

# No Need to Quit Your Flapping: The Intelligibility of Flap /ɾ/ Phoneme Substitutions for either the /ɹ/ or /l/ Phonemes in Non-native English Speaker Conversations

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## Abstract

This is a qualitative study of the intelligibility of /ɾ/ phonemes that are substituted for either the phoneme /ɹ/ or the phoneme /l/ in conversations between Japanese non-native English speakers and non-Japanese non-native English speakers. Adopting a conversation analytic definition and measurement of intelligibility, this study argues that a phoneme should be defined as intelligible under the following conditions: 1) the phoneme is commonly present within utterances that are oriented to as intelligible; 2) the phoneme can be used to complete the repair of other phonemes that are oriented to as unintelligible. Using a corpus of recorded Skype conversations between Japanese non-native speakers of English and non-Japanese non-native speakers of English, who are all students at the same Japanese university, this study demonstrates that the substitution of either the /ɹ/ or the /l/ phoneme with the flap /ɾ/ phoneme in conversational praxis is fully intelligible for the conversationalists in the corpus. This study concludes that the exact articulation of the /ɹ/ and /l/ phonemes is superfluous to intelligible communication between Japanese non-native English speakers and other non-Japanese non-native English speakers.

**Keywords:** Intelligibility, Conversation Analysis, English as a Lingua Franca, Flap, Tap, R, L

## 1 Introduction

This is a qualitative study of English as a Lingua Franca (hereafter, ELF) that analyzes the interactions between non-native speaker (hereafter, NNS) college students of different nationalities at the same Japanese university. Using Conversation Analytic sequential analysis, this study examines which phonemes are intelligible between NNSs and lead to successful communication (Firth 1996; Schegloff, Koshik, Jacoby, & Olsher 2002; Otake 2003; Matsumoto 2011; Szczepek Reed 2012). This article focuses primarily on intelligible ELF pronunciation between Japanese NNSs and non-Japanese NNSs,

following Jenkins's existing studies (e.g., 2000, 2002). Jenkins (2000: 235) points out the general lack of empirical research on phonology in ELF settings, such as conversations between Japanese NNSs and non-Japanese NNSs.

Most ELF pronunciation research focuses on phoneme articulations that necessitated repair and negotiation to reestablish intelligibility (Jenkins 2000, 2002; Matsumoto 2011). This paper, however, examines deviant phoneme articulations—"deviant" defined as articulatory deviance from phonetic citation forms present in pronunciation dictionaries based on native speaker (hereafter, NS) models—with the following characteristics: 1) these deviant phoneme articulations do not catalyze either repair or meaning negotiation; 2) these deviant phoneme articulations can be used to complete repair. In other words, these phonetic articulations are deviant pronunciations only in the sense that they are not proximate to NS models, but are nonetheless found both in utterances that are oriented to as fully intelligible and in utterances used to reestablish mutual intelligibility. In particular, this study focuses on the intelligibility of the substitution of either the /ɹ/ phoneme or the /l/ phoneme with the flap /ɾ/ phoneme, and attempts to answer the following questions: Is phonetic deviation from the /ɹ/ and /l/ phonemes consequential in NNS-NNS English conversations? Does phonetic deviation from the /ɹ/ and /l/ phonemes affect intelligibility in NNS-NNS English conversations? Can the flap /ɾ/ phoneme be used to repair lexemes that have /ɹ/ and /l/ phonemes in their pronunciation citation forms? This study attempts to answer these questions, as well as contribute to a larger project of identifying a Lingua Franca Core of pronunciation features for Japanese speakers of English as a Lingua Franca that are critical to the maintenance of international intelligibility.

## 2 Previous Studies

This section has three distinct purposes: Section 2.1 will introduce the term intelligibility, briefly review previous research on intelligibility, and then propose a new definition of intelligibility in accord with conversation analytic methodology; Section 2.2 will assess some of the previous research into the /ɹ/ and /l/ phonemes and their relationship to intelligibility; Section 2.3 will introduce the Lingua Franca Core, which is a set of phonological features that are claimed to make NNSs' pronunciation more intelligible to other NNSs (Jenkins 2000, 2002; Walker 2010).

### 2.1 Intelligibility in Interaction

"Intelligibility" is usually discussed in conjunction with another term: comprehensibility (Munro & Derwing 1995a, 1995b; Derwing & Munro 2005). Intelligibility refers to the amount of the speaker's message that was actually understood by an interlocutor (Munro & Derwing 1995a, 1995b, 2011; Nelson 2011). Comprehensibility, on the other hand, refers to how subjectively difficult or easy a

speaker's message was to understand (Munro & Derwing 1995a, 1995b, 1998; Isaacs & Trofimovich 2012). A host of studies have demonstrated that intelligibility and comprehensibility are not necessarily correlated (Munro & Derwing 1995a, 1995b, 1998; Derwing & Munro 1997). This study focuses solely on intelligibility because comprehensibility is essentially a measure of an individual's opinion of a speaker's pronunciation, and not a measure of how much an interlocutor understood. Opinions, after all, can be compared to certain body orifices: everyone has one, and it is usually filled with detritus. Therefore, a study of opinions of NNS pronunciation is not as valid a research topic.

Scholars have measured intelligibility in a multiplicity of ways. The most common means of measuring intelligibility is to use a dictation task in which listeners are asked to write what they hear in standard orthography. The number of correctly transcribed words equates to an index of speaker intelligibility (Brodkey 1972; Gass & Varonis 1984; Bent & Bradlow 2003; Derwing & Munro 1995a; Munro, Derwing, & Morton 2006). Other scholars have used comprehension questions (Smith & Bisazza 1982; Anderson-Hsieh & Koehler 1988), summaries of information (Perlmutter 1989), cloze tests (Smith & Rafiqzad 1979), and true/false questions (Munro & Derwing 1995b) in order to ascertain the intelligibility of speech.

However, the previous types of measurement are not without problems. Jenkins (2000), Seidlhofer (2004), and Canagarajah (2006, 2007) justifiably criticize most of the previous research methods as unreliable both because they were conducted in artificial experimental settings and because they only use native speaker judges to assess intelligibility. This is a significant weakness because most English is used between NNSs without a native speaker present (Prodromou 1997). But the greatest flaw of all of the previous assessments of intelligibility is that they make an implicit claim that intelligibility is completely dependent on the speaker. This is a problem because, as Jenkins (2000) states, "intelligibility is dynamically negotiable between speaker and listener, rather than statically inherent in a speaker's linguistic forms" (79). Indeed, as Munro et al. (2006) themselves claim, echoing Jenkins critique without realizing the irony, "the most valuable information about whether a particular speaker is intelligible is likely to come from the people with whom the speaker seeks to interact" (115). Therefore, the best instrument to assess intelligibility is the speaker's interlocutor, not some artificial and hermetically sealed lab experiment.

Accordingly, this study adopts an emic participant-relevant perspective towards intelligibility that utilizes the interlocutor's reaction to an utterance to assess the intelligibility of the utterance. Intelligible utterances would be oriented to without any communicative turbulence or manifestation of interactional trouble. As such, this study defines "intelligible utterances" as utterances that are not subject to repair (Schegloff, Jefferson, & Sacks 1977; Schegloff 1992, 1997, 2000). Intelligible pronunciations are assumed both to reside within utterances that are oriented to as intelligible and to

contribute to the intelligibility of the utterance. Inversely, unintelligible utterances would be oriented to as trouble and would entail repair. Therefore, this study defines “unintelligible utterances” as utterances that catalyze repair, and repair triggered by phonetic trouble sources can reveal the source of the unintelligible pronunciation.

An example will suffice to show that the NNSs in this study’s corpus are fully capable of demonstrating intelligibility and unintelligibility through the presence or absence of repair. We examine an exchange between two NNSs that demonstrates interactional intelligibility. A Chinese student named Yan, a pseudonym, is talking to a Japanese student named Atsuko, also a pseudonym, about Atsuko’s winter holiday activities, which in Japan is an affair laden with cultural significance and normative expectations. The transcripts follow the standard Jeffersonian conversation analytic transcription system, but lexical items of interest have been transcribed into the International Phonetic Alphabet (IPA).

- Example 1: First Semester Sound File 14
- |   |         |  |
|---|---------|--|
| 1 | Yan:    | yeah yeah. So. (.) uhm what did you do in winter holiday?      |
| 2 | Atsuko: | Uh let’s see I went on New Year’s day. I went to Yahiko shrine |
| 3 |         | and after that I /bɪ.zɪ.tɪd/ my grandfather’s house.           |
| 4 | Yan:    | ahnn:: uhm had- had you had many delicious food?               |
| 5 | Atsuko: | ah yes (laughs)  |
| 6 | Yan:    | I think so   |
| 7 | Atsuko: | I enjoyed typical Japanese style winter holiday.               |
| 8 | Yan:    | ah::   |
| 9 | Atsuko: | hn   |

The exchange above begins when Yan asks Atsuko about her winter holiday, to which Atsuko responds with a serial listing of things she did during New Year’s day (lines 1~3). Next, after an elongated receipt token (ahnn::), Yan asks a further question that is contingent on Atsuko’s previous answer, to which Atsuko again responds, quickly completing the second sequence (lines 4~5). Both sequences are conducted in a swift manner without any hesitation between turns, and neither participant conducts repair, which is indicative of the presence of mutually intelligible utterances.

The phonologically interesting aspect of these two sequences is /bɪ.zɪ.tɪd/ in line 3. The details of the interaction reveal that although Atsuko articulated /bɪ.zɪ.tɪd/, Yan interpreted /bɪ.zɪ.tɪd/ as “visited.” In other words, the substitution of the phoneme /v/ with the phoneme /b/ within the lexeme “visited” was interactionally unproblematic (O’Neal 2013). We know this because Yan’s question in line 4, immediately after the articulation of /bɪ.zɪ.tɪd/, reveals that Yan understands the cultural significance of Japanese people visiting grandparents during New Year’s: Japanese families gather together and eat copious amounts of food during the New Year’s celebration. Therefore, Yan’s question in line 4 demonstrates both that Yan understands Japanese New Year

festivities, and that Yan surmised what Atsuko would do when she visited her grandfather's house. This indicates that Yan interpreted /bɪ.zɪ.tɪd/ as "visited," which in turn reveals that /bɪ.zɪ.tɪd/ is an unproblematic alternative pronunciation for "visited." In other words, Yan's response to Atsuko's utterance socially manifests that Atsuko's utterance was intelligible, which in turn reveals that the articulation of "visited" as /bɪ.zɪ.tɪd/ was conducive to the maintenance of mutual intelligibility.

Of course, not any and every response and utterance socially manifests the establishment or maintenance of mutual intelligibility. Indeed, as Wong (2000) argued, any proximate response is not necessarily an indication that a previous utterance is intelligible. This is especially true for minimal responses. Accordingly, the conditions under which a phoneme will be considered intelligible in this study are rather strict and divided into two stages: the utterance stage and the phoneme stage. First, in order to qualify as an utterance that socially manifests mutual intelligibility in this study, the utterance must meet three criteria: 1) it must demonstrate that the previous utterance has genuinely been understood in some way (through lexical repetition, the expression of the significance of the previous utterance, or being sequentially and pragmatically apposite in the sense that it furthers the interactional agenda at hand, etc.); 2) it must be more than just a minimal response (oh, okay, yeah, alright, uh huh); 3) it must not catalyze repair. Second, in order to qualify as a phoneme that socially manifests mutual intelligibility, the phoneme must meet two criteria: 1) the phoneme must commonly reside within utterances that manifest mutual intelligibility in accordance with the criteria above; 2) the phoneme must be able to be used to complete repair and reestablish mutual intelligibility after an intelligibility breakdown. Under these conditions, a phoneme will be considered intelligible. This study will demonstrate that the substitution of the /ɹ/ or the /l/ phoneme with the flap /ɾ/ phoneme commonly resides within utterances that are oriented to as intelligible (see section 3.1), and that the flap /ɾ/ phoneme can be used to reestablish mutual intelligibility by playing a role in the culmination of repair (see section 3.2).

Example 1 shows that intelligibility and unintelligibility are socially visible to the analyst because conversation participants orient to utterances as either intelligible or unintelligible as the case may be. If utterances are intelligible, conversation participants orient to utterances as such. If utterances are unintelligible, conversation participants manifest that in the details of their interaction. That is, intelligibility and unintelligibility are socially constructed, just like errors (Canagarajah 2007: 929). Accordingly, analysts can determine utterance intelligibility and unintelligibility by observing how interlocutors orient to previous utterances (Firth 1996, 2009a, 2009b; Dewey 2009, 2012).

However, one might claim that this method of determining intelligibility is superficial. Indeed, House (1999, 2002) claims that superficial consensus in conversational details simply obfuscates trouble at a deeper level. But claiming a problem exists even when the participants do not orient to one risks inserting the bias of the analyst into

the data, which is always a dangerous proposition because claiming problems exist even when none are salient to the participants themselves implies the analyst subscribes to a deficit view of communication—the speakers are assumed to be unintelligible until proven otherwise. This study explicitly rejects such a view.

Another concern one might have with a conversation analytic measurement of intelligibility is that NNSs might avoid difficult pronunciations, which would render relevant and interesting phonological phenomenon opaque to the analyst. Indeed, Schachter (1974) and Derwing & Munro (2005) claim that observing only natural interactions may shroud pronunciation difficulties behind learner avoidance strategies. But this is hardly a good reason to dispense with naturally recorded data: the Second Language Acquisition (SLA) concept of “Avoidance” is problematic, even anachronistic, to begin with. “Avoidance” is the idea that NNSs avoid conformity to NS norms because they are too difficult, or do not yet understand them (Brown 2006). Yet, as the examples in section 3.1 will demonstrate, conformity to NS pronunciation norms is not a prerequisite for successful communication at all. NNSs are perfectly capable of making themselves understood without recourse to NS pronunciation norms. Indeed, “Avoidance” is little more than another facet of the deficit view of communication masquerading as impressive-sounding SLA jargon, but it is even more insidious: “Avoidance” implies that all NNSs want to, and should, mimic NS speech, which is neither always true nor even necessary, and that until NNSs model their English after NS English, they are doomed to the status of “fossilized” error-prone “interlanguage” users rather than language users (Selinker 1972). This study also rejects the implications of the ideas of “Avoidance,” “Interlanguage,” and “Fossilization.” NNSs are neither “avoiding” NS norms, “fossilized” into a state of permanent ineptitude, nor are they in perpetual “interlanguage” limbo—they are simply successfully communicating in English on their own terms. Because of all of the above, this study adopts a strict emic perspective toward the data: no unintelligibility is assumed until manifest in the details of the interaction.

## 2.2 The /ɹ/ and /l/ Phonemes & Intelligibility

Next, we examine the relationship between specific phonemes and intelligibility in previous research. A plethora of studies claim, assume, or imply that the distinction between the /ɹ/ and /l/ phonemes is critical to intelligibility, and that deviation from NS-like articulations of the /ɹ/ and /l/ phonemes attenuates intelligibility (Goto 1971; Mochizuki 1981; Sheldon & Strange 1982; Strange & Dittman 1984; Yamada 1993; Lively, Logan, & Pisoni 1993; Flege, Takagi, & Mann 1995; Iverson & Kuhl 1996; Bradlow, Pisoni, Akahane-Yamada, & Tohkura 1997; Riney & Flege 1998; Ingram & Park 1998; Bradlow, Akahane-Yamada, Pisoni, & Tohkura 1999; Riney, Takada, & Ota 2000; Thompson 2001; Aoyama, Flege, Guion, Akahane-Yamada, & Yamada 2004; Bradlow 2008; Hattori & Iverson 2009; Saito & Lyster 2012). However, this type of research is

laden with problems, some technical and others theoretical: 1) many studies only use NSs to assess intelligibility, which is very problematic when one considers that English is used to communicate with NNSs more than NSs (e.g., Goto 1971; Mochizuki 1981; Sheldon & Strange 1982; Flege et al. 1995; Ingram & Park 1998; Riney & Flege 1998; Aoyama et al. 2004; Saito & Lyster 2012); 2) many studies do not make a meaningful distinction between intelligibility and comprehensibility (e.g., Yamada 1993; Flege et al. 1995; Bradlow et al. 1997; Bradlow et al. 1999; Aoyama et al. 2004; Saito & Lyster 2012), and some of the experiments and research methodologies are incapable of making such a critical distinction (e.g., Saito & Lyster 2012); 3) few of the studies address the issue of whether teaching the distinction between the /ɹ/ and /l/ phonemes is even worthwhile, especially if one considers that some research has discovered that even NNSs who have lived long periods of time in countries in which the /ɹ/ and /l/ phonemes are distinct are unable to consistently produce the /ɹ/ and /l/ phonemes contrastively (Larson-Hall 2006). Accordingly, the implicit claim of all of this research that states that only NSs are qualified to assess the intelligibility of the /ɹ/ and /l/ phonemes and the intelligibility of deviance from the /ɹ/ and /l/ phonemes in NNS speech is problematic at best, pedagogical propaganda at worst, and should be abandoned.

### 2.3 The Lingua Franca Core

The Lingua Franca Core (LFC) is described as “a core of pronunciation features which occur in successful NNS-NNS communication and whose absence leads to miscommunication” (Jenkins 2007: 25). The main features of the Lingua Franca Core include all of the following: 1) all consonants are critical for intelligibility except /θ/, /ð/, and /l/; 2) voiceless plosives need aspiration to differentiate them from voiced plosives; 3) the British English inter-vocalic /t/ is more intelligible than the North American English inter-vocalic /t/, which is often pronounced as the flap /ɾ/; 4) the North American English retroflex approximant r, /ɻ/, is preferred to the British English post-alveolar approximant r, /ɹ/, for intelligibility; 5) vowel additions between consonants (vowel epenthesis) are acceptable, but consonant cluster simplification is not; 6) distinguishing the vowel /ɜ:/ from other vowels is important; 7) appropriate vowel length before voiceless and voiced consonants aids intelligibility; 8) pitch accents (nuclear stress) are important as well (Jenkins 2000; Walker 2010). As can be seen, the core features of the Lingua Franca Core are mostly segmentals, although some suprasegmentals are also prominently featured.

Segmental and suprasegmental features that are not at all essential to intelligibility are considered non-core features. Non-core features do not aid intelligibility, and sometimes they even inhibit intelligibility (Jenkins 2000, 2002; Walker 2010). Segmental and suprasegmental features that are specifically designated non-core include all of the following: 1) /θ/ and /ð/ are not important to intelligibility, and can be replaced with /f/ and /v/ respectively; 2) /l/ can replace /ɹ/ without ill effect on intelligibility; 3) exact

vowel quality; 4) pitch movement, except for pitch accents; 5) word stress; 6) stress-timing; 7) vowel reduction and weak forms; 8) certain features of connected speech like assimilation, palatalization, and coalescence.

Although the list of segmental and suprasegmental features in both the core and non-core is very specific, Jenkins (2007) did not intend the LFC as a monolithic foundation for an English pidgin. Quite the contrary, the LFC can be, and even should be, adapted to local conditions and needs. As Jenkins (2007) states, NNSs are “entirely free to adjust even the core features if this suits local communication needs. The point of the LFC is that the pronunciation norms in any given interaction are determined by ELF users themselves” (26). That is, the LFC is an extremely variable set of features that can be, and often are, reconstituted in every NNS-NNS interaction. Indeed, the examples in the next section will demonstrate that NNSs delineate new core and non-core pronunciation features during interaction, which is a manifestation of the variable nature of intelligible pronunciation in interaction.

### 3 Methodology & Data

This study adopts a Conversation Analytic approach to the examination of intelligibility in NNS-NNS conversations (Matsumoto 2011). That is, unless the participants in the conversation orient to a pronunciation as problematic or unintelligible, then this study does not make a claim that a pronunciation was unintelligible regardless of how far the pronunciation might deviate from pronunciation dictionary citation forms. Furthermore, this study adopts the transcription conventions of Conversation Analysis (Schegloff 2007), but modifies them in accord with Matsumoto’s (2011) amendments to allow for a detailed phonetic analysis. Specifically, this study renders lexical items of interest in IPA transcription with relevant diacritics. The rest of the lexical items in the transcript follow Jeffersonian transcription conventions.

The corpus of data utilized in this study was collected between September 2011 and March 2013 at a major Japanese university. The corpus contains forty-four recorded English conversations over Skype between Japanese NNSs and non-Japanese NNSs. All names that appear in the transcripts below are pseudonyms. The Skype recordings were student homework in the researcher’s oral communication English class. All recordings are used with the students’ permission. Although the recordings are the result of obligatory homework assignments about topics specified beforehand that all students had to produce, the recordings still are considered a valid data set because it is unlikely that specified topics and obligatory homework assignments affects the relationship between speaker intelligibility and speaker pronunciation.

#### 3.1 Intelligible Utterances Containing Words with Flap /r/ Allophones

In the corpus, utterances containing words with substitutions of either the /ɹ/

phoneme or the /l/ phoneme with the flap /r/ phoneme were rarely problematized or repaired by the participants, with some exceptions (see section 3.2). That is, many speakers used allophones, which are a set of possible phonemes that can be used to represent one sound. Although allophones are often defined and determined according to a native speaker standard, such a standard is inapplicable to this corpus: no one in the corpus is a native speaker of English. Accordingly, the definition of allophone in this study deviates from the standard definition. In this study, any phoneme that deviates from the pronunciation dictionary citation form of the lexeme and is within an utterance that is oriented to as unproblematic is considered an allophone.

We begin with an examination of an extract of a conversation with two lexemes that contained the flap /r/ allophone in places that pronunciation dictionaries mandate a /l/ phoneme. In the following example, a Japanese student named Sakiko converses with a French student named Francine. The extract begins in the middle of the conversation during talk concerning their nocturnal culinary activities. Before the conversation in the extract, Sakiko asked Francine what she planned to do that night, and Francine replied that she intended to cook dinner. The conversation quickly spilled into a conversation about cooking, leading to the following exchange. The items of interest occur in line 4.

- Example 2: French-Japanese 102
- |   |           |  |
|---|-----------|--|
| 1 | Francine: | and what about you Sakiko. Do you like French uh::: cooking?       |
| 2 | Sakiko:   | yeah I like cooking so:::.   |
| 3 | Francine: | uh hm  |
| 4 | Sakiko:   | uh::: I /rɹɪk/ I /rɹɪk/ eating and cooking (laughs) so:::          |
| 5 | Francine: | yeah   |
| 6 | Sakiko:   | so everyday I cook [something.                                     |
| 7 | Francine: | [yup yeah I guess it' s (laughs) a woman' s thing (laughs) to like |
| 8 |           | eating (laughs)  |

The above example begins when Francine asks Sakiko, “do you like French cooking?” in line 1, to which Sakiko orients as a question and answers accordingly in the affirmative in line 2. However, Sakiko deploys the conjunction “so” at the end of her turn in line 2 and elongates the vowel, to which Francine seems to orient as a signal that Sakiko wishes to continue her turn with some supplementary material. This can be seen as Francine cedes her turn back to Sakiko when she deploys the “uh hm” continuer in line 3. In line 4, Sakiko begins to expand on her original turn that was begun in line 2: she states that she likes eating and cooking and again deploys a conjunctive “so” at the end of her turn, displaying her intent to expand her turn even more, to which Francine orients as such and deploys the continuer “yeah” in line 5. In line 6, orienting to “yeah” in line 5 as a continuer, Sakiko continues expanding her turn, which culminates in a statement about her daily culinary activities. Francine begins her

turn in overlap with sakiko's turn in line 7 and concludes the sequence in line 8.

The lexical items of interest are in line 4. Sakiko does not articulate the word “like” as the citation form /laik/. Rather, the lexeme “like” is articulated as /raik/ twice in the same turn. However, Francine never reacts to, or orients to, the articulation /raik/ as either problematic or unintelligible. In fact, Francine orients to Sakiko's turn in line 4 as fully intelligible. That is, the articulation of the lexeme “like” as /raik/ caused absolutely no problems for either participant in the conversation. Furthermore, the fact that Francine repeats the lexeme “like” in her own turn manifests that Francine understood Sakiko's articulation of “like” as /raik/. In a word, this example demonstrates that the flap /r/ can substitute for the phoneme /l/ without inhibiting the intelligibility of the word.

The second example in this section will again demonstrate both that the flap phoneme /r/ can replace a lexeme-initial phoneme /l/ without catalyzing interactional trouble and that the utterance in which the substitution occurs is oriented to as intelligible. In the second example, Masato, a Japanese student, is talking to Chen, a Taiwanese student, about the different culinary traditions in each country, which leads to the following exchange.

- Example 3: Taiwanese-Japanese 100
- |   |         |   |
|---|---------|---|
| 1 | Masato: | hm do you /raik/ ramen?                               |
| 2 |         | (1.0)   |
| 3 | Chen:   | yes I like I like it. I I like (0.5) sushi and ramen. |
| 4 | Masato: | [oh::   |
| 5 | Chen:   | [and rice. It' s very:: (.) very delicious.           |

The opening gambit in example 4 is Masato's question, to which Chen orients as an information request after a second of silence, which could indicate that Masato's utterance was low on the comprehensibility scale, and provides an apposite answer (lines 1~3). Chen adds additional details to her utterance, to which Masato orients as new information in overlap with Chen, which is made manifest by the “oh” receipt token (lines 3~5). But the phonetically interesting aspect of the above exchange is that Masato articulates “like” as /raik/, and that Chen orients to the utterance in which /raik/ appears as intelligible. Furthermore, Chen's lexical repetition of “like” in her own turn manifests that Chen found the articulation of the word “like” as /raik/ as an intelligible articulatory variant of /laik/. That is, this example demonstrates that the flap phoneme /r/ can substitute for a lexeme-initial phoneme /l/ without attenuating the intelligibility of either the word or the utterance.

Another example will further demonstrate both that the flap phoneme /r/ can replace the phoneme /l/ without catalyzing interactional trouble and that the utterance in which the substitution occurs is oriented to as intelligible. In this extract, Sana, a Russian student, and Seiya, a Japanese student, are talking about a trip Sana took with some of her Japanese friends to a famous abandoned house, called the “White House.”

which has a reputation as a haunted house in the Niigata area.

- Example 4: Japanese-Russian 171
- |   |        |  |
|---|--------|--|
| 1 | Seiya: | oh by the way you went there on midnight right               |
| 2 | Sana:  | no not midnight we went there 10 oclock or 9 oclock actually |
| 3 | Seiya: | yeah but it's /ɾɛɪt/ it's /ɾɛɪt/                             |
| 4 | Sana:  | yeah it was it was dark there                                |
| 5 | Seiya: | yeah   |
| 6 | Sana:  | we took flashlights  |
| 7 | Seiya: | kay  |

First, in the middle of Sana's story, Seiya interjects and attempts to confirm the time at which Sana arrived at the haunted house, suggesting a midnight arrival as a possibility, but Sana rejects the suggestion and then orients to Seiya's utterance as a request for the time of arrival, which she provides: 9 or 10 o'clock (lines 1~2). Seiya accepts the answer with a receipt token (yeah), and then says "it's /ɾɛɪt/ it's /ɾɛɪt/," to which Sana responds with "yeah it was it was dark there" (line 3~4). The fact that Sana uses an affirmation token (yeah) to agree with Seiya's supposition that Sana arrived at the haunted house at a /ɾɛɪt/ time, and the fact that Sana mentions that it was dark by the time she arrived, which indicates that Sana agrees with Seiya that she arrived in evening, demonstrates that Sana interpreted /ɾɛɪt/ as "late" even though the first phoneme in the word was the flap phoneme /ɾ/ rather than the phoneme /l/. In other words, Sana's lexical choices reveal that she understood Seiya's articulation of "late" as /ɾɛɪt/ rather than /lɛɪt/ as intelligible. That is, the substitution of the phoneme /l/ for the flap phoneme /ɾ/ does not lead to repair, and the utterance in which the flap phoneme /ɾ/ is deployed is oriented to as intelligible.

The next example further demonstrates both that the flap phoneme /ɾ/ can replace the phoneme /l/ without catalyzing interactional trouble and that the utterance in which the substitution occurs is oriented to as intelligible in NNS-NNS interactions. In next extract, Ayumi, a Japanese student, and Hua, a Chinese student, are talking about the sweet food that they both like. The lexemes "delicious" and "chocolate" appear in the transcript many times, but each speaker uses a different articulatory configuration for each word. However, this articulatory variation causes no interactional breakdown at all.

- Example 5: Chinese-Japanese 123
- |   |        |  |
|---|--------|--|
| 1 | Hua:   | and I think uh Japanese sweet food isu   |
| 2 | Ayumi: | uh [hn]  |
| 3 | Hua:   | [almost very spec- uh::: delicious.  |
| 4 | Ayumi: | oh yes I know it' s really /də.ri.fəs/. How about in China.<br>Can- is /tʃɔk.rət/ is same? |
| 5 | Ayumi: | Is it [( )]  |
| 6 | Hua:   | [uh:::] yes in China choco chocolate is also delicious                                     |

- 7 Ayumi: [oh really uh hn [uh huh [uh huh  
 8 Hua: [but uh uh sometimes the cake [the cake [is no- not so  
 delicious  
 9 Ayumi: oh willy [so  
 10 Hua: [yes:: it depends on the::::=  
 11 Ayumi: =shop.  
 12 Hua: eh no it depends on [the::::  
 13 Ayumi: [uh huh uh huh  
 14 Hua: uhn price.  
 15 Ayumi: ah okay so if you buy expensive one it' s /də.ri.fəs/.  
 16 Hua: yes yes  
 17 Ayumi: uh huh.

The exchange begins with Hua's comment that Japanese sweet food is almost very delicious, to which Ayumi orients as an assessment, and expresses agreement with an upgraded assessment (lines 1~4). Next, Ayumi begins a new sequence and asks Hua about the chocolate situation in China, to which Hua orients as a question that obligates an answer: Hua informs Ayumi that chocolate in China is also delicious. Ayumi reacts to the information as new information with a receipt token (lines 4~7). The two students understand each other throughout the exchange, and no manifestation of interactional trouble appears. The fact that the two students understood each other is also manifest in the lexical choices of each participant: Hua repeats both "delicious" and "chocolate" in line 6, which indicates that Hua understood Ayumi's articulations of "delicious" as /də.ri.fəs/ and "chocolate" as /tʃək.rət/ in line 4. This demonstrates that Hua orients to Ayumi's articulations of "delicious" and "chocolate" as fully intelligible. It can also be said that the articulation of the flap phoneme /ɾ/ in place of the phoneme /l/ is also oriented to as unproblematic in context.

A further example will again demonstrate that the substitution of the phoneme /l/ with the flap phoneme /ɾ/ does not inhibit the maintenance of mutual intelligibility. In the following example, Chie, a Japanese student, and Moon, a Korean student, are talking about their respective living situations. Unlike all of the previous examples so far, both participants in this extract will articulate two words the same way: "alone" as /ə.roʊn/, and "live" as /ɾɪv/. That is, both students will substitute the phoneme /l/ with the flap phoneme /ɾ/ in their articulations of the lexeme "alone."

- Example 6: Korean-Japanese 61  
 1 Moon: uh:: (1.0) have you ever lived alone.  
 2 Chie: uh now:: I live with my parents. Uh and I have never lived  
 with (.) /ɾɪvd/ /ə.roʊn/.  
 3 so:: but someday I want to /ɾɪv/ /ə.roʊn/.  
 4 Moon: hn  
 5 Chie: hn how about chew. uh in Korea::

- 6 Moon: [yeah  
 7 Chie: [di jew /rɪv/ /ə.roʊn/?  
 8 Moon: uh (0.3) I live alone half year in Korea.  
 9 Chie: hn:=  
 10 Moon: =for practice  
 11 Chie: [hn  
 12 Moon: [because because I plan to co:me japan next year for working  
 holidays  
 13 Chie: hn  
 14 Moon: and also go Australia for working holidays too (.) so I have to  
 live alone.  
 15 Chie: oh

The exchange above begins when Moon asks Chie if she has lived alone, an utterance to which Chie orients as an information request that obligates the production of an answer: Chie mentions that she has not lived alone, but she wants to someday. Moon responds to Chie's answer with a curt receipt token (lines 1~4). Next, Chie asks the same question back to Moon, to which Moon orients as an information request and produces the obligated response: he has lived alone for half a year in Korea. Chie also deploys a short receipt token in response to Moon's answer (lines 5~9). The interactional details demonstrate that the two students understood each other throughout the exchange: although Moon's receipt token in line 4 does not definitively prove that Moon understood Chie's articulations of "live" as /rɪv/ and "alone" as /ə.roʊn/ in line 3, Moon's apposite answer in line 8 does prove that Chie's articulations of "live" as /rɪv/ and "alone" as /ə.roʊn/ in line 7 were intelligible. That is, Moon's answer in line 8 in response to Chie's utterance in line 7 is contingent upon Moon understanding Chie's pronunciation, and the fact that Moon provided a response that appropriately answers Chie's question manifests that Moon understood Chie's utterance. As can be seen, Chie's articulations of "live" as /rɪv/ and "alone" as /ə.roʊn/ were key parts of an utterance that was oriented to as intelligible and unproblematic.

All of the previous examples demonstrate that the flap phoneme /ɾ/ can substitute for the /l/ phoneme without attenuating mutual intelligibility, but the flap phoneme /ɾ/ can substitute for other phonemes as well. The next example demonstrates that the flap phoneme /ɾ/ can substitute for the /ɹ/ phoneme as well. In the following extract, Mie, a Japanese student, and Kim, a Korean student, discuss the rent of apartments around their university, but because Kim is an exchange student, his rent is subsidized by the Japanese government, so his monthly rent is considerably less than Mie's. However, the lexeme "rent" is never articulated as /ɹɛnt/. Rather, it is articulated as /ɾɛnt/, and the utterance in which it manifests is oriented to as intelligible.

Example 7:	Korean-Japanese 91
1	Mie: How much for the /rɛnt/? Like a month
2	Kim: gosenkyuhyakuen ((5900 yen))
3	Mie: it's cheap

After a brief discussion of living conditions, Mie asks Kim how much his rent is, and Kim orients to Mie's utterance as a question and provides an apposite answer: 5900 yen per month for rent (lines 1~2). Although Kim code-switches to Japanese to provide the requisite information, Mie's next utterance indicates not only that she believes Kim's rent is a bargain, but also that she understood Kim's Japanese and accepts it as an answer to her question (line 3). The phonetically significant feature of the extract above is that the lexeme "rent" is not articulated as /ɹɛnt/. It is articulated as /rɛnt/ instead, and the fact that Kim provides an apposite and appropriate answer in line 2, and the fact that Mie accepts Kim's answer in line 3, demonstrates that the articulation of the lexeme "rent" as /rɛnt/ was mutually intelligible to the participants in the exchange.

All of the examples so far indicate that the flap /r/ phoneme can substitute for the phonemes /ɹ/ and /l/ without attenuating intelligibility. The flap /r/ phoneme was deployed as an allophone in numerous lexemes in the above conversations, and neither participant ever subjected any of the lexemes with the flap /r/ allophone to repair, nor did they orient to utterances that contained lexemes with the flap /r/ allophone as either problematic or unintelligible. However, that does not mean that utterances containing lexemes with the flap /r/ phoneme were never subjected to repair. Repair of utterances containing lexemes with the flap /r/ phoneme is the subject to which we now turn.

### 3.2 Repair Sequences & the Flap /r/ Phoneme

The previous section documented a number of sequences in which utterances containing lexemes with flap /r/ allophones were oriented to as intelligible. More specifically, the participants never initiated repair because of phoneme substitution in any of the previous examples, and they never needed to because the phoneme substitutions were allophonic. However, that does not mean that the participants in the corpus never initiated repair of utterances containing lexemes with the /r/ phoneme—they did, and we will examine some of the sequences in which it occurred below. In the following examples, participants collaborate to reestablish mutual intelligibility after it has broken down.

The first example in this section will demonstrate that participants can subject utterances containing lexemes with the flap /r/ phoneme to repair but still find the lexeme containing the flap /r/ phoneme intelligible. In the penultimate example, Zhang, a Chinese student, and Daisuke, a Japanese student, are discussing what they each did last weekend. Daisuke mentions that he went to a place near the Shinkawa river and joined in a barbeque party. In lexeme of interest appears three times in lines 12 and 14

in IPA.

- Example 8: Chinese-Japanese111a
- |    |          |   |
|----|----------|---|
| 1  | Zhang:   | so uh what dijah do last weekend?                                       |
| 2  | Daisuke: | uh hm last weekend eh andu I uh   |
| 3  |          | (0.5)   |
| 4  | Daisuke: | I: (.) go to barbeque   |
| 5  | Zhang:   | where=  |
| 6  | Daisuke: | =with my friend etto eh near near university niigata<br>university andu |
| 7  |          | (1.0)   |
| 8  | Daisuke: | uh  |
| 9  |          | (1.0)   |
| 10 | Daisuke: | andu (laughs)   |
| 11 |          | (1.0)   |
| 12 | Daisuke: | near /rɪBɑ/ sinkawa   |
| 13 | Zhang:   | [si   |
| 14 | Daisuke: | [shi- shinkawa /rɪBɑ/. It is /rɪBɑ/.                                    |
| 15 | Zhang:   | kay that sounds interesting   |
| 16 | Daisuke: | ah yes barbeque is very interesting                                     |
| 17 | Zhang:   | okay eh:: so what else did you do                                       |

This extract opens with Zhang's utterance in line 1, to which Daisuke orients as a question obligating an answer. Daisuke tells Zhan that he went to a barbeque (lines 2~4). Zhang orients to the end of Daisuke's utterance in line 4 as a transition relevant place, and initiates a secondary follow-up question, but the fact that Daisuke seems to continue his response to the utterance in line 1 reveals that Daisuke probably did not intend the end of his utterance in line 4 to be a transition relevant place. However, Daisuke simply switches gears in line 6 and orients to Zhang's monosyllabic utterance as a question that obligates yet another response: Daisuke mentions that the location of the barbeque was at a place called river Shinkawa (lines 6~12). In response to that, Zhang utters a single sibilant syllable (line 13), to which Daisuke orients as an indication that Zhang did not understand that he went to a river called Shinkawa. Daisuke repeats the same information as before, but repositions the words "Shinkawa" and "river," and then concludes his turn after he states that "it is a river." Finally, in line 17, Zhang deploys "okay" once to indicate that the sequence begun with the "where" interrogative has reached a sufficient culmination (Schegloff 2007).

Although the sequence is successful in the sense that the information requested was the information relayed, the important aspect of the interaction is the phonetic resources deployed to complete the sequence. Daisuke never articulates the lexeme "river" as /rɪvə/, which pronunciation citation forms mandate a /ɹ/ phoneme in lexeme initial position. Instead, Daisuke continually articulates "river" as /rɪBɑ/, but that fact

does not impede the interaction from reaching a successful culmination. Indeed, the lone utterance that Daisuke oriented to as indicative of trouble, Zhang's sibilant and monosyllabic utterance in line 13, which seems to indicate that Zhang had trouble with a lexeme that had sibilant phonemes in the last utterance, manifests that Daisuke believes Zhang's trouble source is "Shinkawa," not his articulation of the lexeme "river." The above example reveals that the participants problematized the lexeme Shinkawa, subjecting it to repair, not the lexeme /rɪBɑ/, which both participants oriented to as mutually understood. Daisuke even used the lexeme /rɪBɑ/ to attempt to explain Shinkawa. Accordingly, the troubles source was "Shinkawa," not the articulation of "river" as /rɪBɑ/, and therefore the flap /r/ phoneme was not a source of interactional trouble. In other words, the flap /r/ was intelligible in spite of being inside an utterance that was subject to repair.

The previous example demonstrates that the flap /r/ phoneme can appear in repair sequences without being oriented to as the catalyst of the repair sequence. The final example will demonstrate that the substitution of the flap /r/ phoneme for the phoneme /l/, far from causing repair, can be utilized to complete repair and restore mutual intelligibility between NNSs. In the final example, Park, a Korean student, is talking to Takeshi, a Japanese student, about their weekend activities.

- Example 9: Korean-Japanese 181
- |    |          |   |
|----|----------|---|
| 1  | Takeshi: | uhm so:: what did you do last weekend?                          |
| 2  | Park:    | last weekend?   |
| 3  | Takeshi: | yeah  |
| 4  | Park:    | hn today?   |
| 5  | Takeshi: | yeah.   |
| 6  | Park:    | uh today I went tah church.                                     |
| 7  | Takeshi: | church.   |
| 8  | Park:    | church.   |
| 9  | Takeshi: | oh oh church  |
| 10 | Park:    | I have a chapel time  |
| 11 | Takeshi: | hm chapel town?   |
| 12 | Park:    | chapel.   |
| 13 | Takeshi: | chapel.   |
| 14 | Park:    | hn  |
| 15 | Takeshi: | hn I don know::: what is [chapel                                |
| 16 | Park:    | [you (0.5) chapel chapel is hn god (0.5)<br>/plei:/ with people |
| 17 | Takeshi: | (laughs) with people hn:: is is it uh sports?                   |
| 18 | Park:    | no no no (1.0) I'm Christian.                                   |
| 19 | Takeshi: | oh  |
| 20 | Park:    | you (.) do you know Christian. Chu::rch                         |
| 21 | Takeshi: | yeah yeah   |

- 22 Park: chapel is:=  
 23 Takeshi: =oh /prei/. oh ah  
 24 Park: yes yes yes  
 25 Takeshi: not /plei/ and /prei/.  
 26 Park: yes [yes  
 27 Takeshi: [ah oh I I understand.  
 28 Park: yes  
 29 Takeshi: hn

In the above example, Takeshi begins the exchange with a gambit that is oriented to as a request for a telling after two intervening insert sequences (lines 1~6). Next, Takeshi displays trouble understanding “church,” but after a short repair sequence, claims understanding of the lexeme “church” (lines 7~9). In line 10, Park attempts to continue his telling, deploying the word “chapel,” but Takeshi displays trouble understanding “chapel” in line 11. After a brief and unsuccessful attempt to repair “chapel” (lines 11~14), Takeshi requests an explicit explanation of the lexeme “chapel” (line 15). Park attempts to describe “chapel” as “chapel chapel is god (0.5) /plei:/ with people,” to which Takeshi responds, after a short chortle, with “with people hn is is it a sports?”, which demonstrates both that Takeshi interpreted /plei:/ as the lexeme “play,” and “chapel” as some kind of sports center, in spite of the contextual references to a deity within Park’s utterance (line 16~17).

In response to Takeshi’s utterance, Park says “no” three times, and then states, “I’m Christian”, which demonstrates that Park rejects Takeshi’s interpretation of “chapel” as a place where sports are played (line 18). Takeshi reacts to Park’s claim to be Christian as new information, which is manifest in the deployment of the receipt token “oh” (line 19). But Park does not orient to the repair sequence as finished at this point: Park asks if Takeshi understands what a Christian is (line 20). Takeshi deploys two receipt tokens (yeah yeah), which nominally claims understanding, but the fact that Park again attempts to explain “chapel” indicates that Park does not accept Takeshi’s nominal claim of understanding (lines 21~22). Midway into Park’s second attempt to explain “chapel” in line 22, Takeshi interjects, first with an “ah” token, which indicates a change in cognitive state, and then with a proffer of an alternate candidate pronunciation, /prei/, which is followed by two more change of state tokens (line 23). Park deploys three “yes,” which demonstrates that Park accepts the alternate candidate pronunciation (line 24). Next, Takeshi contrasts the alternate pronunciation, /prei/, with the original pronunciation, /plei/, to which Park orients to as a request for a confirmation, and Park affirms the alternate pronunciation (lines 25~26). Last, Takeshi finally claims understanding in line 27.

The extract above is phonetically interesting because it demonstrates that /prei/ was used to repair /plei/. Because there is only one phoneme difference between /prei/ and /plei/, the relation is a minimal pair between the flap phoneme /ɾ/ and the

phoneme /l/. In other words, the flap phoneme /ɾ/ can be used to repair the phoneme /l/. Although the previous extract does not definitely prove that Takeshi finally understood /prei/ as “pray” by the end of the phonetic repair sequences, the details of the interaction strongly suggest that he does. However, the interactional details do prove beyond doubt that the articulatory configuration /prei/ was sufficient to repair /plei/, which was adequate enough to move the conversation along. That is, using the flap phoneme /ɾ/ to repair the phoneme /l/ was enough to complete a phonetic repair sequence. The catalyst of the repair sequence in the extract above was not the usage of a lexeme with the flap phoneme /ɾ/, but the flap phoneme /ɾ/ was used to emerge from repair and reestablish mutual intelligibility. In a word, the flap phoneme /ɾ/ was not the source of the unintelligibility that catalyzed the repair sequence, but rather the phoneme that allowed the phonetic repair sequence to be brought to a successful conclusion.

#### 4 Discussion

The claim that the exact articulation of the /ɹ/ and /l/ phonemes is critical to intelligibility is wildly overblown. As the examples in 3.1 demonstrate, NNSs are perfectly capable of maintaining intelligibility when they substitute a flap /ɹ/ phoneme for either the /ɹ/ or /l/ phonemes. With the exception of a few examples in the corpus, all interlocutors oriented to lexemes with a flap /ɹ/ allophone that substituted for either the /ɹ/ or /l/ phonemes as intelligible, unproblematic, and literally unremarkable. In other words, the interlocutors’ orientations to lexemes that contained the flap /ɹ/ phoneme reveal that they considered the flap /ɹ/ phoneme to be enough to maintain intelligibility. Even when the flap /ɹ/ phoneme did appear within repair sequences, the flap /ɹ/ phoneme was not oriented to as a trouble source (example 8), and in one case, the flap /ɹ/ phoneme was even used to reestablish intelligibility (example 9).

The results of this study question the positions of many scholars who collectively claim that exact articulation of the /ɹ/ phoneme and the /l/ phoneme is critical to intelligibility, and that deviation from the exact articulation of either the /ɹ/ phoneme or the /l/ phoneme attenuates intelligibility. Indeed, the results of this study demonstrate that proximate articulations of the /ɹ/ phoneme and the /l/ phoneme are sufficient to maintain intelligibility between NNSs. This result renders the justifications for any program of articulatory training in the /ɹ/ phoneme and the /l/ phoneme less important.

Indeed, articulatory training in the /ɹ/ phoneme and the /l/ phoneme is questionable to begin with. Many scholars have concluded that teaching students to articulate the /ɹ/ phoneme and the /l/ phoneme is generally ineffective at best. As Bradlow (2008) states, “it is not surprising that the case of training Japanese speakers to acquire the English /ɹ/-/l/ contrast has been met with remarkable resistance” (29).

But the results of this study call into question the attempt to teach exact articulatory performance for the /ɹ/ phoneme and the /l/ phoneme at all. NNSs in this study were able to maintain intelligibility without articulating the /ɹ/ phoneme and the /l/ phonemes exactly, and could even use a flap /ɾ/ phoneme substitution to reestablish intelligibility.

Because the exact articulation of the /ɹ/ and /l/ phonemes is not critical to intelligibility, the /ɹ/ phoneme and the /l/ phoneme are not core components of the LFC for Japanese NNSs. The corpus data do not support the claim that exactly articulating either the /ɹ/ phoneme or the /l/ phoneme is critical for mutual intelligibility between NNSs. In fact, an examination of the corpus data reveals that proximate articulations of the /ɹ/ phoneme or the /l/ phoneme, usually manifest as the flap /ɾ/ phoneme, are sufficient to maintain mutual intelligibility. Teachers specializing in pronunciation pedagogy would do well to focus on other elements of pronunciation that better increase international intelligibility.

One further issue of concern warrants comment here. The corpus only includes NNSs who study at one Japanese university. Might the speakers just be used to their interlocutor's speech? One might make the claim that the corpus represents NNSs who have grown used to each other's speech, and therefore this study's findings are not as relevant as claimed. It is not known how familiar the speakers in the corpus were to Japanese English before their arrival in Japan, so categorical statements are impossible to make. But it is important to point out that the non-Japanese speakers in the corpus came to Japan to learn Japanese, not English and certainly not the phonetics of English spoken by Japanese college students. However, either way one looks at it, the fact that a flap /ɾ/ phoneme can substitute for either a /ɹ/ phoneme or a /l/ phoneme is still a relevant fact for pronunciation pedagogy. If the speakers are used to each their partner's pronunciations, then the fact that a flap /ɾ/ phoneme can substitute for either a /ɹ/ phoneme or a /l/ phoneme without inhibiting intelligibility demonstrates that flap /ɾ/ phoneme substitutions are something interlocutors easily can get used to; other facets of pronunciation pedagogy should receive superordinate status on a pronunciation syllabus because the substitutions present in this study do not cause NNSs any salient or significant intelligibility problems. On the other hand, if the speakers are not used to each their partner's pronunciations, then the fact that a flap /ɾ/ phoneme can substitute for either a /ɹ/ phoneme or a /l/ phoneme without inhibiting intelligibility shows that these substitutions are both unproblematic and inconsequential. Indeed, there is one bit of evidence that suggests the students are not used to each others' speech: the students often subject vowel variation to repair, which suggests that some aspects of student speech really are unintelligible. That is, although students often orient to a flap /ɾ/ phoneme as intelligible, students often orient to vowel variation as unintelligible (see O'Neal in press). Accordingly, either way one approaches the data, one thing is clear: a flap /ɹ/ phoneme can substitute for either a /ɾ/ phoneme or a /l/ phoneme without

inhibiting mutual intelligibility.

## 5 Conclusion

Pronunciation pedagogy has been subject to some radical changes recently—too numerous to cover here. But even in the cauldron of radical change, one tenet of earlier ideology still lurks in mainstream SLA: the best way to learn a language is extensive contact between NSs and NNSs (e.g., Long 1996). However, this study demonstrates that articulatory proximity to NSs models of pronunciation is not necessary for intelligibility between NNSs. Indeed, NNSs are perfectly capable of deviating from NS pronunciation models without inhibiting mutual intelligibility, and in a world in which NNSs are far more likely to converse in English with another NNS than they are with a NS, conforming to an intelligible NNS pronunciation model rather than a NS model is much more pragmatic. Accordingly, an endonormative approach to pronunciation pedagogy that rejects the idea that NS pronunciation models are universally applicable and that accepts NNSs as full participants in determining pronunciation intelligibility is possible, warranted, and indeed justified, especially for Japanese speakers of English (Dewey 2012; Kirkpatrick 2012; Jordan 2011). This study and further studies of this kind hope to contribute to that endeavor.

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