places of work, and so forth. To obtain further information regarding the corpus, please refer to Koiso et al. (2022). More than 15 conversations from this corpus were carefully scrutinized for the analysis presented in this study.

Besides the CEJC data, this study also analyzes three sets of conversational data recorded at an international dormitory in a major city in Japan. The datasets can be categorized as: (a) one set of L2 conversation in Japanese, and (b) two sets of L2 conversation in English, as shown in Table 1.

The international dormitory conversations were conducted among: (a) L1 Japanese speakers and L2 Japanese speakers in the Japanese L2 data, (b) L1 English speakers and L2 English speakers in the English L2 #1 data, and (c) L2 English speakers in the L2 English #2 data. The participants were living in the same dormitory and attend the same university in a major city in Japan. The L2 speakers of Japanese recorded here have different linguistic backgrounds but are all studying and learning the Japanese language during their six month or one-year exchange programs in Japan. They commonly use English or Japanese in their daily life. In the data, both English and Japanese were spoken in a variety of situations (e.g., at mealtimes).

## 4. Analysis

The analysis in this study examined conversational segments in which speakers utilized a specific form of other-initiation of repair in L1 and L2 interaction in Japanese and L2 interaction in English. The specific form of other-initiation of repair investigated here were those open-class repair initiators that are achieved with non-lexical vowels and nasal vocalizations. These vocalizations were produced in a single turn constructional unit (TCU) and consist of open front vowel sounds such as “a” and “e,” “sometimes with a voiceless *h*-onset” (Enfield et al., 2013, p. 352), and the nasal sound “n.” All non-lexical vocalizations observed in the data set under analysis were deployed in repair sequences. The structure of these repair sequences is illustrated below. The following pattern illustrates the turns in the sequences of other-initiation of repair discussed in this section (T1=Turn 1).

T1 A: problematic utterance (trouble source)

T2 B: non-lexical vocalization (trouble source recipients' other-initiation of repair)

T3 A: repair utterance (trouble source speakers' self-repair)

In the sequence, following the occurrence of a problematic utterance, non-lexical nasal vocalization is deployed to address trouble in the prior turn by a trouble source recipient, marked as B above. In Turn 2, the recipient utilizes a repair initiator to indicate that there is some sort of

trouble in the prior turn but without locating what the trouble source specifically is. Therefore, we can see the repair initiator as being an open-class repair initiator, and this is usually how the interactants interpret it in the interaction. Subsequently, the trouble source speaker, A, carries out some type of repair. In most cases, the problem indicated is resolved by repeating a whole or a part of the problematic utterance.

Additionally, analysis was also conducted on the intonation of non-lexical vocalizations, which were deployed as open-class repair initiators in both L1 and L2 Japanese and L2 English interaction. In this study, the audio analysis software, Praat, was used to detect the pitch curve of various non-lexical vocalizations. The pitch curve was shown by a series of speckles in a moment when the sound was produced. Comparing the graphic illustrations which represent the intonation of non-lexical vocalizations, this study considers how these specific vocalizations are systematically produced.

#### **4.1. Non-Lexical Vocalization in L1 and L2 Japanese Conversation**

In this section, I present four instances in which other-initiation of repair with non-lexical vocalizations are deployed to deal with troubles in L1 and L2 conversation in Japanese. The intonation contours of the utterances deployed as open-class repair initiators in this data set are provided in addition to the detailed analysis for each case.

Based on the analysis of the CEJC data, it was found that L1 Japanese speakers frequently initiated repair with non-lexical vocalizations, “e?” during talk with other L1 Japanese speakers, as shown in Extract (2). In this extract, the participants are close friends and engage in a



chat about their children and recent events at a store owned by one of them.

Extract (2) [K002\_012: Line 25–30: Modified]

((Sugita and Sakiko talk about Sakiko's daughter who is living in Canada.))

01 Sugita: *Canada no doko nano?*

Canada GEN where IP

“Where is it in Canada?”

02 (0.4)

03 Sakiko: *e::: tto::: winza: tte ° toko° =*

well Windsor QT place

“Well, a place (where it is called) Windsor.”

04 Sugita: =e? ((Sugita gazes at Sakiko.))

NLV

“E?”

05 Sakiko: *winza:*

Windsor

“Windsor.”

06 Sugita: *he:: [:::] :::*

hmmm

“Hmmm.”

07 Sakiko: [*un.*]

Yeah

“Yeah.”

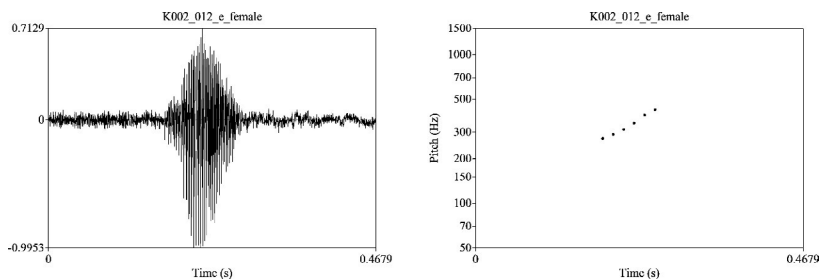


Figure 1 *An Open Front Vowel Sound “e?” as an Open-Class Repair Initiator Produced With Rising Intonation in L1 Japanese Conversation*

In line 01, Sugita asks about the location of Sakiko’s daughter who is living in Canada. Following Sakiko’s answer to this question, Sugita immediately initiates repair by producing a monosyllabic interjection, “e?” in line 04. Through acoustic analysis of the interjection, it is clearly uttered with rising intonation, as shown in Figure 1. At the same time, it can be observed that Sugita gazes at Sakiko. Sakiko then carries out repair by repeating a part of the trouble source turn, “*winza*: (Windzor).” Afterwards, in line 06, Sugita recognizes the location indicated by Sakiko.

The pattern of dots captures the fluctuation of the intonation beginning from the minimum pitch (267 Hz) to maximum/final pitch (448 Hz). When used as an open-class repair initiator, the interjection “e” is mostly produced with rising intonation in L1 conversation in Japanese.

Similarly, the non-lexical vocalization “ha,” is typically used as an open-class repair initiator in L1 conversation in Japanese. It was found that the intonation of the vocalization is produced with level intonation, as shown in following Extract (3). During their common daily interaction at home, a mother and her son are talking in their living room while fixing the seat of a chair.

Extract (3) [K004\_007: Line 372–380: Modified]

01 Mom: *a souieba are dou na [tta ]*

oh by the way that how become: PST

“Oh, by the way, what happened with that?”

02 Son: *[nanya.]*

what

“What.”

03 Mom: *ano basu no sa: onnanoko no sa: jugyou.*

that bus GEN IP girl GEN IP class

“That bus, the lesson of a girl.”

04 (1.4)

05 Son: **ha**

NLV

“Ha”

06 (1.2)

07 Mom: *Rooza no ohanashi no.*

Roza GEN story GEN

“A story of Rosa [Rosa Parks].”

08 (1.3)

09 Son: *a::: nan datta ke ne:: e::: tone are fikushon rashii*

umm what COP: PST PT IP well that fiction heard

10 *kara ne*

PT IP

“Umm, what was it, well, I heard that that was fiction.”

During the process of replacing the chair seat, the mother asks her son

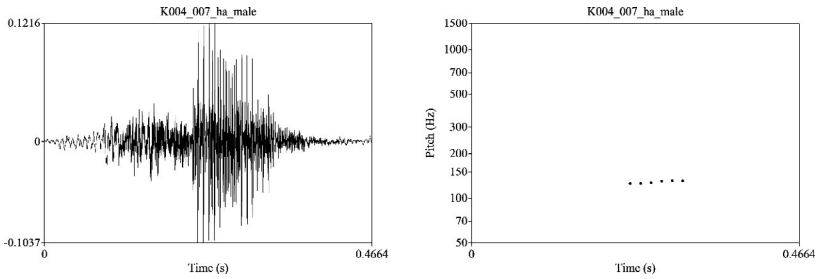


Figure 2 *An Open Front Vowel Sound “a” With a Voiceless h- Onset as an Open-Class Repair Initiator Produced With Level Intonation in L1 Japanese Conversation*

about a story by utilizing the disjunctive marker “*souieba* (by the way)” and the pronoun “*are* (that)” in line 01. The son’s response, “*nanya* (what)”, indicates that he is not aware of the story mentioned by his mother. In line 03, the mother attempts to offer additional information. After a 1.4-second silence, her son initiates repair by making a vocal sound with an open vowel, specifically saying “*ha*” in line 05. The open-class repair initiator is uttered with level intonation, as shown in Figure 2. After the repair initiation, the mother carries out repair by providing further and detailed information about the girl, specifically mentioning her name as “*Rooza* (Rosa)”. Subsequently, the son shows his acknowledgment by uttering “*a::: (umm)*” and informs his mother that the story is a fictional one.

The dotted pattern shown in Figure 2 illustrates the range of intonation, starting with the pitch of 125 Hz and ending at the pitch of 131 Hz. Despite a slight increase in pitch, in L1 Japanese conversation, the open-class repair initiator “*ha*” is occasionally produced with level intonation.

Furthermore, the non-lexical nasal vocalization “*n?*” was commonly

deployed as an open-class repair initiator in the L1 conversation in Japanese that was analyzed in this data set, as demonstrated in the spate of talk shown in Extract (4). In the following extract, two romantic partners are engaged in conversation while having dinner in the privacy of their own home.

Extract (4) [T022\_009: Line 42–45: Modified]

01 Masa: *kyou asa ame sugoka tta?*  
 today morning rain heavy QT  
 “Today, was it raining hard in the morning?”

02 Yuki: **n?**  
 NLV  
 “N?”

03 Masa: *asa ame sugoka tta?*  
 morning rain heavy QT  
 “Was it raining hard this morning?”

04 Yuki: *uun.*  
 No  
 “No.”

In line 01, Masa asks Yuki if there had been a significant quantity of rainfall that morning by saying “*kyou asa ame sugoka tta?* (Today, was it raining hard in the morning?).” In the subsequent turn, Yuki initiates repair through production of the non-lexical nasal vocalization “n?” as an open-class repair initiator. Figure 3 clearly shows the nasal vocalization being produced with rising intonation. After Yuki’s initiation of repair,

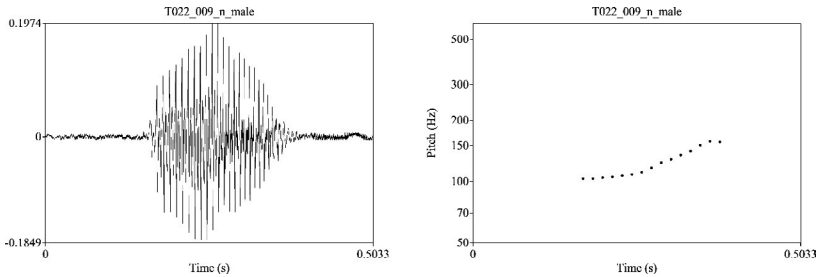


Figure 3 *A Nasal Vocalization “n?” as an Open-Class Repair Initiator Produced With Rising Intonation in L1 Japanese Conversation*

Masa subsequently carries out the repair proper by repeating the trouble source turn, “*asa ame sugoka tta?* (Was it raining hard this morning?)” in line 03. In closing the sequence, Yuki answers the question by saying “*uun* (no).”

The dot pattern visually represents the full range of rising intonation, beginning at the pitch of 101 Hz and concluding at the pitch of 165 Hz. It was found that “n?” as an open-class repair initiator is mostly produced with rising intonation in L1 Japanese conversation.

In a similar vein, in L2 conversation in Japanese, it was observed that the non-lexical nasal vocalization “n?” was deployed as an open-class repair initiator by an L1 Japanese speaker, Nick, during mundane interaction with an L2 Japanese speaker, Taka, as shown in Extract (5).

Extract (5) [TN1-NL2: Japanese Conversation: Six Thousand Yen]

((Nick is talking about the price of something that he bought.))

01 Nick: *daitai*:: (0.9) *n*::: *go- roku sen?*

almost ummm five six thousand

“It’s almost five- six thousand?”

02 (0.9)

03 Taka: n? =

NLV

“N?”

04 Nick: =*roku- roku sen en?* ((Nick looks at the upper left.))

six six thousand yen

“Six- six thousand yen?”

05 Taka: *roku sen en?*

six thousand yen

“Six thousand yen?”

06 Nick: *sou sou*

yeah yeah

“Yeah yeah.”

07 Taka: *hu.: n*

hum

“Hum.”

In line 01, Nick reports the price of his purchase but cuts off “*go-* (five)” and reproduces “*roku sen?* (six thousand?).” After a 0.9-second silence, Taka initiates delayed repair by producing the non-lexical nasal vocalization “n?” Following this other-initiation of repair, Nick immediately performs repair by repeating the price “*roku- roku sen* (six-six thousand)” and adds the Japanese currency “*en?* (yen?)” Here, in line 02, the 0.9-second silence apparently led Nick to forecast the occurrence of Taka’s forthcoming repair initiation. Nick then responds to Taka’s utterance “n?” as a repair initiator and immediately carries out repair by re-

peating his prior problematic utterance with an additional item, “*en?* (yen),” thus making it clear that he is talking about the price in Japanese yen.

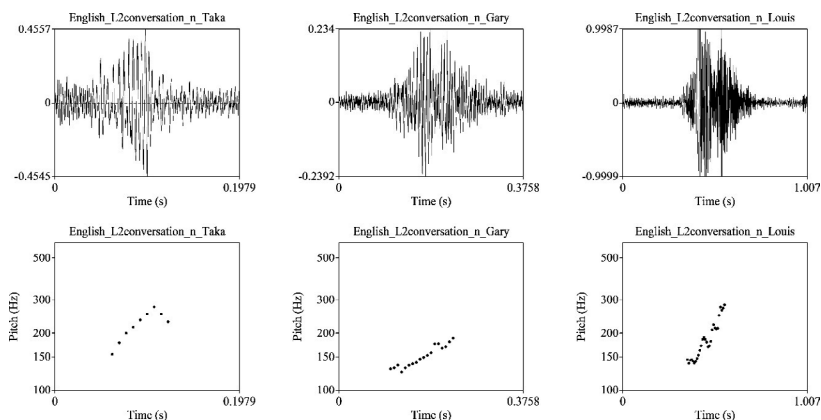
In this extract, the non-lexical nasal vocalization “n?” was deployed by an L1 Japanese speaker as an open-class repair initiator, prompting the L2 Japanese speaker to engage in self-repair. The L2 speaker is likely to have anticipated the L1 speaker’s forthcoming repair initiation because of an absence of immediate response to his question. That is, the delayed response appears to have supported the open-class repair initiator “n?” in eliciting the L2 Japanese speaker’s self-repair.

In this section, the use of non-lexical nasal vocalizations (e.g., “e?”, “ha”, and “n?”) as open-class repair initiators was showcased in the four extracts of L1 and L2 interaction in Japanese. It was demonstrated that this practice is deployed to convey that the speaker has some trouble with the previous utterance while engaging in conversations in Japanese. The repair initiation was occasionally delayed, sometimes accompanied by the trouble-recipient’s non-verbal behavior (e.g., gazing at the trouble source speaker). Furthermore, these non-lexical vocalizations, such as “e?” and “n?”, were mostly produced with rising intonation. However, it was found that one type of open-class repair initiator, “ha” was accomplished through level intonation.

#### **4.2. Non-Lexical Vocalization in L2 English Conversation**

This section presents two instances in which the non-lexical nasal vocalization “n?” is utilized as a means of other-initiation of repair in L2 conversation in English. Based on a detailed analysis of the collected





**Figure 4** *A Nasal Vocalization “n?” Deployed as an Open-Class Repair Initiator Produced With Rising Intonation in L2 English Conversation*

data, it was shown that the L2 English speakers (those who speak Japanese, Spanish, or German as a first language) employ the non-lexical nasal vocalization “n?” to initiate repair during English interaction. In addition, the intonation contours of the three cases of open-class repair initiator, “n?” used in this L2 interaction in English were produced with rising intonation, as shown in Figure 4.

The three L2 English speakers, Taka (an L1 Japanese speaker), Gary (an L1 Spanish speaker), and Louis (an L1 Swiss-German speaker (data not shown here)), produced the open-class repair initiator with rising intonation.

In the following extract, after an L1 Japanese speaker (Taka) utilizes a non-lexical nasal vocalization, an L1 German speaker (Leon) addresses the trouble by producing only a part of the potentially problematic utterance.

Extract (6) [TL2-LL2: English Conversation: Horseradish]

((Taka explains how to eat sushi with *wasabi* [Japanese horseradish].))

01 Leon: | is it not horseradish?

taka: | looks at a package of *wasabi* ->

02 (0.8)

taka: ->

03 Taka: | n?

taka: | gazes at Leon

04 Leon: horseradish.

05 Taka: what's horseradish

06 Leon: horseradish (.) ah: sometimes they use horseradish

07 instead of wasabi,

08 Taka: ah:

In line 01, Leon asks a question about whether “*wasabi* (Japanese horseradish)” is different from horseradish. During a 0.8-second silence in the next turn, Taka continues to look at a package of wasabi. Following the 0.8-second silence, Taka initiates repair by producing the open-class repair initiator “n?” with his gaze directed to Leon. Then, Leon treats the English word “horseradish” as a trouble source and carries out repair by omitting the turn-initial items “is it not.” Thus, it reveals his interpretation that Taka displayed some trouble involving hearing or understanding only the lexical item “horseradish.” Taka’s question, “what’s horseradish” in the subsequent turn, evinces that Leon’s interpretation had been correct: that is, Taka had a problem understanding the word “horseradish.”

Similarly, in the next extract, an L2 English speaker (Gary, who is an L1 speaker of Spanish) uses of the non-lexical nasal vocalization “n?” as an open-class repair initiator, a repair initiator which consistently indicates the presence of a problem in the prior turn. Additionally, as shown in the following extract, the way self-repair is carried out varies across the two participants (Taka, an L1 speaker of Japanese, and Mark, an L1 speaker of English).

Extract (7) [GL2-TL2: English Conversation: Bonito]

((The participants talk about sushi.))

01 Taka: OH (0.3) are there (.) any sauce<sub>ç</sub> with- for

02 (0.3) | *katsuo*. [bonito]

taka: | points at the bonito

03 (0.3)

04 Gary: | n?

gary: | gazes at Taka

05 (.)

06 Mark: ° *katsuo*. °

07 (0.3)

08 Taka: there is another sauce,

09 Gary: another sauce for that?

10 Taka: yeah.

((Taka leaves his seats to bring the sauce.))

In line 01, Taka asks if there is any sauce for “*katsuo* (bonito).” Here, he produces the word “*katsuo*” in Japanese, and then simultaneously exhibits

what it is by pointing at "*katsuo*." Following a 0.3-second silence, Gary initiates repair by producing the open-class repair initiator "n?" with his gaze directed at Taka. After a micro pause, Mark, who is sitting between Taka and Gary, carries out repair by repeating a part of the problematic utterance, "*katsuo*. (bonito)" in a low voice. Following a 0.3-second silence, Taka also carries out repair but in a way that is different from how Mark carried out repair (line 06). Rather than the interrogative utterance Taka deployed in lines 01 to 03, he produces a declarative sentence and announces the existence of a particular sauce for bonito. This indicates that although Taka's utterance asking about the availability of sauce for bonito takes a question format, he was obviously aware that there was another sauce available.

In this extract, it was found that while the non-lexical nasal vocalization "n?" deployed as an open-class repair initiator invariably succeeded in indicating that there was some sort of problem in the proceeding turn, the ways the trouble was eventually dealt with were different between two of the participants. Mark, the overhearing participant, carried out repair by repeating only the word that was potentially problematic in the prior turn, whereas Taka, the trouble source speaker, performed repair by transforming an interrogative sentence into a declarative sentence.

This section analyzed the use of the non-lexical nasal vocalization "n?" as an open-class repair initiator in two instances of repair sequences in L2 interaction in English. These extracts demonstrated that the open-class repair initiator "n?", along with various non-verbal cues, was used to signal that the speaker had problems hearing or understanding the

preceding utterances. In addition, it was found that the trouble source speaker's strategy deployed for repairing the trouble source utterance differed from the strategy deployed by another participant who also attempted repair. Consequently, recipient strategies for repair in L2 contexts is therefore clearly an area of interest for future research.

## 5. Conclusion

This study examined practices for managing repair sequences in mundane conversation by analyzing two conversational datasets: (a) L1 Japanese conversation taken from the Corpus of Everyday Japanese Conversation (CEJC), and (b) L2 conversation in Japanese and English among visiting international university students at a dormitory in Japan. Through detailed observation of the participants' orientations to action formation in the data, this study came to focus on other-initiation of repair with non-lexical vowels and nasal vocalizations, such as "e?", "ha," and "n?"

The analysis of non-lexical vocalizations positioned in interaction as open-class repair initiators addressed three aspects concerning the deployment of open-class repair initiator: (a) strategies for other-initiating repair and subsequent self-repair, (b) deployment of both verbal and non-verbal resources for initiating repair, (c) employment of the open-class repair initiator by speakers with various first language backgrounds.

The findings from the analyses can be summarized as follows. First, the open-class repair initiator was used to address hearing or under-

standing issues in these conversations. Trouble source speakers do not always repair by repeating problematic utterances, but their self-repair methods varied depending on the context. Second, these open-class repair initiators were deployed to address problems without locating the trouble source, frequently accompanied by verbal and non-verbal resources, such as rising intonation, directing gaze to trouble source speakers, and using silence to delay a response. Third, the open-class repair initiator “n?” was utilized by speakers with various first language (L1) backgrounds: some Japanese speakers, a Uruguayan speaker, and a Swiss-German speaker. Moreover, the open-class repair initiator “n?” was produced with rising intonation by both L1 Japanese speakers and L2 English speakers.

The findings of this study offer implications for research on second language interaction with a specific emphasis on repair sequences. First, the open-class repair initiator “n?” was used for other-initiation of repair by both L1 speakers of Japanese and L2 speakers of English speakers in talk-in-interaction. Following the other-initiation of repair, all speakers (i.e., L1 and L2 speakers of Japanese, L1 and L2 speakers of English) performed repair. The findings indicate that the practice of “n?” as an open-class repair initiator may not be restricted to a certain language, but rather it may be a universally employed practice to initiate repair. Second, the findings of this study highlight the phonetic features of specific open-class repair initiators. These open-class repair initiators emerged as non-lexical vocalizations, such as “e?” and “n?”, were produced with rising intonation in Japanese conversation. Moreover, “n?” employed by L2 speakers of English were also produced with rising into-

nation. The phonetic features that accompany open-class repair initiators may facilitate trouble source speakers to engage in self-repair.

This dataset focused on three types of non-lexical vocalizations (e.g., “e?”, “ha”, “n?”) that were employed as open-class repair initiators. Moreover, the utilization of non-lexical vocalizations may not be limited to the deployment as open-class repair initiators. For instance, “n?” is occasionally employed in talk as a means of self-initiation of repair during a word search. In order to grasp the holistic picture of non-lexical vocalizations occurring in repair sequences, it would be ideal to examine these non-lexical vocalizations in various positions within the turn.

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## Appendices

### Appendix A: Transcription Conventions

[ ]	overlapping talk
-	cut-off
=	latched utterances
(0.0)	timed pause (in seconds)
(.)	a short pause
:	an extension of a sound or syllable
> <	talk that is faster than surrounding talk
< >	talk that is slower than surrounding talk
° °	talk that is quieter than surrounding talk
.	fall in intonation
,	slightly rising intonation
?	rising intonation
¿	rising intonation weaker than a question marker
( )	problem hearing
(( ))	a comment by the transcriber
	overlapping bodily movement

-> The action described continues across subsequent lines until the same symbol is reached.

## Appendix B: Abbreviations Used in Interlinear Gross

IP	Interactional particle (e.g. <i>ne</i> , <i>sa</i> , <i>no</i> , <i>yo</i> , <i>na</i> )
PT	Other particles
ACC	Accusative (- <i>o</i> )
GEN	Genitive (- <i>no</i> )
TOP	Topic marker (- <i>wa</i> )
QT	Quotation marker (- <i>te</i> , - <i>tte</i> )
Q	Question marker (- <i>ka</i> , - <i>kke</i> , & its variants)
COP	Copulative verb
NOM	Nominalizer (- <i>ga</i> )
TAG	Tag-like expressions
NEG	Marks negation
PST	Past
POL	Politeness marker
NLV	Non-Lexical Vocalization