INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

Teaching Connected Speech Rules to Japanese Speakers of English so as to Avoid a Staccato Speech Rhythm

Marie A. Melenca

A Thesis

in

The Centre

for

Teaching English as a Second Language

Presented in Partial Fulfilment of the Requirements
for the Degree of Master of Arts at
Concordia University
Montréal (Québec) Canada

March 2001

Abstract

Teaching Connected Speech Rules to Japanese Speakers of English so as to Avoid a Staccato Speech Rhythm

Marie Melenca

This study explores the effectiveness of teaching Japanese speakers of English how to connect speech so as to avoid a robotic speech rhythm. A control and an experimental group were each given three one-hour classes in English. The control group read poetry aloud without any explicit instructions. The experimental group were instructed in how to link words with three different sound boundaries: (1) consonant to vowel, (2) vowel to vowel, and, (3) consonant to consonant. The ability to link word pairs was rated for both the control and experimental groups in pre- and post-treatment situations, and this was compared to a native-speaker baseline of connected word pairs.

This research focussed on whether instruction in connected speech rules would assist in reducing the syncopated rhythm which often characterises the speech of Japanese speakers of English. Although this study was an exploratory one, with a very small sample size, the results were heartening: directly teaching these rules seemed to heighten the awareness of the need to link word pairs. However, the results indicate several problem areas on which researchers and teachers need to focus in order to optimise time spent in pronunciation training. That is, a longer period of instruction with practice may enable a more successful output. Furthermore, it would be necessary to control experimental variables more carefully and use a larger sample size in order to obtain more definitive support for the claim that teaching connected speech rules would, indeed, generally improve the speech rhythm of Japanese learners of English.

Acknowledgements

This project was given its initial stimulus, and then received unswerving support from David Levy, the English Director in the Department of Continuing Education at McGill University. The researcher is indebted to Gregory Glidden and Marie-Claude Barrette for their help in judging the speech samples for the study. The researcher is also grateful for the kind and helpful assistance of Elaine Shatenstein and RoseLyn Small for their assistance in proof-reading several drafts of the thesis in progress.

The author is also thankful for the generosity of the Concordia English Language Institute (CELI) of Concordia University for providing volunteer Japanese Learners of English, as well as for Concordia University's TESL Centre for providing classroom space in which to conduct the experiment.

Dr. Beth Gatbonton and Carolyn Cronk were both excellent thesis readers and gave timely advice and encouragement; I am eternally grateful for their support.

I am very grateful to Dr. Palmer Acheson, who agreed to take on the position of thesis supervisor after the experiment had been conducted; his enthusiasm for my research brought a most welcome breath of fresh air. I am also grateful to Dr. Lori Morris who was the first thesis supervisor; her suggestions were helpful.

I dedicate this research to my late father, Mikhail Melenca, whose unshakeable belief in me kept me to the task.

TABLE OF CONTENTS

List of Figures

List of Tables

List of International Phonetic Alphabet Symbols[1]

THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993)

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k g	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap				ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

Clicks		Voiced implosives		Ejectives	
⊙	Bilabial	ɓ	Bilabial	'	as in:
ǀ	Dental	ɗ	Dental/alveolar	p'	Bilabial
!	(Post)alveolar	ʄ	Palatal	t'	Dental/alveolar
ǂ	Palatoalveolar	ɠ	Velar	k'	Velar
ǁ	Alveolar lateral	ʛ	Uvular	s'	Alveolar fricative

VOWELS

Front   Central   Back

Close   i • y —— ɨ • ʉ —— ɯ • u
            ɪ Y   ʊ
Close-mid e • ø —— ɘ • ɵ —— ɤ • o
                         ə
Open-mid   ɛ • œ — ɜ • ɞ — ʌ • ɔ
              æ   ɐ
Open   a • ɶ —————— ɑ • ɒ
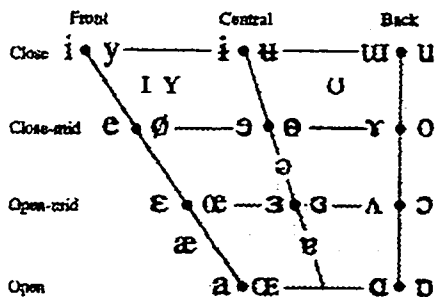
Where symbols appear in pairs, the one to the right represents a rounded vowel.

OTHER SYMBOLS

ʍ Voiceless labial-velar fricative
w Voiced labial-velar approximant
ɥ Voiced labial-palatal approximant
ʜ Voiceless epiglottal fricative
ʢ Voiced epiglottal fricative
ʡ Epiglottal plosive

ɕ ʑ Alveolo-palatal fricatives
ɺ Alveolar lateral flap
ɧ Simultaneous ʃ and x

Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary.

k͡p t͡s

SUPRASEGMENTALS

'	Primary stress	ˌfoʊnəˈtɪʃən
ˌ	Secondary stress	
ː	Long	eː
ˑ	Half-long	eˑ
˘	Extra-short	ĕ
.	Syllable break	ɹi.ækt
|	Minor (foot) group	
‖	Major (intonation) group	
‿	Linking (absence of a break)	

TONES & WORD ACCENTS

LEVEL			CONTOUR		
e̋	or ˥	Extra high	ě	or ∧	Rising
é	˦	High	ê	∨	Falling
ē	˧	Mid	e᷄	᷄	High rising
è	˨	Low	e᷅	᷅	Low rising
ȅ	˩	Extra low	e᷈	᷈	Rising-falling
↓	Downstep	↗	Global rise	etc.
↑	Upstep	↘	Global fall

DIACRITICS

Diacritics may be placed above a symbol with a descender, e.g. ŋ̊

̥	Voiceless	n̥ d̥	̤	Breathy voiced	b̤ a̤	̪	Dental	t̪ d̪
̬	Voiced	s̬ t̬	̰	Creaky voiced	b̰ a̰	̺	Apical	t̺ d̺
ʰ	Aspirated	tʰ dʰ	̼	Linguolabial	t̼ d̼	̻	Laminal	t̻ d̻
̹	More rounded	ɔ̹	ʷ	Labialized	tʷ dʷ	̃	Nasalized	ẽ
̜	Less rounded	ɔ̜	ʲ	Palatalized	tʲ dʲ	ⁿ	Nasal release	dⁿ
̟	Advanced	u̟	ˠ	Velarized	tˠ dˠ	ˡ	Lateral release	dˡ
̠	Retracted	i̠	ˤ	Pharyngealized	tˤ dˤ	̚	No audible release	d̚
̈	Centralized	ë	̴	Velarized or pharyngealized	ɫ			
̽	Mid-centralized	ě	̝	Raised	e̝ (ɹ̝ = voiced alveolar fricative)			
̩	Syllabic	l̩	̞	Lowered	e̞ (β̞ = voiced bilabial approximant)			
̯	Non-syllabic	e̯	̘	Advanced Tongue Root	e̘			
˞	Rhoticity	ɚ	̙	Retracted Tongue Root	e̙			

---

[1] Excerpt from Trask (1996, p. 394)

Chapter 1: Introduction

As a pronunciation teacher of English as a second and foreign language (ESL/EFL), the researcher has noticed that Japanese speakers of English (JSsE) can often attain near native-speaker proficiency in written production while falling short of native-speaker (NS) fluency in oral production, particularly in terms of prosodic features, especially linking. A high incidence of this phenomenon has been observed, and for this reason, a research focus on the staccato-like speech patterns of JSsE was chosen. In addition, a series of pedagogical activities to assist these learners in improving their English speaking proficiency was designed in order to assist JSsE in improving their ability to connect speech in a more effective manner. The goal of this activity is to help learners of English to achieve fluidity of communication in a native-like manner, using connected speech as a central reflection of that reality.

A multi-level experiment was created to explore the following questions:

1. What are the most common types of linking problems across word- and syllable-boundaries that contribute to the staccato-like speech of JSsE?

2. Can specific teaching strategies assist in improving the connected-speech patterns of JSsE?

Before defining connected speech, otherwise known as linking and catenation, it is useful to outline what influences oral production. Ensuring the clarity of meaning in discourse can be provided in spoken language by a variety of means, some of them socio-contextual, and others related to the actual words spoken in the speech stream. The mechanisms include: (a) Grammatical competence, (b) semantic competence, (c)

1

phonemic contrasts, (d) phonotactic rules which influence the occurrence of linking, stress, (e) intonation patterns, (f) psychological variables such as attitude and motivation, and, (g) sociolinguistic competence, which assumes the choice of an appropriate speech register, including the recognition of where it is appropriate to link or to separate phonemes.

The importance of each of these mechanisms may vary from language to language. Native speakers of English[2] attend to all eight mechanisms (in varying degrees) to engage in meaningful and productive communication, as do speakers of other languages. The acoustic level in discourse includes prosodic cues, such as linking and timing.

This paper is primarily concerned with phonotactic rules, sociolinguistic competence, and the appropriate and competent production of both segmental and suprasegmental items. These influence the ability to appropriately link – or not – items in the speech stream, thereby ensuring the clarity of meaning in discourse.

This thesis will attempt to: (a) confirm that JSsE produce disconnected speech in three environments: CV, VV and CC, (b) describe and show the results of a series of three lessons designed to teach JSsE how to link within these three environments, and, (c) contrast the oral output of the experimental and control groups in pre- and post-test conditions.

---

[2] This paper focuses on standard North American English (NAE).

Chapter 2: Literature Review

Research on Linking

McNerney and Mendelsohn (1992) define linking, or connected speech, as having

no pauses between words within a stream of speech.

> In sentences where linking is required students must not pronounce words
> as separate entities, but make the words flow smoothly together. Linking
> should be introduced to students not only as a natural aspect of connected
> speech, but also as a necessary one for comprehensibility. There are times
> when a potentially ambiguous sentence can only be disambiguated when
> the appropriate linking ... is used. (p. 194)

Celce-Murcia, Brinton and Goodwin (1996) have added that linking, which they

call connected speech, includes "... the connecting of the final sound of one word or

syllable to the initial sound of the next" (p. 158). The five environments of where linking

occurs are discussed below: (a) Consonant to vowel (CV), (b) vowel to vowel (VV), (c)

consonant to identical consonant (CC), (d) consonant to non-identical consonant (C_1C_2),

and (e) resyllabification (Avery & Ehrlich, 1992; Celce-Murcia et al., 1996; and Dauer,

1993).

Consonant to Vowel – CV

In word- and syllable-boundary environments, the final consonant (C) is pushed

onto the following vowel (V). Table 1 shows the types of articulatory settings in word or

syllable endings possible in CV boundaries.

TABLE 1

Types of CV environments across word and syllable boundaries

Phonological Environment	Examples
C (labial) + V	stop it, slo·ppy
C (dental) + V	laugh at, fluffy
C (alveolar) + V	played on, atom
C (palatal)+ V	rage on, Cajun
C (velar) + V	drag out, bakery

Vowel to Vowel – VV

Linking VV across word- and syllable-boundaries involves glide insertion. This

occurs when linking a word- or syllable-final tense vowel or a diphthong to a following

vowel (Celce-Murcia et al., 1996). Vowels in the NAE inventory, which find themselves

in word- and syllable-final position, end in off-glides, /y/ and /w/[3], and these make links

easy to produce. In fact, open syllables in English contain only tense vowels which end in

off-glides (Kreidler, 1989). Table 2 shows the types of articulatory settings in word or

---

[3] Several vowels in NAE are tense and have off- glide endings - [iy], [ey], [uw], and [ow] -
and these are sometimes reflected in NAE spelling, as is evident in some words, such as "try"
and "how. " Some phonetic inventories do not indicate off-glides in their representations;
instead, these inventories use two dots to indicate tension. That is, [i:] represents [iy], [e:]
represents [ey], [u:] represents [uw], and [o:] represents [ow]. Some of these systems may
also avoid the use of off- glides for diphthongs, replacing [oi] for [oy], [au] for [aw], and [ai]
for [ay]. Whatever the system of notation used, the off- glide is heard in vowel-to-vowel
linking. This thesis will show tense vowels and diphthongs using off- glides for ease of
notation. Furthermore, several of the resources used in this research (such as Avery &
Ehrlich, 1992; Celce-Murcia et al., 1996; and Gilbert, 1993b) also use off- glides in their
notations of NAE.

syllable endings possible in VV boundaries.

TABLE 2

Types of VV environments across word and syllable boundaries

Phonological Environment	Examples
/iy/ + V	see it, create
/ɔy/ + V	toy art, lawyer
/ey/ + V	say it, crayon
/ay/ + V	try it, triangle
/uw/ + V	true orange, congruous
/ow/ + V	go on, noël
/aw/ + V	how about, flour

Consonant to Consonant – CC

Linking identical consonants causes a native speaker of English (NSE) to hold the consonant for a longer period than the same consonant in other environments, for example: (a) *deep pot*, *(b) push Shirley*, *and (c) love very*. Table 3 shows the types of articulatory settings in word or syllable endings possible in CC boundaries.

Linking between two non-identical consonants creates an interesting phenomenon in NSsE discourse: NSsE often do not release the first consonant before commencing the second. Acoustically, the CC transition is thus dominated by the second consonant and it may be that NSsE use partly semantic or other contextual cues to interpret what was

heard (Celce-Murcia et al., 1996). However, when a nonnative speaker (NNS) of English hears the NSE production of, "pet cat," they may hear "pekat," and so, may misunderstand.

TABLE 3

Types of CC environments across word and syllable boundaries

Phonological Environment	Examples
p + t	stop trying, laptop
b + t	lab technician
p + s	keep speaking, tipsy
d + m	need money
t + d	let down
d + dʒ	bad judge
t + l	pet lizard, Atlantic
g + b	big boy, rugby
t + k	pet cat, Picton
g + z	big zoo
k + ʃ	deck shoes, direction
g + k	log cabin

Resyllabification and Simplification

According to Celce-Murcia et al. (1996), resyllabification occurs when a consonant cluster in a word- or syllable-final position is followed by a vowel-initial word or syllable. The final consonant of the initial cluster is then pronounced as part of the following word or syllable. An example of resyllabification is: "find out" which sounds like "fine doubt," and "left over" sounds like "lef tover."

These environments cause consonant clusters which are relatively difficult even for NSsE, and ways are found to simplify their pronunciation. Some examples of particularly problematic sequences include: (a) stopped near [staptniyr], and, (b) robbed banks [rabdbæŋks]. Unless one chooses to exaggerate each phoneme, thus sounding somewhat artificial, the final consonant of the first word is unreleased. When there are three heterogeneous stops, the difficulty increases, such as: (c) liked boys [layktbɔyz], (d) picked pockets [pɪktpakəts], and, (e) nagged people [nægdpiypəl]. These consonant clusters are often problematic for many L2 learners of English as many speak languages that have simpler canonic structures (Prator & Robinett, 1985).

It should be noted that in all these areas of connected speech, i. e. CV, VV, CC, C_1C_2, resyllabification and simplification, it is important for the interlocutor to respect thought-group boundaries.

> The term *thought group* refers to a discrete stretch of speech that forms a semantically and grammatically coherent segment of discourse. When we think about where a speaker can logically pause in the stream of speech, we can separate an utterance into thought groups. Although written discourse provides some markers for these divisions or pauses (i. e.,

commas, semicolons, periods, dashes), in spoken discourse a speaker may pause at points where such punctuation does not always occur in a written transcription of the utterance. (Celce-Murcia et al., 1996, p. 175)

Linking usually does not occur between two clauses, or two distinct ideas. For example, in the sentence: "The elephant, of which I spoke, is gone." VV linking occurs between "the" and "elephant," CV catenation would not occur between "elephant" and "of," CV linking occurs between "which" and "I," but CV linking would not occur between "spoke" and "is." Note, however, that a NSE could in rapid speech overlook these conventions and link across thought-group boundaries.

Terminology

The terminology of this particular phonological process proves to be varied, and it appears that several terms are not treated with equal significance. Since English has historically been strongly influenced by the French language, it is useful to clarify exactly what influence may have been received from this language, as well as to compare what is defined as connected speech. Lebel (1967), and more recently, Garant-Viau (1994) give three types of linking: (a) *l'enchaînement vocalique*, (b) *l'enchaînement consonantique*, and (c) *la liaison*.

L'enchaînement vocalique resembles VV linking, in that there is a smooth connection between the two vowels, with one exception: off-glides are not compulsory in order to assist in the connection. Rather, each vowel must maintain its syllabic duration and form, without any glottal stop inserted between the two vowels. For example, *Noël* is pronounced as: [nɔɛl] without glide nor glottal insertion (Garant-Viau, 1994).

8

L'enchaînement consonantique resembles a combination of CV and resyllabification. Garant-Viau (1994) states that the release of a consonant seems to be delayed rather than anticipated. In fact, it leaves the impression that the final consonant becomes the initial consonant of the following word. For example, *il a* can be represented as: [i-la]. As stated before, English has a similar phenomenon in consonant clusters, especially in respect to resyllabification: the final consonant of the initial cluster is then pronounced as part of the following word or syllable.

L'enchaînement consonantique should not be confused with *liaison*. According to Garant-Viau (1994), *liaison* is the survivor of an age when all consonants were pronounced. A large number of lexical units end in silent consonants which resurface when placed in front a vowel-initial item, thus serving as the consonant at the head of the next word. Furthermore, *liaison* is used more frequently in formal register, whereas in informal speech one tends not to use this aspect. Some examples of *liaison* with words that have silent final consonants in the wake of another consonant, and which resurfaces when a vowel-initial word from the same rhythmic group follows: (a) the "s" of "les" [lɛ] resurfaces in *les enfants* [lezãfã], (b) the "s" of *ils* [il] resurfaces in *ils ont* [ilzɔ̃], (c) the "s" of *très* [tRɛ] resurfaces in *très important* [tRɛzɛ̃pɔRtã], (d) the "t" of *tout* [t̪u] resurfaces in *tout à coup* [tutaku], (e) the "s" of *États* [eta] resurfaces in *États Unis* [etazuni] and, (f) the "s" of *Champs* [ʃã] resurfaces in *Champs Élysées* [ʃãzelize]. Although English has inherited some aspects of *l'enchaînement vocalique* and *l'enchaînement consonantique*, it does not have a parallel phenomenon to *liaison*. This is contrary to the claim that Gimson (1970) makes when he

9

claims that *liaison* refers to the linking of a consonant to a following vowel. Furthermore,

English demonstrates higher incidences of linking in informal speech, which is the

opposite of French usage. Although French is far from being a linguistic equivalent to

Japanese, it does, however, demonstrate an example of connected speech in an unrelated

language.

It may be that all languages have some form of connected speech. Indeed, as

Pinker (1994) claims:

> In the speech sound wave, one word runs into the next seamlessly; there
> are no little silences between spoken words the way there are white spaces
> between written words. We simply hallucinate word boundaries when we
> reach the edge of a stretch of sound that matches some entry in our mental
> dictionary. This becomes apparent when we listen to speech in a foreign
> language: it is impossible to tell where one word ends and the next begins.
> (pp. 159-160)

The rules for connected speech may vary among languages; some attention needs

to be paid to these rules in order to assist in the reception and production of discourse.

Temperley (1987) suggests that "…[c]loser examination of linking shows its more

profound effect on English pronunciation than is usually recognised, and that its neglect

leads to misrepresentation and unnatural expectations" (p. 65). Indeed, students should be

made aware of the pervasiveness of linking which is related to rhythm, contractions, and

sound changes (Morley, 1979). Browne and Huckin (1987) also promote the

"…importance of learning how sounds are linked [and that it] is essential to good oral

communication in English, because the listener needs these cues to interpret the meaning

of the message" (p. 30).

There are times in natural NSE speech when linking across word- and syllable-boundaries does not occur. Not only do the phonemes become more carefully articulated, but also a glottal stop preceded by a short time lapse fills the gap between CV; for example, "get up" [gɛɾʌp] becomes [gɛtˈ. ʔʌp]. It can also occur between VV gaps; for instance, "go over" [gowowvər] becomes [gow. ʔowvər].

The following examples illustrate some environments where disconnection may occur:

1. Glottal insertion may occur between CV environments in word- and syllable-boundary position, which may be expressed as:

   C (C)_V (C) → C(C) ʔ V(C)

   For example: <come on> and <keep on>.

2. Glottal insertion may occur between VV environments in word- or syllable-boundary position, which may be expressed as:

   C(C)V __ VC(C) → C(C)V ʔ VC(C)

   For example: <biology> and <how about>.

Disconnection may occur when a NSE wishes to be clearly understood; for example, in a classroom environment, a public speaking event, or in any situation when emphasis on information is required. An illustration of emphasis happens when asserting one's credibility, such as the emphatic statement: "This *is* the right *answer*!" In this case, disconnection occurs between the first two and last two words. Also, attempts at

11

clarification cause normally linked environments to be separated, as is the case when the

NSE is emotionally highly agitated (Hatch, 1992) as in the angry expression, "Get out!"

[gɛt.ʔawt].

A failure to link in English presents a problem in effective communication for the

learner of English. Indeed, the learner needs to know the various prosodic features of the

target language which allow NSsE to communicate effectively with each other. Prosody,

which is the suprasegmental system made up of stress, rhythm, linking, and intonation, is

used in detecting a speaker's emotions, sincerity and conviction, and this allows

harmonious communication to continue (Hatch, 1992). When any of the elements of the

suprasegmental system are incorrectly used, this can cause confusion and

misinterpretation of a NNS output; NSsE can come to view their interlocutor as being

arrogant or rude, and thus choose to close the doors of friendly communication. Indeed,

non-native patterns in pronunciation and hesitation were found to be very strong

contributors to listener distraction, irritation and annoyance (Fayer & Krasinski, 1987;

Gynan, 1984). Furthermore, when NNSs of English consistently disconnect the link

between words, the expressive effect for the NS listener can be rather disconcerting, for

the speaker is often viewed as aggressive and abrupt (Hatch, 1992; Anderson-Hsieh,

Riney & Koehler, 1994; S. Browne, personal communication, February 1, 1999).

Past research on the comprehensibility of NNS speech production shows that the

term "pronunciation" has not always been clearly defined, and that non-professional NS

judges are often unable to define exactly what element of "pronunciation" causes non-

intelligibility (Hadden, 1991; Ludwig, 1982; Varonis & Gass, 1982). Ludwig (1982)

reviewed the literature on error analysis concerning the measurement of

12

comprehensibility and irritation in NS of NNS attempts to communicate. She found that

intelligible pronunciation, alongside accurate grammar and appropriate vocabulary, are

necessary for the understanding of what contributes to comprehensibility and irritability.

When ESL teachers are asked to judge the intelligibility of NNS output, they tend

to focus more on grammatical than oral correctness, since they have become

"... accustomed to student's language, [and so,] teachers may no longer be able to

determine which errors impede comprehension" (Hadden, 1991, p. 3). With this in mind

there are several pronunciation experts (Celce-Murcia et al., 1996; Dauer, 1993; Gilbert,

1993; Morley 1987; and Seidlhofer, 1994[4]) who have made it their mission to redefine

and promote pronunciation with very specific components, such as: segmentals; word and

sentence stress; rhythm; intonation; phrasing; pausing; blending; and linking. Each of

these elements affects in varying degrees the intelligibility of NNS output, and the

mastery of each element contributes to fluency (Celce-Murcia et al., 1996; Dauer, 1994).

Research on the Pronunciation Problems of JSsE

Several variables might easily affect the speaking mannerisms of JSsE. For

example, cultural traits may influence the characteristics of speech production: JSsE may

prefer not to speak, but rather, allow their classmates to initiate communication. Indeed,

the most comfortable communicative interaction for JSsE is frequently perceived to be

---

[4] These authors, among many others, are members of TESOL, which is an American
professional organization that has a variety of interest sections. The TESOL
Speech/Pronunciation Interest Section, or SPRIS, often shares information with the
British equivalent, the IATEFL pronunciation special interest group.

13

none at all (Hinenoya & Gatbonton, 2000). This tendency to speak as little as possible leads to a lack of real-life opportunity to practice and refine speech patterns in a language being learned. This is especially true for acquiring and applying the rules of connected speech.

Many pronunciation specialists (such as Celce-Murcia, et al., 1996; Morley, 1987, 1994; Gilbert, 1993b; Seidlhofer, 1994; Avery & Ehrlich, 1992) claim that pronunciation instruction has been overshadowed by a strong emphasis on reading and writing skills in many ESL courses, which they suggest hinders progress in oral production. Indeed, it is arguable that disconnected speech may derive from strategies acquired during the learning process associated with these types of learning. Gilbert (1993b) implies that L2 students – and this seems to be true for JSsE – may have learned to speak English from written material, and so, as there are white spaces between words, the L2 learner of English may speak with an oral imitation of white space.

Many pronunciation specialists agree that JSsE seem to place more emphasis on grammatical and lexical strategies than on phonological or phonetic strategies when learning the TL, and this tendency seems to stem from their language-training experience. If one scans the most commonly used instructional textbooks in the ESL classroom, it is clear that the focus of language instruction is on grammar and vocabulary. For example, several colleges and universities in the Montreal area use *Communicate What you Mean: A Concise Advanced Grammar* (Pollock, 1997), *English on Line* (Fournier, 1999), *Refining Composition Skills* (Smalley & Ruetten, 1995), and *Understanding and Using English Grammar* (Azar, 1989), all of which have a strong emphasis on grammar and writing skills.

14

Courses at certain language institutions which teach English as a second language (as opposed to teaching it as a *foreign* language), for example in Montréal (Québec), there is an emphasis on teaching all four skills of reading, writing, listening, and speaking. It is true that conversational skills are taught and practised; however, there seems to be very little treatment of, indeed, even an avoidance of teaching prosodic features of English, especially of linking. The following three textbooks are among many used in the curriculum at McGill University and other language schools in Montréal. These books deal scantily with word stress, sentence stress, and morphophonemic rules, but nowhere can the rules of connected speech be found in these and similar textbooks: *Canadian Concepts* (Berish & Thibaudeau, 1993), *A Canadian Conversation Book*, (Carver, Fotinos & Cooper, 1993), and *Interchange* (Richards, 1992).

The much heavier emphasis on grammar and lexicon in their classroom experience naturally leads the students to perceive this aspect of language learning as being most important to language proficiency. As a result, JSsE may unwittingly rely on a formulaic and formalistic knowledge of English (Avery & Ehrlich, 1992; Celce-Murcia et al., 1996; Gilbert, 1993b; Morley, 1987, 1994; personal communications with ESL pronunciation professionals of TESOL's Speech/Pronunciation Interest Section).

From classroom and experimental observations, I have noticed that JSsE often fail to appropriately link in CV and VV environments in conversational contexts. This disconnection is realised as an addition of a slight temporal pause, followed by a glottal stop. For example, "cup of" would be pronounced as: [kʌpʰ. ʔəv] instead of: [kʌpəv], and "go on" would be pronounced as: [go. ʔɔ̃] instead of: [gowɑn]. Even when JSsE are prolific interlocuters, their pronunciation contains a high frequency of

15

disconnection across word- and syllable-boundaries. Anderson-Hsieh et al. (1994)

confirm that JSsE often do not link between words as NSsE do. Indeed, they tend to pay

noticeable attention to every word, so that each one sounds like a separate unit; thus, their

speech sounds choppy, and their messages might be misconstrued (Morley, 1987, 1994;

Gilbert, 1993b).

In a study on the speech modifications of JSsE, Anderson-Hsieh, Riney, and

Koehler (1994) looked at how intermediate-proficiency (IP) and high-proficiency (HP)

JSsE differ in their usage of connected speech from NSsE. They also looked at the effect

of L1 transfer on linking, specifically, rate of vowel reduction, consonant deletion, and

the choice of strategy for simplifying consonant clusters. The researchers had three sets

of subjects read from an abbreviated version of an oral test: One of the three groups

consisted of five NSsE, the second consisted of five JSsE with an IP level, and the third

five JSsE with an HP level. Six NSE evaluators with training in the administration of the

SPEAK test rated, among other variables, the pronunciation of JSE speech samples.

In general, Anderson-Hsieh et al. (1994) found that the NS group linked words

together more than did the HP and IP groups. Indeed, they confirmed that the HP and IP

groups were apt to break the link across word- and syllable-boundaries by inserting a

glottal stop before the word-initial vowel in the second word. In addition, they claimed

that foreign words with consonant clusters incorporated into the Japanese language were

simplified by inserting vowels between any adjacent consonants. For example, the

language learner of Japanese sees that "ice cream" is written in Romanized letters as

aisukurimu, "necktie" as *nekutai*, and "text" as *tekisuto* (from *Japanese for busy people*,

1994, pp. 221, 222, 224) This allows the foreign syllable structure to conform to the

canonical syllable structure of Japanese, which is that of a predominantly open and simple-phoneme syllable. Anderson-Hsieh et al. (1994) further suggest that L1 transfer affects connected speech and not just isolated units of speech.

Hancin-Bhatt & Rakesh (1997), in a study of the transfer effects of the phonotactics of Chinese onto English, "...have provided empirical evidence that transfer effects are a significant part of L2 syllable structure, and that they interact with developmental effects..." (p. 376). Chinese and Japanese tend towards a similar canonical structure, that is, that of open syllables with the possibility of a syllable ending in a nasal. Thus, the findings of Hancin-Bhatt and Rakesh (1997) may apply to JSsE in that transfer effects seem to contribute to the rough rhythm of output by JSsE.

What may prove problematic for JSsE, indeed, for many NNsE, is starting from a restricted phonemic inventory, both in number of sounds and in their distribution, which includes vowels without off-glides (Avery & Ehrlich, 1992; Thompson, 1987). Hence, the student may instead insert a temporal pause and a glottal stop to compensate for what is missing in the phonological schema of his or her first language. Furthermore, JSsE often insert short unvoiced vowels, which also serve to 'round off' final consonants. This epenthetic vowel appears not only in CC environments, but also in CV environments. For example, when a JSE produces "make a," a NSE may hear [meiku̥. ʔa] (where [u̥] represents the unrounded high back vowel used in Japanese) instead of [meykə] as produced by native speakers (Thompson, 1987; Anderson-Hsieh et al., 1994).

The perceived epenthetic temporal pause may be caused by the phenomenon of vowel devoicing which is transferred from Japanese to English. Indeed, Japanese high vowels are "... devoiced when preceded and followed by voiceless obstruents" (Fromkin

17

and Rodman, as cited in Vance, 1987, p. 48). However, nonhigh vowels are also devoiced in the same environments, but with a much lower frequency than high vowels (Vance, 1987). Hence, this transfers into English as paragoge – the addition of one or more segments to the end of a word (Trask, p. 256). This appears to cause non-native-like articulation, and may be realised as a temporal pause to the ears of NSsE.

Linking occurs in English and in French, and it probably occurs to some degree in all languages of the world. Vance (1987) claims that historically,

> [It] was once widely accepted that *liaison* was completely regular in standard Japanese from about 1300 to about 1600. [I]t may well be that *liaison* has always been sporadic and ordinarily confined to particular words. Nonetheless, there is no doubt that it was once much more widespread than it is in the modern standard language. (p. 164)

What is particularly interesting is that modern Japanese demonstrates the use of a glottal stop [ʔ] after short vowels. It can also occur in interjections and emphatic speech, as it does in English speech, for example, "an emphatic exclamation such as *ouch!* often begins with [ʔ]" (Martin, as cited in Vance, 1987, p. 32). Furthermore, McCawley (as cited in Vance, 1987) claims that a glottal precedes any syllable-initial vowel. In view of this, it appears that glottal insertion by Japanese speakers occurs in front of vowel-initial syllables, and it is likely they will transfer this effect onto their speech patterns in English.

Many pronunciation specialists often claim that the phonotactic structure of Asian languages pose a problem for second language learners of English (Celce-Murcia et al., 1996; Avery & Ehrlich, 1993; Gilbert, 1993b; Morley, 1987, 1994). Indeed, most Asian languages are perceived as having an open-syllable structure, although not necessarily so.

18

The syllable structure of Japanese is represented by Vance (1987, p. 64) as:

$$(C)(y)V \left\{ \begin{array}{c} V \\ N \\ Q \end{array} \right\}$$

As can be seen, the Japanese canonic shape is quite limited. It is based on the most popular structure being CV. Only one glide (G) is allowed: /y/. A second short vowel is permitted within the syllable boundaries only if the first vowel is short, and this is directly related to the mora-timing of the rhythm of Japanese. After the initial vowel, a nasal may occur in this position, however, it is often phonemically represented as a nasalization of a preceding vowel (Vance, 1987). Finally, the "Q" represents a glottal which occurs quite frequently in syllable-final position.

All of the above findings suggest that JSsE may be unwittingly transferring these patterns to English. This is detrimental to achieving oral fluency for Japanese learners of English.

Reasons for Teaching Linking

The teaching of connected speech skills to JSsE, and indeed to all L2 learners, is essential for effective cross-cultural communication. Several pedagogical pronunciation textbooks (Celce-Murcia, et al., 1996; Gilbert, 1993; Dauer, 1993; Avery & Ehrlich, 1992) highly recommend the incorporation of linking activities. These guides indicate that it is necessary to teach students appropriate perceptual cues of English so that they are able to move from one word to the next, since the habitual – and largely unconscious – speech patterns carried over from their L1 are not effective. Knowledge of when to link

19

across word- and syllable-boundaries may be difficult to acquire if not explicitly taught.

Morley (1987, 1994) points out that most ESL textbooks guide students to learn the

lexical, semantic and syntactic rules of the English language, yet give students little

instruction in pronunciation.

Pronunciation should be viewed as important because there is always some

potential to improve the ability of the NNS to be understood more clearly. It is important

to note that an experienced ESL teacher may no longer be able to determine which errors

impede comprehension. Indeed, teachers may become, in a sense, "native listeners"

(Brodkey, 1972; Hadden, 1991). Knowing that teachers may have this ability to

understand even the most unintelligible speech, could help teachers identify areas for

concentrated effort in teaching pronunciation.

It is often argued that L2 learners of English do not need to learn the rules of

linking. Some teachers claim that a learner's transitions between words will become more

native-like as fluency develops, or that the lack of these transitions result in nothing

worse than a foreign accent (see Morley, 1994). However, it has been shown that a

learner can develop fluency without achieving an acceptable level of intelligible

pronunciation, and that words become linked in ways not common in English

(Temperley, 1987).

A robotic rhythm occurs as a result of disconnected speech, and this may lead to a

lack of comprehension; in fact, Dauer (1993) claims that the speech of learners of English

sounds choppy when disconnected, and it is difficult for NSsE to know which words

belong together in phrases. This leads to communication breakdown.

Additionally, in order to assist learners of English with listening comprehension

20

skills, it is important for them to understand the phonological changes that occur in discourse. Brown (1977) suggests that in normal informal speech, NSsE usually concentrate on the content rather than on the precise articulation of what is being said. NSsE tend to articulate in the most time-efficient manner, that is, they use linking, blending, reduction and simplification to assist in getting the message across in the least amount of time.

Indeed, Seidlhofer (1994) remarks that "...articulatory (over-) precision is a stylistic device. It is a conscious choice if we want to be insistent or threatening, but it may also make us sound "wearyingly precise and pedantic, even offensively so. ... In human interaction, articulatory imprecision is clearly the more natural and the more functional option" (pp. 25-26). An illustration of a negative perception of choppy speech is found in Hatch (1992), where she describes a situation where she and her students perceived an Asian student as being angry. When confronted, he was puzzled and explained that he was not at all angry, so she realised that his "...staccato style [and use of] syllable timing ... [caused a] ... defensive reaction from other students in the classroom..." (p. 279), and herself as well.

More serious examples are discussed on the SUPRAS Listserve, the official name of the online group of pronunciation teachers and specialists from around the world. Indeed, issues related to obtaining and retaining employment have been discussed, as has been reflected in articles in *TESOL Matters* by members of the Speech/Pronunciation Interest Section of TESOL. "Issues surrounding employees being fired or denied advancement because of foreign accents are now being argued in the courts" (Fried Goetz, 2000, p. 14). This is an area that requires empirical research from the phonological

21

and from the discourse analysis points of view.

Summary and Conclusions

There is a general agreement in the literature that teaching of pronunciation to learners of English should include teaching suprasegmentals, including linking, and that it should not focus primarily on minimal phonemic pairs. The relative importance of these different areas of nonnative pronunciation for intelligibility has been shown. It has been argued that the most critical area of pronunciation is prosody, which includes connected speech. Linking words together helps to reduce the possible negative effects of choppy speech, especially if JSsE, indeed all NNSsE, wish to conduct harmonious and successful discourse (Celce-Murcia et al., 1996; Gilbert, 1993b; Hatch, 1983; McNerney & Mendelsohn, 1987; Morley, 1994; Seidlhofer, 1994; Wong, 1987). Connected speech has an important effect on the progress in oral skills of not only JSsE but also many other NNSs of English. A significant step towards more effective language teaching is to clarify its place among the conversational skills JSsE must learn (Gilbert, 1993).

For the purpose of this study, the researcher has chosen to explore two environments where linking occurs across word- and syllable-boundaries: linking CV, and linking VV. These environments were selected as a result of the researcher's observations that JSsE produce a high frequency of errors in these areas, and that these errors appear to lead to miscommunication and misunderstanding in NNS/NS interactions. Only two environments were chosen in order to keep the study as narrowly focussed as possible; this ensured optimal efficiency in data collection and analysis.

Research Question

The question central to this study is whether explicit instruction will assist JSsE in reducing the frequency of disconnected word pairs.

Chapter 3: Design

Overall Design

The main aim of this thesis is to examine whether Japanese second language learners of English might improve their ability to connect word pairs in obligatory contexts, thus attaining a smoother rhythm of speech. To attempt to answer this question, a small exploratory study was created using a control group (CG) and an experimental group (EG). A group of NSsE provided the baseline of word pairs that were obligatory contexts of connected speech. Word pairs were obtained from the text *At the Travel Agent's Office* Gilbert (1993b); additional word pairs were derived from the free-speech monologues obtained in response to an open-ended question. The control and experimental groups were each given three one-hour lessons. The CG read poetry aloud with a teacher who had received no training in pronunciation pedagogy. The EG were taught how to connect word pairs in obligatory contexts by the researcher, who served in the role of the EG teacher.

Participants: Roles and Materials

Nine JSsE were recruited from the continuing education department at Concordia University, and the CG teacher and two judges were recruited from the continuing education department at McGill University in Montréal. Permission was granted from the

English language director at Concordia English Language Institute (CELI) to petition the assistance of CELI instructors to search for interested JSsE to participate in this experiment. The instructors were asked to provide an information sheet to those interested, who could contact the researcher at their convenience (see Appendix A). The participants consisted of the following groups: one group of five JSsE who made up the EG, one group of four JSsE who made up the CG, four NSsE, two teachers, and two judges.

Japanese participants were chosen for this study because their speech usually contains a high frequency of disconnection while speaking English. All participating JSsE arrived in Montreal at least one year prior to the experiment, and they were between the ages of 20 and 29. Every participating JSsE had studied English since the age of 12 or 13 during their high school years. Six JSsE were registered in an intermediate or advanced level of English as a Second language, while another three were enrolled in B.A. programs at Concordia University, thus, with fairly advanced language skills.

All but one Japanese participant had never taken a pronunciation course prior to this experiment. The one JSE (participant number 14) who had taken a pronunciation course had only received cursory phonetic training over a one-year period in first-year university in Japan. She appeared to have no understanding of linking as an essential pronunciation component, judging by her lack of linking skills in the initial interview with her. This was later confirmed in the experimental treatment stage when she seemed pleasantly surprised that pronunciation practice did not solely mean the teaching of consonants and vowels.

The JSsE were assigned to either the CG or the EG. This was done by drawing

each participant number out of a hat. Since there was only one male participant among the JSsE, he was intentionally placed in the EG. It appeared reasonable to have an even number of female participants in both groups. Placing the male student in the EG allowed observation of any changes in his speech performance that may not have occurred if he was placed in the CG. An indicator of possible sex difference in the learning of prosodic features was thus potentially available.

The two teachers in the pedagogical experiment were NSsE and were teaching ESL at McGill University. Having a strong command of teaching pronunciation skills, especially linking, the researcher served as instructor for the EG, since no one else in her academic community taught pronunciation as a single skill course at the time. The CG instructor, who had little if any understanding of how to teach pronunciation, was a volunteer recruited from among the researcher's' teaching colleagues and taught advanced ESL writing courses at McGill University. Both teachers had at least five years of teaching experience, with the EG teacher having had three more than the CG teacher.

A baseline of obligatory contexts for connected speech was required. Four unilingual NSsE were asked to provide speech samples. NSE 1, an Afro-American male participant, lived in New York City. The other three NSsE were all Canadian women who lived in the Montreal area. All NSsE have university degrees, and the average age was slightly higher than those of the JSsE. They were all acquaintances of the researcher, selected for their lack of daily use of any other language than English.

The researcher transcribed word pairs taken from the discourse that the two groups of JSsE as well as the group of NSsE produced in free-speech samples. Word pairs from the output of the *Clear Speaking Test* (Gilbert, 1993a; see Appendix G) were

26

also transcribed.

Once the transcripts were completed, the researcher identified points where linking did and did not occur in the speech of these three groups. Two judges verified the accuracy of the researcher's transcripts. Both judges have master's degrees, and they were chosen for their experience in teaching connected speech. One of the judges was a NSE who has French family members. At that time, he had taught ESL pronunciation for more than three years. The second judge was a balanced bilingual speaker of French and English; she had studied both English and French linguistics at French and English universities. More specifically, she had an excellent understanding and natural usage of English phonology.

In terms of inter-rater reliability, the researcher asked the judges (also referred to here as the "raters") to listen to 10% of recorded speech samples of both speaking tasks to determine whether or not the researcher accurately transcribed each word pair with the appropriate connection or disconnection. The researcher asked each rater to listen to the cassettes, look at the transcriptions given in Appendixes N and O, then indicate agreement by marking a check mark next to each word pair with a CV or VV environment. This gave the raters a chance to point out any errors or omissions. One judge agreed with the transcriptions and connections 99% of the time, and the other judge agreed 97% of the time. No omissions were found by the judges. The transcripts can thus be considered highly reliable with regard to occurrence of linking in CV and VV contexts.

Design of Pedagogical Activity

Three 30-minute pedagogical units with an explicit focus on connected speech were created for the EG. These units were given over three consecutive days. Each teaching unit focused on the explicit linking strategies for one of the following three environments: (a) CV, (b) VV, and, (c) CC. The first day involved students being taught how to link in a CV environment, for example, how to link "In an airplane" (see Appendix H). On the second day, the EG teacher reviewed the previous lesson, and then the JSsE learned the rule for linking in a VV environment, for example, "May I ask" (see Appendix I). On the third day the first two rules were reviewed, and then the instructor taught the rule for linking CC word pairs, for example, "Bill loves pie" (see Appendix J). Each lesson lasted one hour and followed the same format: presentation, elicited repetition, and pair practice. See appendices H, I, and J, respectively. The three lessons occurred on consecutive days over a long weekend.

By the time the third lesson was completed, the researcher realised that a grasp of the more complex phonological rules associated with linking in a CC context was beyond what one could reasonably expect language students to acquire within such a short time. Their performance as seen in post-treatment testing confirmed this judgement.

A series of three 30-minute pedagogical activities were created for the CG as well. These activities did not focus on pronunciation, but rather required students to read poetry aloud once only in chorus with the teacher after she read it aloud to them. The

focus of their lessons was to discuss the meaning of each text given. In the first class, the CG teacher directed the class in a discussion of *Uphill* by Christina Rossetti (see Appendix K), in the second, *The Road Not Taken* by Robert Frost (see Appendix L), and the third, *Taken Up* by Charles Martin (see Appendix M). Each lesson followed the same format: a reading of the poem by the teacher, a single choral repetition, and then a discussion of the meaning of each poem directed by the teacher through the use of open questions. Each poem provided the content of one pedagogical unit. Each class lasted one hour, and the classes were given over the same three consecutive days at the same times and in the same building as those for the EG.

Recording and Analysis of JSE Speech Samples

Before recording the JSsE, a baseline of obligatory contexts was required. The researcher recorded the four NSsE individually reading the text, "*At the Travel Agent's Office*" shown in Appendix G. Upon completion, each was asked a question about what he or she did the previous evening in order to elicit a monologue (see Appendix F).

Every JSE was recorded to test their ability to pronounce the target items on the same day, exactly one week prior to the block of teaching activities. One week after the block of teaching activities, all nine JSsE were recorded on the same day. Each JSsE was individually recorded reading the same dialogue read by the NSsE (see Appendix G). Following the reading, each participant answered the same question as the JSsE (i.e. "What did you do last night?") intended to elicit a monologue. Before receiving the next participant, each monologue segment was timed so that each spoken piece analysed lasted approximately one minute. The researcher transcribed all speech samples two

weeks later when all the recordings were collected, the experiment was completed, and the JSsE had been given free ESL pronunciation classes as remuneration for their participation.

The researcher transcribed the 49 CV and VV word pairs that are found in the dialogue used for reading aloud (see Appendixes G and N). She also transcribed a single page of descriptive monologues (see Appendixes E and O) marking where linking did and did not occur in the CV and VV environments.

Chapter 4: Results

The text, "At the Travel Agent's Office" (see Appendix G) was read aloud by all participants. The NSsE provided a baseline, JSsE provided samples for the pre-treatment condition, and all JSsE read the same text aloud in post-treatment condition. There were exactly 49 pairs of words with a CV or VV environment which could potentially be linked in the text provided. Narrow transcriptions of these pairs as pronounced by each participant are given in Appendix N. Table 4 (see page 32) provides raw data of the performance of all 13 participants.

TABLE 4

Number of Linked Word Pairs (CV and VV Environments):

Reading Aloud

Group and Participant	Pre–Test	Post-Test
Baseline		
NSE 1	24	
NSE 2	41	
NSE 3	36	
NSE 4	31	
Control Group		
JSE 6	17	16
JSE 7	26	21
JSE 8	21	29
JSE 9	20	17
Experimental Group		
JSE 11	14	17
JSE 12	8	36
JSE 13	15	32
JSE 14	22	23
JSE 15	26	30

Note: Total number of items to be potentially linked in the set text = 49

All participants in the study were asked a question in order to elicit a sample of free speech. The NSsE and the pre-test JSsE were asked what they did the previous evening, and they were encouraged to elaborate as much as possible. The post-test JSsE were asked what they would do that evening, and they were asked to be specific and descriptive. Narrow transcriptions of the word pairs containing CV and VV environments from each participant's sample are provided in Appendix O.

In the free-speech task, there was quite a diverse range of number of word pairs that could potentially be linked, as well as great diversity in the number of word pairs that were actually linked as produced by each JSsE. Table 5 (see page 34) shows the raw data of the word pairs produced by each participant in pre-test and post-test conditions. What may appear to have been increase or decrease in the ability to link word pairs in terms of percentages in reality does not occur. The comparison of percentages, which are obtained by dividing the actual number by the potential number of linked word pairs, is more readily seen in Figure 3 (see page 39). Narrow transcriptions of all word pairs are given in Appendix O.

There is a common belief among my ESL colleagues that both first and second language speakers have a tendency to read aloud more carefully. Figure 1 (see page 35) shows the individual performances of each NSE while reading aloud and while speaking freely. It is interesting to note that the average percentage of linking while reading a text is at 67%, and while speaking freely is at 73%, which seems to suggest that connection of word pairs occurs with a high and approximately equal percentage under both conditions.

TABLE 5

Number of Linked Word Pairs (CV and VV Environments): Speaking Freely

Group and Participant	Pre-Test			Post-Test		
	Poten-tial	Actual	%	Poten-tial	Actual	%
Baseline						
NSE 1	24	14	58			
NSE 2	16	12	75			
NSE 3	30	23	77			
NSE 4	18	15	83			
Control Group						
JSE 6	11	3	27	10	3	30
JSE 7	52	22	42	21	13	62
JSE 8	24	4	17	12	8	67
JSE 9	29	8	28	13	3	23
Experimental Group						
JSE 11	23	3	13	25	9	36
JSE 12	14	2	14	16	6	38
JSE 13	31	6	19	27	8	30
JSE 14	14	8	57	21	6	29
JSE 15	29	10	34	19	7	37

FIGURE 1

Comparison of Linking by Native Speakers of English while

Reading Aloud versus Free Speech (%)

	1	2	3	4
- - ◆ - -Reading Aloud	49	84	73	63
—■—Speaking Freely	58	75	77	83
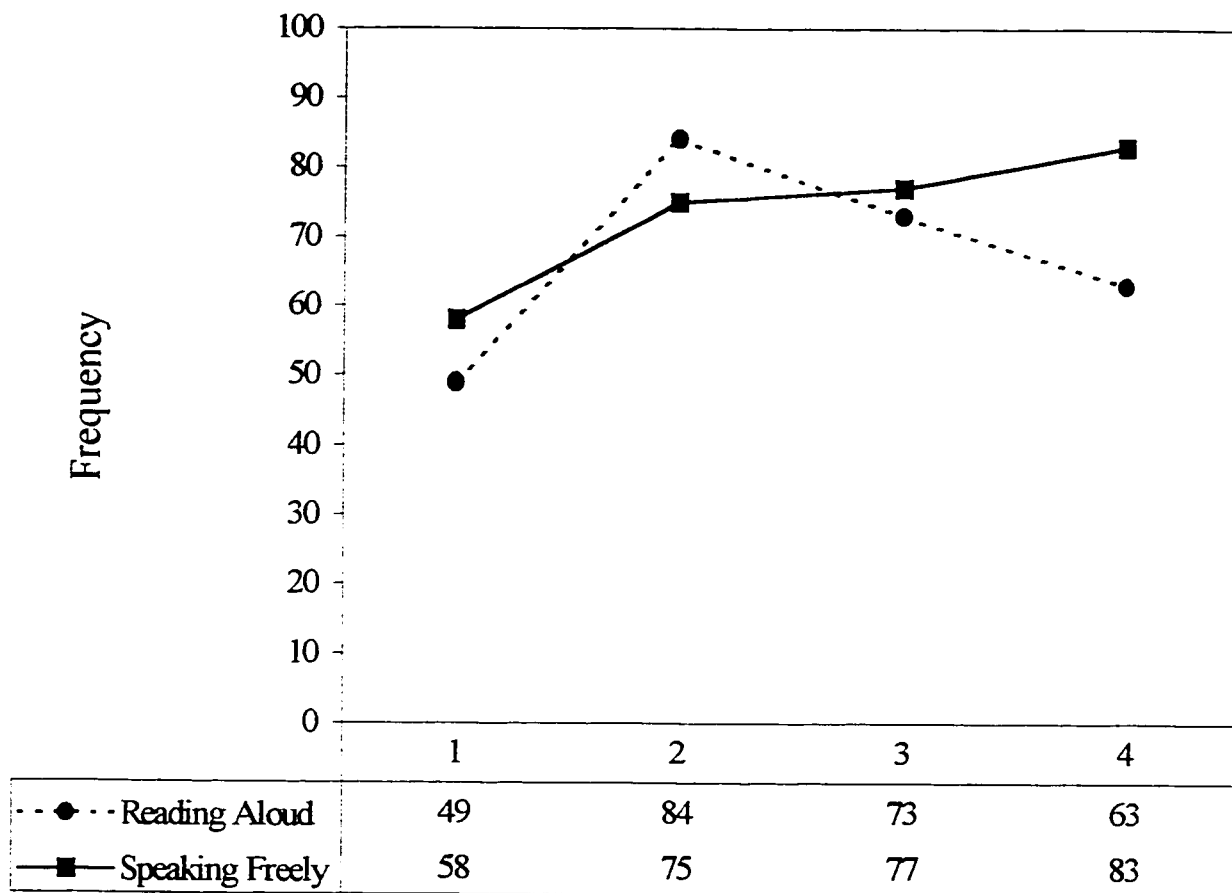
Note: These are the percentages of actual versus potential linked items while reading

aloud, as well as the percentages of linked items while responding freely to a question,

for native speakers of English. These graph lines are shown again in Figures 2 and 3 for

comparison with Japanese speakers of English.

Figure 2 (see page 37) shows that individual performances in pre- and post-treatment measures vary considerably. It is however noteworthy that the performance of all five EG participants either improved or remained relatively stable in linking ability when reading a set text. Among the four CG participants, three either stayed the same or showed a somewhat lower level. Atypically, one showed a higher percentage of linking for this condition after the experimental period.

FIGURE 2

Comparison of Actual Versus Potential Linked Items Made by All Participants While Reading Aloud (%)

Frequency

Participants	Native Speakers				Control Group				Experimental Group				
	1	2	3	4	6	7	8	9	11	12	13	14	15
Baseline ●····●	49	84	73	63									
Pre-Test ●····●					35	53	43	41	29	16	31	45	53
Post-Test ■—■					33	43	59	35	35	73	65	47	61
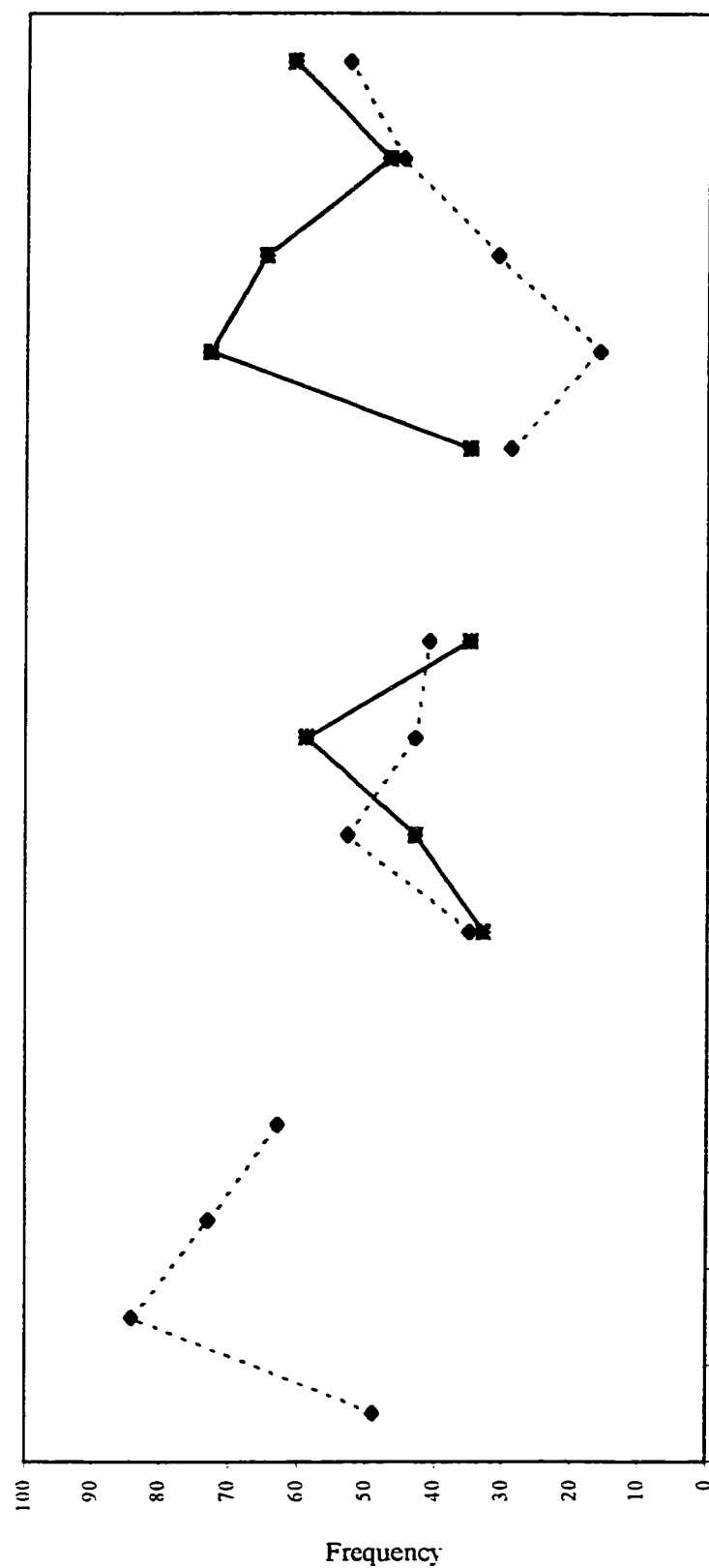
Figure 3 (see page 39) shows the results of connected word pairs of all participants while speaking freely. Again, there is considerable difference in individual performance across the JSsE.

The results for the EG show that only two participants improved noticeably in their ability to connect word pairs: JSE 11 improved by 23% while JSE 12 improved by 24%. An unexpected result came from JSE 14 whose ability to connect word pairs decreased by 28%. Most surprising, however, is the observation that two of the CG participants also show significant increases in linking. It is important to keep in mind while looking at the results in Table 5 (see page 34) and Figure 3 (see page 39) that the individual performances of each participant, whichever group they were part of, show a great deal of variation in the number of word pairs that could be potentially linked as well as those that were actually linked.

FIGURE 3

Comparison of Actual Versus Potential Linked Items Made by All Participants in Free Speech (%)

Participants	Native Speakers					Control Group					Experimental Group				
	1	2	3	4		6	7	8	9		11	12	13	14	15
Baseline •····●	58	75	77	83		27	42	17	28		13	14	19	57	34
Pre-Test •····●						30	62	67	23		36	38	30	29	37
Post-Test ■——■															
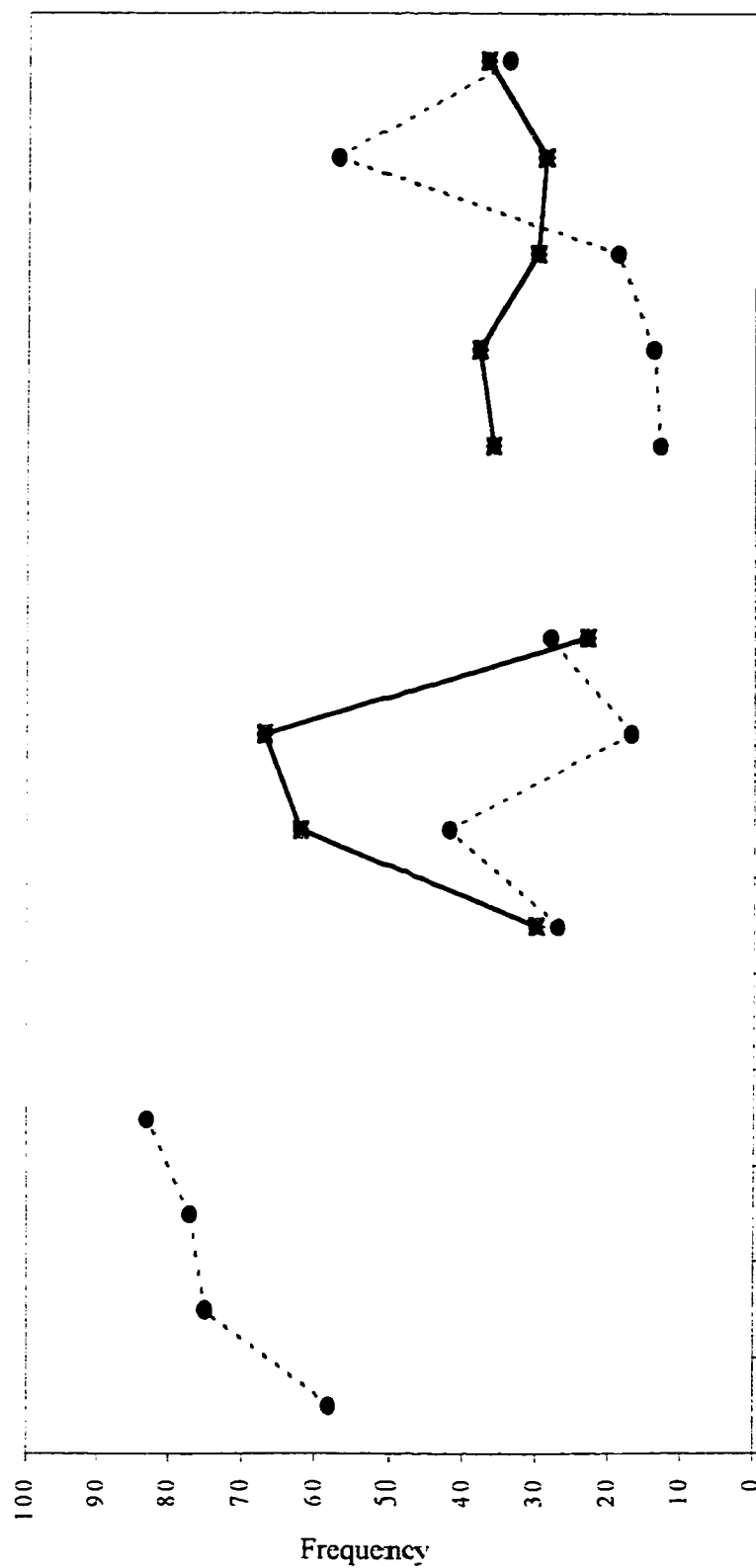
Chapter 5: Summary, Discussion, Recommendations

The sample size of this exploratory study is far too small to make any conclusive statement. Nevertheless, the differences between the pre- and post-test samples of the JSsE reading aloud and speaking freely seem to suggest that the explicit teaching of the rules of connected speech may improve the quality of the oral English output of JSsE. It seemed especially interesting to note that there was a difference for the EG between pre- and post-tests when the participants read aloud; however, there were several variables which may have affected the outcome.

The initial purpose of this study was to explore the usefulness of a pedagogical technique for correcting a significant speech problem for JSsE and other learners of English, specifically that of producing connected speech. In this respect, the findings of this study offer a glimmer of hope as to what type of consciousness-raising activities might help students improve their ability to connect speech.

Research Questions

At the onset of this exploratory experiment in chapter 1, two questions were asked:

1. What are the most common types of linking problems across word- and syllable-boundaries that contribute to the staccato-like speech of JSsE?

2. Can specific teaching strategies assist in improving the connected-speech patterns of JSsE?

Native language transfer seemed to be a strong factor in the Japanese speakers' pronunciation of English. It is clearly reflected in the way certain phonemes are pronounced: For example, JSsE often change the suffix "er" to [ɐ], such as in the word "driver" which was pronounced by JSE 8 as [drɐivɐs] (line 174 in Appendix 0). According to Vance (1987), Japanese syllable structure does not allow [r] nor [ər] to be in either syllable- or word-final position, and so, when the Japanese speak English, they tend to drop the [r]. Furthermore, when a word ends with an "er" suffix, the closest match in Japanese is the above mentioned [ɐ].

When it came to determining the extent to which native language transfer affected connected speech, one can only speculate. Looking at the results from this exploratory study, the NSsE linked 67% of the time while reading aloud, and 73% of the time while speaking freely. The average of all nine JSsE prior to the experiment was 38% while reading aloud, and 33% while speaking freely (these amounts were calculated by adding all nine percentages and dividing by nine in the pre-test conditions of both speaking situations). So, it appears that JSsE generally speak with approximately 29% more instances of disconnected speech than NSsE while reading aloud.

It is especially difficult to draw any firm conclusions about the free speech of the JSsE in comparison to what the NSsE produced. In response to the experimental question used to elicit free speech ("What did you do last night?") the NSsE spoke with much more sophisticated language, did not need any coaxing, and they almost never hesitated about what they were going to say. Indeed, there was plenty of material with which to

41

work. In contrast, the JSsE generally used simpler language, needed to be coaxed (for example, some paused for too long, so, I asked them to describe their dinner, if they told me they made dinner), and more often than not, became mute because they could not express themselves.

While I transcribed their output, I was quite frustrated with the small amounts of word pairs with a CV or VV environment that did not have hesitations or fillers such as "um," "uh," and "ah," which were produced by especially JSsE 6, 8, 9, 11, 12, 13, and 14 (see Table 5, page 34, and Appendix O). The most frustrating factor is that they were all quite garrulous when not under the investigative lamp of research. Larsen-Freeman and Long (1990) say it best when discussing the difficulty in studying the output of participants:

> ... the mere presence of an observer is likely to cause the subjects to pay more attention to their speech and thus result in unspontaneous performance. Moreover, even if completely spontaneous production data were available, there are certain drawbacks to relying solely on them for insights into the second language acquisition process. First of all, without the imposition of constraints in terms of the range of possible responses a subject is likely to produce, it is impossible to study all aspects of a learner's developing performance. Certain language features could not be studied because they do not occur frequently in normal conversation. A researcher would have to wait a long time, for example, for subjects to produce enough [of the target item being researched] for the researcher to be able to say anything meaningful about their acquisition. (p. 26)

It is far easier to control the quantity and quality of obligatory contexts in a controlled reading. It is also clear that even NSsE produce only certain amounts of connected speech at certain times. Table 5 (see page 34) shows that in the free speech of the NSsE, there was a range of 16 to 30 potential word pairs to be linked, whereas the CG JSsE produced a range of 11 to 52 potential word pairs to be linked, and the EG produced

a range of 14 to 29 potential word pairs.

It seemed that the JSsE were suffering from the shame of not speaking "perfect English," which is a behaviour I have observed from many Japanese students I have taught over the years. Indeed, as Hinenoya & Gatbonton (2000) have pointed out: The most comfortable communicative interaction for JSsE is frequently perceived to be none at all. Indeed, JSE 14 was quite exasperated just prior to the post-test recording of her reading. She felt that she could no longer speak because her pronunciation "so poor!" My guess is that she became more aware of what she was not doing in her speaking habits, and so, refrained from saying anything that might be problematic. This may explain the sudden drop of her percentage rate of successful linking in the pre- and post-experimental recordings from 57 to 29 (see Figure 3, page 39).

Interlanguage Strategy

Several pronunciation specialists (SUPRAS, an on-line discussion group, as described in chapter 2) have recently discussed whether teaching linking is a necessary component in ESL classes. Among the range of answers provided, one correspondent suggested that the tendency to separate each word is some sort of interlanguage phenomenon in relation to the orthography, that is, where there is white space on a page, students reflect this space in their speech (see also Gilbert, 1993b).

Another pronunciation specialist offered an example which many can attest to: As a beginner student of Spanish, a simple phrase such as "¿Que hora es?" was frequently unintelligible to him because he did not link the three words. He explains that his elementary level disconnected version of the phrase seriously distorted his expectations

43

as to what native speakers were saying to him, and so, communication breakdown occurred. Clearly, there is a strong need to teach this element in the ESL class. We could follow the example given in many French language learning classrooms: teach liaison as part of the curriculum. For example, in beginner-level French classes, McGill University uses the textbook: *Le nouveau sans frontières* (Dominique, Girardet, Verdelhan, & Verdelhan, 1990); *liaison* is taught from lesson one. In the intermediate classes they use the textbook: *Plaisir des Sons* (Kaneman-Pougatch & Pedoya-Guimbretière, 1991) where *liaison* lessons are continued.

Ten years of casual observations of my own students of Japanese origin leads me to think that attempts at saying a sentence with the correct articulation, word and sentence stress in order to generate the required message sometimes fail because of articulation difficulties at word boundaries. The difficulties generate a pause, and this can destroy the structure of the intended utterance, especially since a glottal is usually inserted in front of words beginning with a vowel.

Most Common Areas of Disconnection

In Appendix N are the transcriptions of all the 49 word pairs that could potentially be produced by the four NSsE participants and the nine JSE participants. The pairs that were disconnected by all four NSsE are: "unfortunately I've" (see lines 15, 64, 113, and 162), "by early" (see lines 26, 75, 124, 173), and "early evening" (see lines 27, 76, 125, 174). In the first pair, it seems that a pause was necessary in order to emphasise "unfortunately," thereby necessitating a disconnection. For the other two word pairs, it is possible that the sequence of vowels [ay] to [ər] and [iy] to [iy] required too

44

much muscular tension, and so, a disconnection may have provided temporary relief.

All nine JSsE disconnected the same three word pairs with the exception of JSE 12 of the EG who was able to link the word pair after the experiment. Looking at Figure 3 (see page 39), it is clear that she almost tripled her ability to link word pairs, with an increase of 24% (from 14% to 38%).

Do Remedial Teaching Activities Help?

Although the inconclusiveness of the results provided by this study are somewhat disappointing, there are some areas which provide confirmation that teaching linking can, indeed, improve the rhythm of the speech of Japanese learners of English. This was especially evident for JSsE 11, 12, and 13 in both speaking tasks. Most certainly, this needs to be further researched with larger sample groups and more tightly controlled variables. These variables will be discussed in the recommendations below.

What to Teach and When

Teaching the EG how to connect word pairs with a CC environment proved to be far more complex than the JSsE could manage within the three days of the experiment, as they had had plenty to manage with linking in CV and VV environments. Indeed, it became quite clear that teaching them how to link two consonants was a far more complicated teaching task than the researcher had originally anticipated. It became obvious that teaching the three different rules of connected speech would have been better achieved over a minimum of four weeks. However, the students were due to leave the country for the summer break within a month of recruitment, and the experiment needed to be completed within a reasonable amount of time.

In addition, teaching students CC environments would require a further division

of learning tasks: (1) How to link consonants, whether identical or not, without vowel

insertion; this would most likely require an understanding of syllable structures between

the L1 and L2, (2) how to link identical consonants, such as "deep pot," often pronounced

by NSsE as [diypatˀ], (3) how to link non-identical consonants, where each

consonant retains the original articulatory features, such as "like black," pronounced as

[laykˀblæk], (4) how to link non-identical consonants, where each consonant

changes somewhat from the original articulatory features, such as "but the," – where the

[t] is dentalized and [ð] becomes more obstruent as a result of assimilation, and (5)

how to link consonants with glides where articulatory features are affected, such as "can't

you" which is often pronounced as [kæntʃə].

Measuring Learner Performance

Two types of tasks were chosen to measure learner performance: reading aloud

and elicited free-speech monologues. These two tasks allowed me to observe the habits of

connected speech in two different contexts in order to determine how much linking

occurs. The reading task was far easier to measure and control, whereas the elicited

monologues proved to be disappointing in terms of the amount and quality of speech

samples produced by each participant. That is, the NSsE produced useful amounts of

material, whereas the JSsE: (1) did not provide enough material, (2) did not provide

enough word pairs with CV and VV environments, (3) were repetitive, or (4) used an

46

excessive amount of fillers, such as: "uh," "um," and "ah."

Appendix O has the transcriptions of all NSsE and JSsE participants who provided monologues in pre- and post-test conditions. As already mentioned, there are large differences in the amount of data useful to this study. Table 5 (see page 34) shows the raw data along with the percentages of word pair items that could have been and actually were linked. NSE 2 provided the smallest amount of items to be linked (16), as well as those that actually were linked (12), whereas NSE 3 provided the largest amounts (30 and 23). However, if we look at the percentages, it was NSE 1 who had the lowest percentage of realised linked items (58%) in his monologue, and NSE 4 had the highest amount (83%). It was expected that NSsE would link at least 50% of the time, so these percentages exceeded my expectations.

The results for the JSsE, however, are sobering, especially if we look at the individual performances. Figure 3 (see page 39) clearly displays the performance of each participant. An unexpected improvement came from JSE 8, who was in the CG: she has an improvement of 50% from 17% to 67%, which was dramatic. However, the raw data in Table 5 (see page 34) shows that she links only 4 out of 24 word pair items in the pre-test condition. It is also shown that in the post-test condition, she provided 12 word pairs that could have been linked – half of what she provided in the pre-test – and 8 were linked, giving a percentage higher than that in the pre-test condition. So, her performance, based solely on the comparison of the two percentages, is rather misleading.

In the EG, the performance of JSE 14 is even more disappointing if the pre- and

47

post-test percentages are compared. She drops from 57% to 29% in her ability to link word pairs. Looking at the raw data in Table 5 (see page 34), the ratio of word pairs produced and the ones actually linked is 14:8 in the pre-test condition. In the post-test condition, it is 21:6. So, she produces more word pairs but links less frequently in the post-test condition. The raw data therefore shows a less dramatic difference. It should be noted, however, that this subject was particularly self-deprecating. During the class, when called upon, she ducked her head, sucked in air between her teeth to indicate that she was unsure of herself, then shook her head in disappointment if she did not perform correctly. When she did perform correctly, she shook her head in disbelief. As mentioned above, she admitted that her English was "so poor," and so she demonstrated clearly the self-fulfilling prophecy which plagues many a classroom. As Norman Vincent Peale (1993) puts it: "What you think, you will become – good or bad, weak or strong, defeated or victorious – so practice being a positive thinker in a time like this." (p. 73) It would be interesting to see research on linking being done with a healthy dose of positive thinking included in the experimental design.

Discussion of "Reading Aloud" Results

While preparing for this study, I was advised by a former professor of Concordia University's TESL Centre that the results for L1 and L2 *readers* of texts would show that they enunciate more carefully they do when producing free speech. Indeed, the research noticed this phenomenon when listening to ESL students reading aloud during oral examinations. However, this appears to be true for the phonetic articulation of English speech. For example, the article "a" was pronounced as [ey] instead of the more

regularly used schwa vowel [ə];see Appendix N, lines 28, 31, 32, 37, 44, and 45.

Reading aloud does not produce larger amounts of disconnected speech as much as articulation. The average percentage of connected pairs for the CG in pre- and post-experimental recordings regressed by only 1%, rendering the results for the EG more interesting because there was a 21% increase (see Table 4, page 32).

From my own observations with ESL students over the last decade, it appears that that L2 readers hesitate, backtrack and enunciate more carefully while reading aloud. So it is to be expected that there would be some difference between controlled readings and uncontrolled monologues. It is to be expected that when a text is read, the tendency to speak with more pauses and a higher rate of disconnection would be present. However, the differences in my data are very small. The frequency of connected speech in the controlled reading and spontaneous speech for NSsE are shown in Figure 1 (see page 35). In spite of the fact that the number of NSE participants is very small (n = 4), the small difference between the two conditions is a potential research area: Is there really any significant difference in the way one reads aloud in comparison to spontaneous speech? Perhaps many are under the impression that there is a big difference, but we need empirical evidence to confirm or refute this claim.

Table 4 (see page 32) shows that there was a decrease in the average of connected items CG JSsE produced while reading aloud. Individually speaking, all but one JSE worsened in the ability to link word pairs. JSE 8 increased by 16% from 43% to 59%, that is, out of 49 potential word pairs that could be linked, JSE 8 was able to link 21 pairs in the pre-test and 29 in the post-test. This excellent improvement may be a result of several hidden factors. At first glance, it appeared that she was one of the undergraduate

49

students, but she was in fact enrolled in the Concordia English Language Institute (CELI) where she was finishing her 9th week of study. Her strong performance may be related to her high level of motivation. Moreover, she had admitted to me that she enjoyed singing English songs at Karaoke bars; many pronunciation specialists believe that music can improve speech rhythm. Although the EG were asked to promise to not share the information given to them during the experiment, it is also possible that one or more of the experimental group students taught JSE 8 how to connect words.

The most dramatic improvement in the EG was shown by JSE 12 who had a 57% increase from 16% to 73%. That is, out of 49 word pairs that could potentially be linked, she was able to link 8 pairs in the pre-test and 36 in the post-test (see Table 4, page 32). JSE 12 was enrolled in an intermediate-level of English at CELI. She seemed the most highly motivated out of all the JSsE to improve her speech rhythm. It is agreed among ESL teachers that students with high motivation often acquire the target language in a relatively effortless fashion.

Discussion of Free-Speech Monologue Results

The results for the elicited monologue task of free, unscripted speech are partly disconcerting. However, one must recollect that the sample size is quite small. There was a large amount of participant variability in what each JSsE produced in this task. Taking a look at Appendix 0, some JSsE had very little to say, using a restricted vocabulary (JSsE 2, 12, and 14), while others were more expressive, using slightly more sophisticated language (JSsE 7, 9, 11, and 13).

Each JSE who participated in this experiment possessed a different educational

50

background, and each demonstrated a different capacity to learn and produce what was learned. Four JSsE participants were enrolled in undergraduate programs at Concordia University; two of each were put into the CG (JSE 7 and 9) and EG (JSE 11 and 13). Five students were intermediate-level students from CELI who were my prime target: two were placed in the CG (JSE 6 and 8), and three were placed in the EG (JSE 12, 14 and 15).

The four JSsE – numbers 7, 9, 11, and 13 – were enrolled in bachelor degree programs at Concordia University. It is hard to say whether or not their academic status had any influence on their performance, since the results for both pre- and post-treatment monologues (see Figure 3, page 39) show mixed results. JSE 7 and JSE 9 were both in the control group; JSE 7 showed a 20% increase of linked word pairs from 42% to 62% of linked pairs. In contrast, JSE 9 showed a decrease of 5% from 28% down to 23%. However, the raw data in Table 5 (see page 34) shows ratios of potential word pairs to be linked to that those actually made were 52 to 22 for JSE 7, whereas JSE 9 had a ratio of 21 to 13.

Two of the five EG participants, JSE 11 and 13, both showed encouraging improvements of 23% and 11%, respectively (see Figure 3, page 39). Looking at the raw data in Table 5 (see page 34), one sees the *pre-test* ratios of potential word pairs to be linked to those actually made were 23 to 3 for JSE 11, whereas JSE 13 had a ratio of 31 to 6. Table 5 (see page 34) shows the *post-test* ratios of potential word pairs to be linked to those actually made were 25 to 9 for JSE 11, whereas JSE 13 had a ratio of 27 to 8.

The remaining five JSsE were all enrolled in CELI. Participant numbers 6 and 8 were in the control group, and numbers 12, 14 and 15 were in the EG. The most dramatic

decrease in the EG was shown by JSE 14 who had a 28% decrease from 57% to 29% of

connected word pairs (see Figure 3, page 39). The raw data shows that the pre-test ratio

was 14 to 8 and the post-test ratio was 21 to 6 (see Table 5, page 34).

During the post-treatment recording of the students in both contexts, the

researcher became aware of a certain level of discomfort that may be related to the

cultural features of Japanese learners of English. Teachers need to remember that

Japanese students, and perhaps many other learners of English, may have a certain level

of performance anxiety, and so not be able to produce what is anticipated. Corder (In

Larsen-Freeman and Long, 1990) confirms that "...learners will place limitations on the

data themselves." (p. 26) Larsen-Freeman and Long (1990) continue by saying that,

> ... learners will often not reveal to researchers their entire linguistic
> repertoire; rather, they will use only those aspects in which they have the
> most confidence. They will avoid the troublesome aspects through
> circumlocution or some other device. And it may be precisely the
> troublesome aspects of the second language in which the researcher is
> most interested. Thus, if the occasion does not lend itself for a particular
> aspect of linguistic performance to be manifest, or if learners are adept at
> circumlocuting aspects of the language which cause them difficulty,
> researchers will not be able to adduce any sort of evidence. (p. 26)

Transcription Discoveries

As the researcher transcribed the output produced by all the participants, there

were no problems with transcriptions of NSE speech. However, several doubts arose

when transcribing JSE speech. Certain phonological phenomena arose that do not occur

in English: (1) Meta-cognitive understanding of the researcher, that is, "What do I *think* I

hear?" (2) Final [n] deletion with nasalization of preceding vowel.

52

Perhaps one drawback was my preconception of what the JSsE would produce. The meta-cognitive influence of language comprehension cannot be ignored. There were moments when I thought I heard aspiration, but in fact the speaker had "rounded off" certain sounds. This rounding off, or "paragoge" was mentioned in chapter one, section 2.4. The Japanese language is often characterised as having voiceless obstruents followed by voiceless high vowels. What I thought was aspiration of voiceless obstruents, turned out to be paragoge. It appeared that the students were overgeneralizing the aspiration of voiceless obstruents in word initial position as NSsE would normally do. However, knowing what this does not necessarily mean understanding how this applies to the results as shown. Perhaps future research could look at this phenomenon and see to what degree paragoge affects linking.

Final [n] deletion and subsequent nasalization of preceding vowel occurred in a high number of cases in the speech of all JSsE. In Appendix N, there are six word pairs which have /n/ as the final consonant in the first word. They are: "can I," "on Wednesday," "return on," "and you'll," "an adventure," and, "than I." Except for the first pair, the JSsE used a nasalised vowel instead of producing an alveolar /n/. It appeared that this nasalised vowel was an allophone of /n/, however, there seems to no literature to confirm this finding. It is interesting that the JSE participants were able to produce an alveolar /n/ for "can I" which lead me to think that it might be in free variation with the nasalised vowel. What was discovered was that the JSsE produced an unusual way of linking: a nasal vowel linked with a following vowel without using the /y/ nor /w/ glides. This is one of the characteristics of their interlanguage which needs to be more carefully researched.

53

Discussion of Experimental Conditions

It became clear that certain environments were very difficult to hear. Indeed, having a reel-to-reel audio recorder with a splicer would have been a useful tool in order to extract only the word pairs that were being used as a focus. This would have been useful in eliminating some of the contextual cues that may have been interfering. Also, it would be very useful to use a spectrogram in order to determine if certain sounds are indeed produced.

Discussion of Experimenter Bias

There was a possibility that experimenter bias occurred as a result of the researcher performing the role of the EG teacher. It was unfortunate that the researcher was unable to find anyone able to teach this area of pronunciation who was available at the time of the experiment. She was therefore obliged to apply her own expertise. The CG teacher had a very different area of expertise, with experience in teaching ESL reading and writing at a major university in Montréal (Québec).

Furthermore, the experimenter transcribed the data herself without the help of an assistant. Nevertheless, the reliability of the data was verified by two judges who each agreed 97% of the time or better with the accuracy of the transcriptions as well as where connection did or did not occur.

Although the two judges both had academic training and experience in teaching ESL pronunciation, they both are fluent bilingual speakers of English and French. Their bilingualism may have changed their level of awareness of suprasegmental phenomena like linking in English.

54

Discussion of Limitations

There were several limitations in this necessarily exploratory study, the most apparent being the sample size. More robust conclusions as to the usefulness of directly teaching prosodic features would be possible following the use of the exercises developed for this study with a larger group of students. Ideally, the researcher would analyse data gathered by instructors other than herself and be assisted by judges with no significant exposure to any language other than English. A pedagogical intervention of several weeks rather than the few days available for the represent study would allow time for more significant changes in pronunciation behaviour and thus provide a better indication of differences between control and experimental groups. Student anxieties and other variables influencing motivation could also be addressed and better controlled.

There was also experimenter bias, difficult to avoid in the context where this study was conducted. ESL teachers who specialise in teaching pronunciation are rare in Montréal (Québec). Finding unilingual anglophones with ESL experience and the appropriate linguistic knowledge to serve as judges of transcription reliability is also a sizeable challenge in the Montréal area.

Recommendations

The importance of increased intelligibility needs particular attention. Including the rules of connected speech in ESL pedagogy can go far in improving the listening and speaking skills of all learners of English. Having taught large numbers of learners of English various pronunciation techniques, I am convinced that learning suprasegmentals will benefit at least some of them. I believe that teaching these learners the suprasegmentals requires less time and produces more effective results than teaching simply how to articulate various consonants and vowels. I am, however, keenly aware that empirical measurements are required in order to support this hypothesis, as well as to bring about some changes in teacher training institutions.

This investigation into the teaching of the rules of connected speech indicates that the effectiveness of instruction may not depend solely on explicit teaching and elicited repetition; indeed, perhaps a more communicative strategy needs to be implemented. There are clearly some issues to be resolved in successfully eliciting spontaneous speech, and so the method of speech elicitation needs careful consideration. For example, in future experimentation, students could describe a well-known fairy tale from their own culture. Another suggestion might be to have pairs of participants discussing the differences in two pictures, which are identical except for a restricted number of differences. This would hopefully allow NNSs a chance to provide output that would more closely match that of NSs in quantity and quality.

A more discrete monitoring system needs to be implemented. This system should involve a soundproof room where no interruptions will occur. A high-quality recording

device should be used in a discrete way so that the participants are not so keenly aware of its presence, thus leading to a more artificial output.

In preparation for future experiments, the recruitment variables would need to be more carefully considered. For example, knowing exactly what the participant had studied in their university courses would help in creating a more homogeneous group. This would help the researcher to avoid the surprise I encountered when I discovered that some of my participants had studied linguistics.

The most apparent need for change should be the number of participants recruited. The practicality of explicitly teaching connected speech following the use of the exercises developed for this study with a larger group of students would possibly derive more conclusive results. It is recommended, however, that linking words beginning with a vowel be taught in one type of experiment, that is, CV and VV connection. Linking words that begin with a consonant, that is, CC connection, should be investigated in a separate study, since the phonological strategies in CC environments used by NSsE are far too complex to be used in the same study.

Pedagogical intervention of four weeks, or more, with at least one-week intervals would allow time for more significant changes in pronunciation behaviour. While explicitly teaching participants how to connect words beginning with a vowel, it would be important to include lessons on how to articulate potentially difficult sounds in word-final positions such as [y], [w], [r] and [n] which would be linked with the following vowel. It would also me helpful to give an overview of all the vowels which end in off-glides in order to help the students understand that these are essential elements in assisting them to connect words.

57

Pronunciation pedagogy still has some fascinating areas to be further investigated, and it is hoped that these and other areas of prosodic features will receive more attention in second language acquisition research.

References

Acton, W. R., Gilbert, J., & Wong, R. (1991, March). *Integrating pronunciation into the second language curriculum*. Paper presented at the 25th Annual International TESOL Convention, New York, New York.

Anderson-Hsieh, J., Riney, T., & Koehler, K. (1994). Connected speech modifications in the English of Japanese ESL learners. *IDEAL, 7,* 31-52.

Avery, P., & Ehrlich, S. (1992). *Teaching American English pronunciation*. Oxford: Oxford University Press.

Azar, B. S. (1989). *Understanding and using English grammar*. (2nd ed.). Englewood Cliffs, NJ: Prentice Hall Regents.

Berish, L., & Thibaudeau, S. (1993). *Canadian Concepts*. Scarborough, Ontario, Canada: Prentice-Hall.

Brodkey, D. (1972). Dictation as measure of mutual intelligibility: A pilot study. *Language Learning, 22,* 203-220.

Brown, G. (1977). Listening to spoken English. In C. N. Candlin (Ed.), *Applied Linguistics and Language Study*. Essex, UK: Longman.

Browne, S. C., & Huckin, T. N. (1987). Pronunciation tutorials for nonnative technical professionals: A program description. In H. J. Morley (Ed.), *Current perspectives on pronunciation* (41-58). Washington, DC: Teachers of English to Speakers of Other Languages.

Boudreault, M. (1967). *Prononciation du français par le rhythme*. Québec: Les Presses de l'Université Laval.

Carver, T. K., Fotinos, S. D., & Cooper, C. (1993). *A Canadian Conversation Book: English in Everyday Life*. Scarborough, Ontario, Canada: Prentice-Hall.

Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (1996). *Teaching pronunciation: A reference for teachers of English to speakers of other languages*. New York: Cambridge University Press.

Chan, M. (1987). *Phrase by phrase: Pronunciation and listening in American English*. Englewood Cliffs, NJ: Regents/Prentice Hall.

Dauer, R. M. (1993). *Accurate English: A complete course in pronunciation.* Englewood Cliffs, NJ: Regents/Prentice Hall.

Dickerson, W. (1989). *Stress in the stream of speech – The rhythm of spoken English: Teacher's manual.* Urbana, IL: University of Illinois Press.

Fayer, J. M., & Krasinski, E. (1987). Native and nonnative judgments of intelligibility and irritation. *Language Learning, 37,* 313-326.

Fournier, P. (1999). *English on line: introducing college English skills.* (2nd ed.). Scarborough, ON: Prentice Hall.

Fried Goetz, B. (2000). Speech/Pronunciation consulting. *TESOL Matters, February/March,* 14.

Garant-Viau, C. (1994). *La portée des sons.* Québec: Les Presses de l'Université Laval.

Gilbert, J. B. (1984). Pronunciation and listening comprehension. In H. J. Morley (Ed.), *Current perspectives on pronunciation* (29-39). Washington, DC: Teachers of English to Speakers of Other Languages.

Gilbert, J. B. (1993a). *Clear speech – pronunciation and listening comprehension in North American English: Student's book.* New York: Cambridge University Press.

Gilbert, J. B. (1993b). *Clear speech – Pronunciation and listening comprehension in North American English: Teacher's resource book.* New York: Cambridge University Press.

Gimson, A. C. (1970). *An introduction to the pronunciation of English* (2nd ed.). London: Edward Arnold.

Grant, L. (1993). *Well said: Advanced English pronunciation.* Boston: Heinle & Heinle Publishers.

Gynan, S. N. (1984). Attitudes toward interlanguage: What is the object of study? *Modern Language Journal, 68,* 315-321.

Hadden, B. L. (1991). Teacher and nonteacher perceptions of second-language communication. *Language Learning, 41,* 1-24.

Halliday, M. A. K. (1989). *Spoken and written language.* Oxford: Oxford University Press.

60

Hancin-Bhatt, B., & Rakesh, M. B. (1997). Optimal L2 syllables: Interactions of transfer and developmental effects. *Studies in Second Language Acquisition, 19*, 331-378.

Hatch, E. M. (1992). *Discourse and language education.* Cambridge: Cambridge University Press.

Hatch, E. M. (1983). *Psycholinguistics: A second language perspective.* Rowley, Massachusetts: Newbury House.

Hinenoya, K. & Gatbonton, E. (2000). Ethnocentrism, cultural traits, beliefs, and English Proficiency: A Japanese Sample. *Modern Language Journal, 84*, 225-240.

Japanese for busy people. (2nd ed.). (1994). Tokyo: Association for Japanese-Language Teaching

Jones, R. H. (1997). Beyond "Listen and Repeat": Pronunciation Teaching Materials and Theories of Second Language Acquisition. *System, 25*, 103-112.

Kaneman-Pougatch, M. & Pedoya-Guimbretière, E. (1991). *Plaisir des sons.* Paris: Hatier.

Kreidler, C. W. (1989). *The pronunciation of English: A course book in phonology.* Oxford: Blackwell.

Lado, R. (1957). *Linguistics across cultures: Applied linguistics for language teachers.* Ann Arbor: University of Michigan Press.

Larsen-Freeman, D. & Long, M. H. (1990). An Introduction to Second Language Acquisition Research. In C. N. Candlin (Ed.), *Applied Linguistics and Language Study.* London: Longman.

Lightbown, P. (1985). Great Expectations: Second-Language Acquisition Research and Classroom Teaching. *Applied Linguistics, 6*, 173-189.

Ludwig, J. (1982). Native-Speaker Judgments of Second-language Learners' Efforts at Communication: A Review. *Modern Language Journal, 66*, 274-283.

McNerney, M., & Mendelsohn, D. (1992). Suprasegmentals in the pronunciation class: Setting priorities. In P. Avery & S. Ehrlich (Eds.), *Teaching American English pronunciation*, 185-196. Oxford: Oxford University Press.

Miller, S. F. (2000*). Targeting pronunciation: The intonation, sounds, and rhythm of American English.* Boston: Houghton Mifflin.

Morley, J. (1979). *Improving spoken English.* Ann Arbor: University of Michigan Press.

Morley, J. (Ed.). (1987). *Current perspectives on pronunciation: practices anchored in theory*. Washington DC: Teachers of English to Speakers of Other Languages.

Morley, J. (Ed.). (1994). *Pronunciation pedagogy and theory: New views, new directions.* Alexandria, VA: Teachers of English to Speakers of Other Languages.

Peale, N. V. (1993). *Positive thinking everyday: An Inspiration for each day of the year.* New York: Fireside..

Pennington, M., & Richards, J. (1986). Pronunciation revisited. *TESOL Quarterly, 20,* 207-225.

Pinker, S. (1995). *The language instinct: How the mind creates language.* New York: HarperPerennial.

Pollock, C. W. (1997). *Communicate what you mean: A concise advanced grammar.* (2nd ed., revised by S. Eckstut.). New Jersey: Prentice Hall Regents.

Prator, C. H., Jr., & Robinett, B. W. (1985). *Manual of American English pronunciation.* New York: Holt, Rinehart & Winston.

Richards, J. C. (1992). *Interchange.* Cambridge: Cambridge University Press.

Seidlhofer, B. (1994). Pronunciation. In C. N. Candlin, & H. G. Widdowson (Eds.), *Language Teaching: A Scheme for Teacher Education.* Oxford: Oxford University Press.

Smalley, R. L. & Ruetten, M. K. (1995). *Refining composition skills: Rhetoric and grammar.* (4th ed.). Boston: Heinle & Heinle.

Temperley, M. S. (1987). Linking and deletion in final consonant clusters. In H. J. Morley (Ed.), *Current perspectives on pronunciation* (59-82). Washington, DC: Teachers of English to Speakers of Other Languages.

Thompson, I. (1987). Japanese Speakers. In M. Swan & B. Smith (Eds.), *Learner English: A teacher's guide to interference and other problems* (212-223). Cambridge: Cambridge University Press.

Trask, R. L. (1996). *A dictionary of phonetics and phonology.* London: Routledge.

Vance, T. J. (1987). *An introduction to Japanese phonology.* New York: State University of New York Press.

Varonis, E. M., & Gass, S. (1982). The comprehensibility of non-native speech. *Studies in Second Language Acquisition, 4,* 114-136.

Wong, R. (1987). *Teaching pronunciation: Focus on rhythm*. Englewood Cliffs, New Jersey: Prentice-Hall.

Yule, G., & Macdonald, D. (1994). The effects of pronunciation teaching. In J. Morley (Ed.), *Pronunciation pedagogy and theory: New views, new directions* (109-118). Alexandria, VA: Teachers of English to Speakers of Other Languages.

Appendices

Appendix A: Request for Teachers' Assistance in Recruiting Japanese

Speakers of English

Dear teacher,

I am currently working on a master's thesis in the Applied Linguistics program of the TESL Centre at Concordia University in Montreal, Quebec. My research focus is the pronunciation of Japanese students of English (JSE).

I have consulted with Mr. Charles Brown, and he has kindly allowed me to recruit JSE from your intensive English program as well as to contact you for help.

Please give them the attached information sheet and kindly ask them to contact me this week, if possible. Also, I have posted additional sheets on the bulletin boards in your department, in hopes that JSE will take note and wish to volunteer. It is important for them to know that their participation is completely voluntary, and that they will not be penalised if they do not wish to participate.

Thank you for your assistance.

Sincerely,

Marie Melenca
Applied Linguistics Graduate
Concordia University
TESL Centre
2070 MacKay Street, 2nd floor
(514) 768 3299

Dear student from Japan,

I am currently working on a master's thesis in the Applied Linguistics department at Concordia University in Montreal (Quebec). My research focus is the pronunciation of Japanese students of English (JSsE). I am looking for JSE who are willing to participate in my teaching experiment between April 8 to 18. I would like to meet students who:

➤ are in intermediate or advanced levels of English
➤ have lived out of Japan for less than two years
➤ speak no other languages than Japanese and English
➤ are between the ages of 18 and 35

In return for your assistance, I will give you a free pronunciation class equivalent to the time you spend participating in my research.

If you are interested in participating, or if you would like to have more information, please contact me by leaving a message in the secretary's office of the TESL Centre, by phoning me, or by sending me an e-mail.

Thank you!

Marie Melenca
TESL Centre
2070 MacKay Street, 2nd floor
Telephone: (514) 768 3299 [leave a message]
E-mail: <melenca@hotmail.com>

✂ **

Please cut along the line, keep the above information for yourself and leave the lower part of this page with me.

Name:
_____

Telephone number:
_____

University:
_____

Level:
_____

Appendix C: Consent Form to Participate in Research (JSsE)

I agree to participate in a program of research being conducted by Marie Melenca as part of her master's degree thesis under the supervision of Dr. Lori Morris of the Applied Linguistics program of the TESL Centre at Concordia University.

PURPOSE

I have been informed that the purpose of the research is to better understand the pronunciation difficulties of Japanese speakers of English.

PROCEDURES

The researcher will record my voice while I read a text and discuss a topic in English. I will participate in 3 lessons of 30 minutes each for over a period of 3 days.

When the information has been collected, studied and written, my identity will not be revealed to anyone other than the researcher.

CONDITIONS OF PARTICIPATION

☐ I understand that I am free to leave at any time and discontinue my participation at any time without penalty.

☐ I understand that my participation in this study is <u>CONFIDENTIAL</u> (that is, the researcher will know, but will not disclose my identity in the written thesis.)

☐ I understand that information about my age, language skills and communication abilities will be kept <u>CONFIDENTIAL</u>.

☐ I understand that the data from this study may be published but no information will permit me to be identified.

☐ I understand the purpose of this study and know that here is no hidden motive of which I have not been informed.

CONSENT FORM TO PARTICIPATE IN RESEARCH (JSsE)

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND AGREE TO PARTICIPATE IN THIS STUDY.

NAME (PLEASE PRINT) _____ . _____

SIGNATURE _____

WITNESS SIGNATURE _____

DATE _____

I agree to participate in a program of research being conducted by Marie Melenca as part of her master's degree thesis under the supervision of Dr. Lori Morris of the Applied Linguistics program in the TESL Centre at Concordia University.

PURPOSE

I have been informed that the purpose of the research is to better understand the pronunciation difficulties of Japanese speakers of English.

PROCEDURES

The researcher will record my voice while I read a text and discuss a topic in English. I will participate in 3 lessons of 30 minutes each for over a period of 3 days.

When the information has been collected, studied and written, my identity will not be revealed to anyone other than the researcher.

CONDITIONS OF PARTICIPATION

☐ I understand that I am free to leave at any time and discontinue my participation at any time without penalty.

☐ I understand that my participation in this study is <u>CONFIDENTIAL</u> (that is, the researcher will know, but will not disclose my identity in the written thesis.)

☐ I understand that information about my age, language skills and communication abilities will be kept <u>CONFIDENTIAL</u>.

☐ I understand that the data from this study may be published but no information will permit me to be identified.

☐ I understand the purpose of this study and know that here is no hidden motive of which I have not been informed.

CONSENT FORM TO PARTICIPATE IN RESEARCH (NSsE)

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS
AGREEMENT. I FREELY CONSENT AND AGREE TO PARTICIPATE IN THIS
STUDY.

NAME (PLEASE PRINT) _____

SIGNATURE _____

WITNESS SIGNATURE _____

DATE _____

PRE-TEST INSTRUCTIONS READ TO EACH JSE PARTICIPANT

🔖 The researcher, Marie Melenca, will record you reading the dialogue, "At the Travel Agent's Office."[5]

🔖 Once you have done that, the researcher will ask you to answer a general question so that she can record your speech patterns when you speak in a normal manner.

🔖 The question:

🔖 What did you do last night? That is, what kind of activities did you do? Be specific and descriptive.

POST-TEST INSTRUCTIONS

🔖 The researcher, Marie Melenca, will record you reading the dialogue, "At the Travel Agent's Office."

🔖 Once you have done that, the researcher will ask you to answer a general question so that she can record your speech patterns when you speak in a normal manner.

🔖 The question: What will you do tonight? Be specific and descriptive.

---

[5] Gilbert (1993b)

PRE-TEST INSTRUCTIONS TO NSE PARTICIPANTS

℣ The researcher, Marie Melenca, will record you reading the dialogue, "At the Travel Agent's Office."[6]

℣ Once you have done that, the researcher will ask you to answer a general question so that she can record your speech patterns when you speak in a normal manner.

℣ The question:

℣ What did you do last night? That is, what kind of activities did you do? Be specific and descriptive.

---

[6] Judy B. Gilbert (1993) *Clear Speech: Teacher's Resource Book*, © Cambridge University Press.

At the Travel Agent's Office

A: [1] Can I help you?

B: [2] Yes, I want to fly to Chicago on Wednesday the seventh and return on Friday the

ninth.

A: [3] Of October?

B: [4] No, November. [5] How much is the fare?

A: [6] Fares are cheaper if you stay over Saturday night.

B: [7] Thanks, but unfortunately I've already arranged some business here

that Friday. [8] So I'll just have to pay the extra cost.

A: [9] What time of day would you prefer? [10] Morning or afternoon?

B: [11] Morning, because I have to be there by early evening. [12] Is there a meal?

A: [13] Yes, they'll be serving breakfast; and you'll also see a movie.

B: [14] Which movie?

A: [15] In both directions they'll show a short feature on planned communities. [16] Going

east, the major film is *City Slickers*. [17] I think it's a cowboy comedy. [18] The movie

going west is *Big Joe*. [19] That's an adventure story about a boy who raises a wolf.

B: [20] Sounds good, but what's the fare?

A: [21] Eight hundred and fifty dollars round trip.

B: [22] That's more than I expected!

---

[7] Gilbert (1993a, p. xii)

A. Understanding Linking[8]

As you read this page of *printed* English, notice the spaces between the words. It is easy to see where one word ends and the next word begins.

In *spoken* English, however, there are little or no spaces [or pauses] between words in sentences. Words seem to run together. Students of English are often not sure where one word ends and the next word begins when they listen to spoken English. The speaker links words together in groups to help the listener get the sense [or meaning] of the sentence. In short sentences, all words are linked together, with no pauses. In this lesson we will practice *linking* words.

In linking, the end of one word blends into the beginning of the next word with little or no pause. This mark " ‿ " is used to show linking. Repeat the following sentences. Link the words.

Who‿are‿you?
I'm‿ready‿for‿class.
My‿office‿is‿empty.

B. Linking[9] means that words should be joined smoothly to each other without adding extra sounds or omitting final consonants. There are three types of connected environments. You will learn one of three types of connected speech today.

C. Linking A Final Consonant To An Initial Vowel [CV]

If a word ends in a consonant and the next word begins with a vowel, use the consonant to begin the syllable of the following word: do NOT insert a glottal (do not stop the air or pause) between the two words.

1. In‿an‿airplane.
2. Live‿all‿alone.

D. Practice the following sentences with CV environments.

---

[8] All of part one, with minor modifications, including the examples, is from Morley (1979).
[9] B, C, D (1-10) and E are from Dauer (1993).

1. It's͜ an͜ apple.
2. Come͜ in.
3. It's͜ all͜ over.
4. I give͜ up.
5. He made͜ a mess.
6. Cook͜ a meal.
7. He robbed͜ a bank.
8. She baked͜ a cake.
9. She loves͜ him[10].
10. He likes͜ her.
11. They save͜ old bottles. [11]
12. They believed͜ everything.
13. We live͜ in͜ an͜ apartment.
14. He had͜ a big car.
15. They love͜ animals.
16. Many men shaved͜ every day.
17. Highway workers pave͜ our roads.
18. Some dogs retrieved͜ all balls.
19. Rude people shove͜ into lines.
20. We approved͜ all͜ -her work.

E. Mark the links between words where there is a final consonant and initial vowel environment

In the morning the sun was up and the tent was starting to get hot. Nick crawled out under the mosquito netting stretched across the mouth of the tent to look at the morning. The grass was wet on his hands as he came out. He held his trousers and his shoes in his hands. The sun was just up over the hill. There was the meadow, the river and the swamp. There were birch tress in the green of the swamp on the other side of the river.

---

[10] Participants were informed that pronouns with an initial "h" were not pronounced within a sentence.

[11] D (11-20) and E are from Gilbert (1993a).

A. Review of LINKING:

In linking, the end of one word blends into the beginning of the next word with little or no pause. This mark "‿" is used to show linking.

B. Linking A Final Vowel To An Initial Vowel [VV]

If a word ends in a vowel, as well as [w] and [y], and the next word begins with another vowel, go from one vowel right into the other without stopping your voice. Use a short [y] sound after front vowels[12], a short [w] after back vowels, and [r] after words ending in 'er'. The word 'the' is usually pronounced as [ðiy] before words beginning with vowels. This occurs not only between words, but also between syllables.

1. go‿out
2. the‿answer‿is
3. tri‿angular‿incision [triangular]

C. Practice the following sentences with VV environments.

1. Let's go‿over it.
2. I'm taking bi‿ology [biology] and ge‿ology [geology].
3. May‿I‿ask?
4. Do‿I know‿her[13]?
5. I'll wear‿it.
6. Did you see‿her?
7. They‿owe‿him money.
8. I‿always tie‿it up.
9. His blue‿eyes were‿open.
10. Where is the‿office?[14]

---

[12] Front vowels are the following: [iy] as in 'beat', [ɪ] as in 'bit', [ey] as in 'bait', [ɛ] as in 'bet', [æ] as in 'bat'.

[13] Participants were informed that pronouns with an initial "h" were not pronounced within a sentence.

[14] Sentences C (3-10) are from Dauer (1993).

11. What's the‿answer?

12. He‿asked me.

13. I hate to say‿it.

14. "I think you should find another sport," I‿answered.

15. From now‿on, I'll do better.

16. Then she‿asked, "How‿are you?"

17. We‿agree on re‿ality [reality].

18. We‿always study ge‿ography [geography][15].

D. Mark the links between words where there is a final vowel and initial vowel environment.

We often go the beach on the weekend. We always go by car, because it's

fastest. My roommate will try anything. He loves to surf, but he isn't a great

surfer. He always falls off the surfboard.

Sometimes I go over to my friend's house. The first thing she says is,

"How are you?" If I really tell her how I am, she doesn't listen. This happens so

often that I decided to answer "fine" every time. But then I said, "You always ask,

but you don't listen. " So she apologised and said, "My biology exam is freaking

me out. I'm sorry. "

---

[15] Sentences B, C (11-18), and D [excluding the last 2 sentences] are from Gilbert (1993a).

A. Linking A Final Consonant To An Initial Consonant [CC]

If the final <u>sound</u> is the <u>same</u> sound as the beginning of the next word, say the words as one word. Do not say the sound twice, say the sound once.

1. wash͜ shells
2. bus͜ system
3. tax͜ saving[16]

If a word ends in a consonant and the next word begins with another consonant, go directly from one consonant to the next without releasing the first one (that is, without opening your mouth too wide, nor dropping your tongue) or adding a vowel sound like 'uh'. Furthermore, you should not omit the final consonant either. Try to say the two consonant sounds simultaneously. This also happens across syllables.

4. keep͜ talking
5. You laugh͜ too much.
6. Give͜ good ad͜ vice. [17]

B. Practice the following sentences with CC environments

1. Sam͜ might͜ go.
2. The sun͜ never sets.
3. Bill͜ loves pie.
4. We both͜ think it's good.
5. I wish͜ she'd͜ come.
6. I have͜ very good ideas.
7. Please͜ stop͜ pushing.
8. Cook it in a deep͜ pot. [18]
9. Where does͜ the bus͜ stop?
10. I like͜ black͜ cats.
11. What͜ time will you eat͜ tonight?

---

[16] Gilbert (1993a)
[17] Dauer (1993)
[18] Gilbert (1993a)

12. His‿vacation was‿terrible.

13. Don't‿stop‿driving. [19]

C. Mark the links between words where there is a final Consonant and initial Consonant environment.

1. What's a "lab beaker?"

2. Put ten dollars in the box.

3. Is this the right town?

4. Open the red door.

5. Our luck could change.

6. I took a cab back to town.

7. She has a black cat. [20]

D. Mark the links between words where there is a final Consonant and initial Consonant environment.

The Recipe[21]

A: How do I make it?
B: You need an egg, an apple, an eggplant, an ounce of oatmeal, one
     onion, some apricots, some almonds, some orange juice, and some oil.
A: Anything else?
B: That's it!
A: That sounds like an incredible recipe.
B: It may be an inedible[22] one. I just made it up.

---

[19] Dauer (1993)
[20] J. B. Gilbert (1993a)
[21] R. M. Dauer (1993)
[22] Students were given the following footnote: Inedible = can't be eaten.

ENGLISH LESSON #1

Poetry is a useful way to learn English. Please follow the instructions of the teacher.

Christina Rossetti (1830-1894)

Uphill   1862

Does the road wind uphill all the way?
  Yes, to the very end.
Will the day's journey take the whole long day?
  From morn to night, my friend.

But is there for the night a resting-place?
  A roof for when the slow dark hours begin.
May not the darkness hide it from my face?
  You cannot miss that inn.

Shall I meet other wayfarers at night?
  Those who have gone before.
Then must I knock, or call when just in sight?
  They will not keep you standing at that door.

Shall I find comfort, travel-sore and weak?
  Of labor you shall find the sum.
Will there be beds for me and all who seek?
  Yea, beds for all who come.

ENGLISH LESSON #2

Poetry is a useful way to learn English. Please follow the instructions of the teacher.

Robert Frost (1874-1963)

The Road Not Taken   1916

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I –
I took the one less traveled by,
And that has made all the difference.

ENGLISH LESSON #3

Poetry is a useful way to learn English. Please follow the instructions of the teacher.

Charles Martin (b. 1942)

Taken Up   1978

Tired of earth, they dwindled on their hill,
Watching and waiting in the moonlight until
The aspens' leaves quite suddenly grew still,

No longer quaking as the disc descended,
That glowing wheel of lights whose coming ended
All waiting and watch. When it landed

The ones within it one by one came forth,
Stalking out awkwardly upon the earth,
And those who watched them were confirmed in faith:

Mysterious voyagers from outer space,
Attenuated, golden – shreds of lace
Spun into seeds of the sunflower's spinning face –

Light was their speech, spanning mind to mind:
We come here not believing what we find –
Can it be your desire to leave behind

The earth, which those called angels bless,
Exchanging amplitude for emptiness?
And in a single voice they answered *Yes*,

Discord of human melodies all blent
To the unearthly strain of their assent.
Come then, the Strangers said, and those that were taken, went.

Due to the lengthy nature of this appendix (47 pages), the legend will preface the data in order to assist in the reading of the following transcriptions. The numbers in columns seven and eight were used to facilitate Excel calculations.

Some transcriptions in column four show a period (" - ") in order to indicate a temporal pause where no sound has been produced. Also, there will be some transcriptions with a colon (" : ") in column four; this indicates that the vowel or consonant has been lengthened. These symbols are in keeping with IPA transcription conventions.

A dash (" - ") is used to indicate that the item was not given by the speaker.

Column seven will show either "0," which means disconnected, or "1" which means connected. Column eight may sometimes show a "2," which means that a glottal was inserted during disconnection.

Note that the transcriptions are given for four native speakers of English in order to give a baseline. The transcriptions of the nine Japanese speakers of English are provided for pre- and post-test conditions. In each case, there are 49 word pairs that were to be linked.

NSE Baseline Speech Samples

Datum Number	Speaker	Word Pairs – C(G)V or V(G)V	Transcription	Final sound	Initial sound	Connected?	Glottal?
1.	N1	can I	kəna^y	n	a^y	1	
2.	N1	help you	hɛlpyuw	p	y	1	
3.	N1	I want	aywan	y	w	1	
4.	N1	Chicago on	ʃɪkagow.ʔan	ow	a	0	2
5.	N1	on Wednesday	anwɛnzdey	n	w	1	
6.	N1	seventh and	sɛvənθ.ʔan	θ	æ	0	2

---

[23] Taken from *Clear Speaking Test* Gilbert (1993a, p. xii)

7.	N1	return on	rətərn.ʔan	n	a	0	2
8.	N1	of October[24]	əv.ʔaktowbə	v	a	0	2
9.	N1	much is	mʌtʃ.ʔɪz	tʃ	ɪ	0	2
10.	N1	fares are	fɛəzə	z	ə	1	
11.	N1	cheaper if	tʃiypə.ʔɪf	r	ɪ	0	2
12.	N1	if you	ɪfyuw	f	y	1	
13.	N1	stay over	steyowvər	y	ow	1	
14.	N1	but unfortunately	bərənfɔətʃənliy	ɾ	ə	1	
15.	N1	unfortunately I've	ənfɔətʃənliy.ʔayhæv	y	ay	0	2
16.	N1	I've already	ayhæv.ʔɔlrɛdiy	v	ɔ	0	2
17.	N1	already arranged	ɔlrɛdiyəreyndʒ[25]	y	ə	1	
18.	N1	So I'll	sow.ʔayl	ow	ay	0	2
19.	N1	the extra	ðiyɛkstrə	y	ɛ	1	
20.	N1	time of	taym.ʔɔv	m	ɔ	0	2
21.	N1	day would	dey.wʊd	y	w	0	
22.	N1	would you	wʊdʒuw	d	y	1	
23.	N1	morning or	mɔənɪŋɔr	ŋ	ɔ	1	
24.	N1	or afternoon	ɔræftənuwn	r	æ	1	
25.	N1	because I	biykɔz.ʔay	z	ay	0	2
26.	N1	by early	bay.ʔərliy	y	ə	0	2
27.	N1	early evening	ərliy.ʔiyvnɪŋ	y	iy	0	2

---

[24] Please note this native speaker of English is of Afro-Hispanic origin and lives in New York. His speech moves freely between rhotic and non-rhotic varieties of English.
[25] Elided /d/

28.	N1	there a	zɛrey	r	ey	1	
29.	N1	and you'll	ənyəl	n	y	1	
30.	N1	you'll also	yəl.ʔalsow	l	a	0	2
31.	N1	see a	siyey	y	ey	1	
32.	N1	show a	ʃowey	w	ey	1	
33.	N1	feature on	fiytʃər.ʔan	r	a	0	2
34.	N1	going east	goɪŋ.ʔiys	ŋ	iy	0	2
35.	N1	film is	fɪlmɪz	m	ɪ	0	2
36.	N1	think it's	θɪŋkɪz	k	ɪ	1	
37.	N1	it's a	izey	z	ey	1	
38.	N1	going west	gowiŋ.wɛs	ŋ	w	0	
39.	N1	west is	wɛs.ʔɪz	s	ɪ	0	2
40.	N1	that's an	ðætsən	s	ə	1	
41.	N1	an adventure	ənædvɛntʃə	n	æ	1	
42.	N1	story about	stɔriygowɪŋ[26]	iy	-	-	
43.	N1	about a	(this pair was skipped)	-	-	-	-
44.	N1	raises a	reyzɪz.ʔey	z	ey	0	2
45.	N1	a wolf	eywuf[27]	ey	w	1	
46.	N1	but what's	bət˺.wats	t˺	w	0	
47.	N1	hundred and	hʌndrəd˺.ʔæn	d	æ	0	2
48.	N1	than I	ðənay	n	ay	1	
49.	N1	I expected	ayəkspɛktəd	y	ə	1	

---

[26] This participant skipped a line.
[27] Speaker said this word without /l/.

50.	N2	can I	kənay	n	ay	1	
51.	N2	help you	hɛlpyuw	p	y	1	
52.	N2	I want	aywant	y	w	1	
53.	N2	Chicago on	ʃɪkagowən	ow	ə	1	
54.	N2	on Wednesday	ənwɛnzdey	n	w	1	
55.	N2	seventh and	sɛvenθən	θ	ə	1	
56.	N2	return on	rətərnan	n	a	1	
57.	N2	of October	əvaktowbər	v	a	1	
58.	N2	much is	mʌtʃɪz	tʃ	ɪ	1	
59.	N2	fares are	fɛrzər	z	ə	1	
60.	N2	cheaper if	tʃiypərɪf	r	ɪ	1	
61.	N2	if you	ɪfyə	f	y	1	
62.	N2	stay over	stey.ʔowvər	y	ow	0	2
63.	N2	but unfortunately	bətˀ.ʔənfortʃənəʔliy	t	ə	0	2
64.	N2	unfortunately I've	ənfortʃənəʔliyayv	y	ay	1	
65.	N2	I've already	ayvalrɛdiy	v	a	1	
66.	N2	already arranged	alrɛdiyəreyntʃtˀ	y	ə	1	
67.	N2	So I'll	sowəl	ow	ə	1	
68.	N2	the extra	ðiyɛkstrə	y	ɛ	1	
69.	N2	time of	tayməv	m	ə	1	
70.	N2	day would	deywʊd	y	w	1	
71.	N2	would you	wʊdʒuw	d	y	1	
72.	N2	morning or	mɔrnɪŋor	ŋ	ɔ	1	
73.	N2	or afternoon	ɔræftərnuwn	r	æ	1	

74.	N2	because I	bəkʌzay	z	ay	1	
75.	N2	by early	bay.ʔərliy	y	ə	0	2
76.	N2	early evening	ərliy.ʔiyvnɪŋ	y	iy	0	2
77.	N2	there a	ðɛrə	r	ə	1	
78.	N2	and you'll	ənyəl	n	y	1	
79.	N2	you'll also	yəlalsow	l	a	1	
80.	N2	see a	siyə	y	ə	1	
81.	N2	show a	ʃow.ʔə	w	ə	0	2
82.	N2	feature on	fiytʃər.ʔan	r	a	0	2
83.	N2	going east	goɪŋ.ʔiyst	n	iy	0	2
84.	N2	film is	fɪlmɪz	m	ɪ	1	
85.	N2	think it's	θɪŋkɪts	k	ɪ	1	
86.	N2	it's a	itsə	s	ə	1	
87.	N2	going west	gowiŋwɛst	ŋ	w	1	
88.	N2	west is	wɛstɪz	t	ɪ	1	
89.	N2	that's an	ðætsən	s	ə	1	
90.	N2	an adventure	ənædvɛntʃər	n	æ	1	
91.	N2	story about	stɔriyəbawt	y	ə	1	
92.	N2	about a	əbawɾə	ɾ	ə	1	
93.	N2	raises a	reyzɪzə	z	ə	1	
94.	N2	a wolf	əwʊlf	ə	w	1	
95.	N2	but what's	bəʔ.wʌts	ʔ	w	0	2
96.	N2	hundred and	hʌndrədən	d	ə	1	
97.	N2	than I	ðənay	n	ay	1	

98.	N2	I expected	ayəkspɛktəd	y	ə	1	
99.	N3	can I	kənay	n	ay	1	
100.	N3	help you	hɛlpyuw	p	y	1	
101.	N3	I want	aywant	y	w	1	
102.	N3	Chicago on	ʃɪkagow.ʔan	ow	a	0	2
103.	N3	on Wednesday	anwɛnzdey	n	w	1	
104.	N3	seventh and	sɛvenθən	θ	ə	1	
105.	N3	return on	rətərnan	n	a	1	
106.	N3	of October	əvaktowbər	v	a	1	
107.	N3	much is	mʌtʃɪz	tʃ	ɪ	1	
108.	N3	fares are	fɛrzər	z	ə	1	
109.	N3	cheaper if	tʃiypərɪf	r	ɪ	1	
110.	N3	if you	ɪfyə	f	y	1	
111.	N3	stay over	steyowvər	y	ow	1	
112.	N3	but unfortunately	bərənfɔrtʃənəʔliy	ɾ	ə	1	
113.	N3	unfortunately I've	ənfɔrtʃənəʔliy.ʔayv	y	ɔ	0	2
114.	N3	I've already	ayv.ʔalrɛdiy	v	a	0	2
115.	N3	already arranged	alrɛdiy.ʔəreyndʒd	y	ə	0	2
116.	N3	So I'll	sow.ʔayl	ow	ay	0	2
117.	N3	the extra	ðiy.ʔɛkstrə	y	ɛ	0	2
118.	N3	time of	tayməv	m	ə	1	
119.	N3	day would	deywʊd	y	w	1	
120.	N3	would you	wʊdʒə	d	y	1	
121.	N3	morning or	mɔrnɪŋ.ʔɔr	ŋ	ɔ	0	2

122.	N3	or afternoon	ɔræftərnuwn	r	æ	1	
123.	N3	because I	bəkʌzay	z	ay	1	
124.	N3	by early	bay.ʔərliy	y	ə	0	2
125.	N3	early evening	ərliy.ʔiyvnɪŋ	y	iy	0	2
126.	N3	there a	ðɛrə	r	ə	1	
127.	N3	and you'll	ənyəl	n	y	1	
128.	N3	you'll also	yəlalsow	l	a	1	
129.	N3	see a	siyə	y	ə	1	
130.	N3	show a	ʃowə	w	ə	1	
131.	N3	feature on	fiytʃər.ʔan	r	a	0	2
132.	N3	going east	goɪŋ.ʔiyst	n	iy	0	2
133.	N3	film is	fɪlmɪz	m	ɪ	1	
134.	N3	think it's	θɪŋkɪts	k	ɪ	1	
135.	N3	it's a	itsə	s	ə	1	
136.	N3	going west	gowɪŋwɛst	ŋ	w	1	
137.	N3	west is	wɛstɪz	t	ɪ	1	
138.	N3	that's an	ðætsən	s	ə	1	
139.	N3	an adventure	ənædvɛntʃər	n	æ	1	
140.	N3	story about	stɔriy.ʔəbawt	y	ə	0	2
141.	N3	about a	əbawɾə	ɾ	ə	1	
142.	N3	raises a	reyzɪzə	z	ə	1	
143.	N3	a wolf	əwʊlf	ə	w	1	
144.	N3	but what's	bəʔ.wʌts	ʔ	w	0	2
145.	N3	hundred and	hʌndrədən	d	ə	1	

146.	N3	than I	ðənay	n	ay	1	
147.	N3	I expected	ayəkspɛktəd	y	ə	1	
148.	N4	can I	kənay	n	ay	1	
149.	N4	help you	hɛlpyuw	p	y	1	
150.	N4	I want	aywant	y	w	1	1
151.	N4	Chicago on	ʃɪkagow.ʔan	ow	a	0	2
152.	N4	on Wednesday	anwɛnzdey	n	w	1	
153.	N4	seventh and	sɛvenθ.ʔæn	θ	æ	0	2
154.	N4	return on	rətərnan	n	a	1	
155.	N4	of October	əvaktowbər	v	a	1	
156.	N4	much is	mʌtʃɪz	tʃ	ɪ	1	
157.	N4	fares are	fɛrzər	z	ə	1	
158.	N4	cheaper if	tʃiypər.ʔɪf	r	ɪ	0	2
159.	N4	if you	ɪfyuw	f	y	1	
160.	N4	stay over	steyowvər	y	ow	1	
161.	N4	but unfortunately	bərənforʃnliy	ɾ	ə	1	
162.	N4	unfortunately I've	ənforʃnliy.ʔayv	y	ay	0	2
163.	N4	I've already	ayv.ʔalrɛdiy	v	a	0	2
164.	N4	already arranged	alrɛdiy.ʔəreynʃ	y	ə	0	2
165.	N4	So I'll	sow.ʔəl	ow	ə	0	2
166.	N4	the extra	ðiy.ʔɛkstrə	y	ɛ	0	2
167.	N4	time of	tayməv	m	ə	1	
168.	N4	day would	deywʊd	y	w	1	
169.	N4	would you	wʊdʒə	d	y	1	

89

170.	N4	morning or	mɔrnɪŋər	ŋ	ə	1	
171.	N4	or afternoon	ər.ʔæftərnuwn	r	æ	0	2
172.	N4	because I	bəkʌzay	z	ay	1	
173.	N4	by early	bay.ʔərliy	y	ə	0	2
174.	N4	early evening	ərliy.ʔiyvnɪŋ	y	iy	0	2
175.	N4	there a	ðɛrə	r	ə	1	
176.	N4	and you'll	ənyəl	n	y	1	
177.	N4	you'll also	yəl.ʔalsow	l	a	0	2
178.	N4	see a	siyə	y	ə	1	
179.	N4	show a	ʃow.ʔə	w	ə	0	2
180.	N4	feature on	fiytʃər.ʔan	r	a	0	2
181.	N4	going east	goɪŋ.ʔiyst	n	iy	0	2
182.	N4	film is	fɪlmɪz	m	ɪ	1	
183.	N4	think it's	θɪŋkɪts	k	ɪ	1	
184.	N4	it's a	itsə	s	ə	1	
185.	N4	going west	gowɪŋwɛst	ŋ	w	1	
186.	N4	west is	wɛstɪz	t	ɪ	1	
187.	N4	that's an	ðætsən	s	ə	1	
188.	N4	an adventure	ənædvɛntʃər	n	æ	1	
189.	N4	story about	stɔriy.ʔəbawt	y	ə	0	2
190.	N4	about a	əbawɾə	ɾ	ə	1	
191.	N4	raises a	reyzɪzə	z	ə	1	
192.	N4	a wolf	əwʊlf	ə	w	1	
193.	N4	but what's	bəʔ.wʌts	ʔ	w	0	2

90

194.	N4	hundred and	hʌndrədən	d	ə	1	
195.	N4	than I	ðənay	n	ay	1	
196.	N4	I expected	ayəkspɛktəd	y	ə	1	

JSE Pre-Test Speech Samples

197.	J6	can I	kenɐi	n	ɐi	1	
198.	J6	help you	helᵘpiu	p	i	1	
199.	J6	I want	ɐiwɐn	ɐi	w	1	
200.	J6	Chicago on	ʃikɐgo.ʔõ	o	õ	0	2
201.	J6	on Wednesday	õwenzᵘdei	õ	w	1	
202.	J6	seventh and	sevens.ʔẽ	s	ẽ	0	2
203.	J6	return on	ɾitẽ.ʔẽ	ẽ	ẽ	0	2
204.	J6	of October	ovᵘ.ʔokᵘtobɐ	vᵘ	o	0	2
205.	J6	much is	mɐtʃiz	tʃ	i	1	
206.	J6	fares are	feɐ.ʔɐ:	ɐ	ɐ	0	2
207.	J6	cheaper if	tʃipɐ.ʔifᵘ	ɐ	i	0	2
208.	J6	if you	ifᵘ.ʔiu	fᵘ	i	0	2
209.	J6	stay over	ste.ʔovɐ	e	o	0	2
210.	J6	but unfortunately	bɐt.ʔɐnfortʃunetri	t	ɐ	0	2
211.	J6	unfortunately I've	ɐnfortʃunetri.ʔɐvᵘ	i	ɐ	0	2
212.	J6	I've already	ɐvᵘ.ʔoɾeɾi	vᵘ	o	0	2
213.	J6	already arranged	oɾeɾi.ʔɐlendᵘsᵘ	i	ɐ	0	2
214.	J6	So I'll	so.ʔɐilʷ	o	ɐi	0	2
215.	J6	the extra	dɐ.ʔekⁱstɾɐ	ɐ	e	0	2

91

216.	J6	the extra	dze.ʔekⁱstɹɐ	e	e	0	2
217.	J6	time of	tɐim.ʔovᵘ	m	o	0	2
218.	J6	day would	de.ʔud	e	u	0	2
219.	J6	would you	udʒu	d	y	1	
220.	J6	morning or	moniŋ.ʔoɐ	ŋ	o	0	2
221.	J6	or afternoon	oɐ.ʔɐftɐnũ	ɐ	ɐ	0	2
222.	J6	because I	bikozᵘ.ʔɐi	zᵘ	ɐi	0	2
223.	J6	by early	bɐi.ʔɐli	ɐi	ɐ	0	2
224.	J6	early evening	ɐli.ʔivɐniŋs	i	i	0	2
225.	J6	there a	zeɐ	e	ɐ	1	
226.	J6	and you'll	ɐnᵉ.ʔiul	nᵉ	i	0	2
227.	J6	you'll also	yul.ʔɐlso	l	ɐ	0	2
228.	J6	see a	siɐ	i	ɐ	1	
229.	J6	show a	ʃo.ʔɐ	o	ɐ	0	2
230.	J6	feature on	fiutʃɐ.ʔõ	ɐ	õ	0	2
231.	J6	going east	goiŋ.ʔist	ŋ	i	0	2
232.	J6	film is	fiɹᵉm.ʔis	m	i	0	2
233.	J6	think it's	siŋkᵘ.ʔits	kᵘ	i	0	2
234.	J6	it's a	itsɐ	s	ɐ	1	
235.	J6	going west	goiŋ.west	ŋ	w	0	
236.	J6	west is	west.ʔidzᵘ	t	i	0	2
237.	J6	that's an	dzets.ʔẽ	s	ẽ	0	2
238.	J6	an adventure	ẽ.ʔedᵘbɐ.ʔedɐbentʃɐ	ẽ	ɐ	0	2
239.	J6	story about	stoɹiɐbɐᵘt	i	ɐ	1	

240.	J6	about a	ɐbɐ^utɐ	t	ɐ	1	
241.	J6	raises a	leiziz.ʔɐ	z	ɐ	0	2
242.	J6	a wolf	ɐ.ʔuf	ɐ	u	0	2
243.	J6	but what's	bɐt^u.ʔuɐts	t^u	u	0	2
244.	J6	hundred and	hendʀed.ʔen^u	d	ɐ	0	2
245.	J6	than I	θẽ.ʔɐ	ẽ	ɐ	0	2
246.	J6	I expected	ɐ.ʔekspekted	ɐ	e	0	2
247.	J7	can I	kenɐi	n	ɐi	1	
248.	J7	help you	heopiu	p	i	1	
249.	J7	I want	ɐiwɐnt	ɐi	w	1	
250.	J7	Chicago on	ʃikɐgoõ	o	õ	1	
251.	J7	on Wednesday	õ.ʔwenzdei	õ	w	0	2
252.	J7	seventh and	sevens.ʔen^ɑ	s	ɐ	0	2
253.	J7	return on	ritẽõ	ẽ	õ	1	
254.	J7	of October	of.ʔoktobər	f	o	0	2
255.	J7	much is	mɐtʃi	tʃ	i	1	
256.	J7	fares are	ferzɐ	z	ɐ	1	
257.	J7	cheaper if	tʃipər.ʔif^u	r	i	0	2
258.	J7	if you	if^uiu	f^u	i	1	
259.	J7	stay over	ste.ʔovər	e	o	0	2
260.	J7	but unfortunately	bɐt.ʔenfortʃunetri	t	ɐ	0	2
261.	J7	unfortunately I've	enfortʃunetri.ʔɐiv	i	ɐi	0	2
262.	J7	I've already	ɐiv.ʔolredi	v	o	0	2
263.	J7	already arranged	olredi.ʔɐlenz	i	ɐ	0	2

93

264.	J7	So I'll	so.ʔɐilʷ	o	ɐ	0	2
265.	J7	the extra	ðɐ.ʔegᵘstrɐ	ɐ	e	0	2
266.	J7	time of	tɐimov	m	o	1	
267.	J7	day would	de.ʔut	e	u	0	2
268.	J7	would you	udʒu	d	y	1	
269.	J7	morning or	moɐniŋ.ʔor	ŋ	o	0	2
270.	J7	or afternoon	or.ʔɐftərnū	r	ɐ	0	2
271.	J7	because I	bikɐs.ʔɐi	s	ɐi	0	2
272.	J7	by early	bɐi.ʔɐli	ɐi	ɐ	0	2
273.	J7	early evening	ɐli.ʔivɐnī	i	i	0	2
274.	J7	there a	ðeɐ	e	ɐ	1	
275.	J7	and you'll	ɐndᵃyul	dᵃ	y	1	
276.	J7	you'll also	yul.ʔolso	l	o	0	2
277.	J7	see a	siɐ	i	ɐ	1	
278.	J7	show a	ʃoɐ	o	ɐ	1	
279.	J7	feature on	fyutʃɐ.ʔõ	ɐ	õ	0	2
280.	J7	going east	goiŋ.ʔist	ŋ	i	0	2
281.	J7	film is	film.ʔis	m	i	0	2
282.	J7	think it's	θiŋkits	k	i	1	
283.	J7	it's a	itsɐ	s	ɐ	1	
284.	J7	going west	goiŋwest	ŋ	w	1	
285.	J7	west is	westᵘ.ʔiz	tᵘ	i	0	2
286.	J7	that's an	ðetsɐn	s	ɐ	1	
287.	J7	an adventure	ɐn.ʔedᵘbentʃɐ	n	ɐ	0	2

288.	J7	story about	stori.ʔɐbɐut	i	ɐ	0	2
289.	J7	about a	ɐbɐutɐ	t	ɐ	1	
290.	J7	raises a	rlɐizɐzɐ	z	ɐ	1	
291.	J7	a wolf	ɐ.ʔuf	ɐ	u	0	2
292.	J7	but what's	bɐt^u.ʔuɐt	t^u	u	0	2
293.	J7	hundred and	θɐusant.ʔɐn	t	ɐ	0	2
294.	J7	than I	dē.ʔɐi	ē	ɐi	0	2
295.	J7	I expected	ɐi.ʔekspekted	ɐi	ɐi	0	2
296.	J8	can I	kenɐi	n	ɐi	1	
297.	J8	help you	heopiu	p	i	1	
298.	J8	I want	ɐiwent	ɐi	w	1	
299.	J8	Chicago on	s^{i}kēgõ.ʔõ	õ	õ	0	2
300.	J8	on Wednesday	õ.wēnsde	õ	w	0	
301.	J8	seventh and	sevenθ.ʔēn	θ	ē	0	2
302.	J8	return on	ritē.ʔõ	ē	õ	0	2
303.	J8	of October	ov^u.ʔoktobər	v^u	o	0	2
304.	J8	much is	metʃiz	tʃ	i	1	
305.	J8	fares are	ferɐr	r	ɐ	1	
306.	J8	cheaper if	tʃipɐ.ʔif^u	ɐ	i	0	2
307.	J8	if you	ifiu	f	i	1	
308.	J8	stay over	ste.ʔovɐ	e	o	0	2
309.	J8	but unfortunately	bɐt^u.ʔenfortʃænetli	t	ɐ	0	2
310.	J8	unfortunately I've	ɐnfortʃænetli.ʔɐiv^u	i	ɐi	0	2
311.	J8	I've already	ɐiv^u.ʔoledi	v	o	0	2

312.	J8	already arranged	oledi.ʔerens	i	ɐ	0	2
313.	J8	So I'll	so.ʔeilʷ	o	ɐi	0	2
314.	J8	the extra	dɐ.ʔekstrɐ	ɐ	e	0	2
315.	J8	time of	tɐimo	m	o	1	
316.	J8	day would	de.ʔudʒ	e	u	0	2
317.	J8	would you	udʒu	dʒ	u	1	
318.	J8	morning or	moniɲor	ŋ	o	1	
319.	J8	or afternoon	orɐftɐnū	r	ɐ	1	
320.	J8	because I	bikozɐ	z	ɐ	1	
321.	J8	by early	bɐi.ʔeli	ɐi	ɐ	0	2
322.	J8	early evening	ɐli.ʔivenɪ	i	i	0	2
323.	J8	there a	deɐ	e	ɐ	1	
324.	J8	and you'll	ɐndⁱyul	d	y	1	
325.	J8	you'll also	yul.ʔolso	l	o	0	2
326.	J8	see a	siɐ	i	ɐ	1	
327.	J8	show a	ʃoɐ	o	ɐ	1	
328.	J8	feature on	fitʃɐ.ʔõ	ɐ	õ	0	2
329.	J8	going east	goiɲist	ŋ	i	1	
330.	J8	film is	firɐm.ʔis	m	i	0	2
331.	J8	think it's	θiŋk.ʔits	k	i	0	2
332.	J8	it's a	itsɐ	s	ɐ	1	
333.	J8	going west	goiŋ.west	ŋ	w	0	
334.	J8	west is	west.ʔiz	t	i	0	2
335.	J8	that's an	dɐtsē̃	s	ē̃	1	

336.	J8	an adventure	ē.ʔedᵘventʃər	ē	ɐ	0	2
337.	J8	story about	stori.ʔɐbɐut	i	ɐ	0	2
338.	J8	about a	ɐbɐutɐ	t	ɐ	1	
339.	J8	raises a	reizɐ	z	ɐ	1	
340.	J8	a wolf	ɐ.ʔuf	ɐ	w	0	2
341.	J8	but what's	bɐ.ʔwɐts	ɐ	w	0	2
342.	J8	hundred and	hɐndred.ʔen	d	ɐ	0	2
343.	J8	than I	dē.ʔɐi	ē	ɐi	0	2
344.	J8	I expected	ɐi.ʔekspektet	ɐi	e	0	2
345.	J9	can I	kenɐi	n	ɐi	1	
346.	J9	help you	heopiu	p	i	1	
347.	J9	I want	eiwent	ei	w	1	
348.	J9	Chicago on	sikɐgo.ʔon	o	o	0	2
349.	J9	on Wednesday	ō.wenzdei	ō	w	0	
350.	J9	seventh and	sevenθ.ʔen	θ	ɐ	0	2
351.	J9	return on	ritɐnō	n	ō	1	
352.	J9	of October	of.ʔokᵘtobər	f	o	0	2
353.	J9	much is	mɐtʃi	tʃ	i	1	
354.	J9	fares are	fers.ʔɐ	s	ɐ	0	2
355.	J9	cheaper if	tʃipər.ʔifᵘ	r	i	0	2
356.	J9	if you	ifᵘiu	f	i	1	
357.	J9	stay over	ste.ʔovɐ	e	o	0	2
358.	J9	but unfortunately	bɐt.ʔenfortʃœnetᵘlʷi	t	ɐ	0	2
359.	J9	unfortunately I've	enfortʃœnetᵘlʷi.ʔɐvᵘ	i	ɐ	0	2

97

360.	J9	I've already	ɐvᵘ.ʔolredi	v	o	0	2
361.	J9	already arranged	olredi.ʔɐrentst	i	ɐ	0	2
362.	J9	So I'll	so.ʔɐilʷ	o	ɐi	0	2
363.	J9	the extra	dɐ.ʔekstrɐ	ɐ	e	0	2
364.	J9	time of	tɐimov	m	o	1	
365.	J9	day would	de.ʔut	e	u	0	2
366.	J9	would you	utʃu	tʃ	u	1	
367.	J9	morning or	moɐniŋ.ʔoɐ	ŋ	o	0	2
368.	J9	or afternoon	oɐ.ʔɐftɐnũ	ɐ	ɐ	0	2
369.	J9	because I	bikosɐi	s	ɐi	1	
370.	J9	by early	bɐ.ʔɐɐʷli	ɐ	ɐ	0	2
371.	J9	early evening	ɐɐʷli.ʔivɐnĩ	i	i	0	2
372.	J9	there a	deɐ	e	ɐ	1	
373.	J9	and you'll	ɐnyul	n	y	1	
374.	J9	you'll also	yul.ʔolso	l	o	0	2
375.	J9	see a	siɐ	i	ɐ	1	
376.	J9	show a	ʃoɐ	o	ɐ	1	
377.	J9	feature on	fitʃɐ.ʔon	ɐ	o	0	2
378.	J9	going east	goiŋ.ʔist	ŋ	i	0	2
379.	J9	film is	film.ʔis	m	i	0	2
380.	J9	think it's	t̪iŋkᵘ.ʔits	k	i	0	2
381.	J9	it's a	itsɐ	s	ɐ	0	2
382.	J9	going west	goiŋwest	ŋ	w	1	
383.	J9	west is	west.ʔiz	t	i	0	2

98

384.	J9	that's an	detsɐn	s	ɐ	1	
385.	J9	an adventure	ɐn.ʔɐdᵘbentʃɐ	n	ɐ	0	2
386.	J9	story about	storiɐbɐud	i	ɐ	1	
387.	J9	about a	ɐbɐudɐ	d	ɐ	1	
388.	J9	raises a	lezɐzɐ	z	ɐ	1	
389.	J9	a wolf	ɐ.ʔuf	ɐ	u	0	2
390.	J9	but what's	betᵘ.ʔuɐts	t	u	0	2
391.	J9	hundred and	hɐndred.ʔen	d	ɐ	0	2
392.	J9	than I	dẽ.ʔɐi	ẽ	ɐi	0	2
393.	J9	I expected	ɐi.ʔekspekted	ɐi	e	0	2
394.	J11	can I	kenɐi	n	ɐi	1	
395.	J11	help you	heopiu	p	i	1	
396.	J11	I want	ɐiwent	ɐi	w	1	
397.	J11	Chicago on	sikɐgo.ʔõ	o	õ	0	2
398.	J11	on Wednesday	õwensde	õ	w	1	
399.	J11	seventh and	sevenθɐn	θ	ɐ	1	
400.	J11	return on	ritɐn.ʔõ	n	õ	0	2
401.	J11	of October	ɐv.ʔekxtɐbər	v	ɐ	0	2
402.	J11	much is	metʃi	tʃ	i	1	
403.	J11	fares are	ferz.ʔɐ	z	ɐ	0	2
404.	J11	cheaper if	tʃipər.ʔif	r	i	0	2
405.	J11	if you	ifᵘ.ʔiu	fᵘ	i	0	2
406.	J11	stay over	ste.ʔevər	e	æ	0	2
407.	J11	but unfortunately	beʔ.ʔenfortʃunetli	ʔ	ɐ	0	2

408.	J11	unfortunately I've	ɐnfortʃunetli.ʔɐivᵘ	i	ɐi	0	2
409.	J11	I've already	ɐivᵘ.ʔɐledi	vᵘ	ɐ	0	2
410.	J11	already arranged	oledi.ʔɐlenʃt	i	ɐ	0	2
411.	J11	So I'll	so.ʔɐilʷ	o	ɐi	0	2
412.	J11	the extra	ðe.ʔekstrɐ	e	e	0	2
413.	J11	time of	tɐim.ʔɐv	m	ɐ	0	2
414.	J11	day would	de.ʔudʒ	e	u	0	2
415.	J11	would you	udʒu	d	y	1	
416.	J11	morning or	moniŋ.ʔo	ŋ	o	0	2
417.	J11	or afternoon	o.ʔɐftɐnū	o	ɐ	1	2
418.	J11	because I	bikɐz.ʔɐi	z	ɐi	0	2
419.	J11	by early	bɐi.ʔɐli	ɐi	ɐ	0	2
420.	J11	early evening	ɐli.ʔivenī	i	i	0	2
421.	J11	there a	ðeɐ	e	ɐ	1	
422.	J11	and you'll	ɐn.ʔiuwi°	n	i	0	2
423.	J11	you'll also	iuwi°.ʔɐlso	i	ɐ	0	2
424.	J11	see a	siɐ	i	ɐ	1	
425.	J11	show a	ʃoɐ	o	ɐ	1	
426.	J11	feature on	fitʃɐ.ʔɐn	ɐ	ɐ	0	2
427.	J11	going east	goiŋ.ʔist	ŋ	i	0	2
428.	J11	film is	film.ʔis	m	i	0	2
429.	J11	think it's	θiŋk.ʔits	k	i	0	2
430.	J11	it's a	itsɐ	s	ɐ	1	
431.	J11	going west	goiŋ.west	ŋ	w	0	

432.	J11	west is	wɛst.ʔɛz	t	e	0	2
433.	J11	that's an	zɛtsɛn	s	æ	1	
434.	J11	an adventure	ɛn.ʔædvɛntʃər	n	æ	0	2
435.	J11	story about	stori.ʔəbæut	i	æ	0	2
436.	J11	about a	(Speaker drops article)	-	-	-	-
437.	J11	raises a	lezɛz.ʔæ	z	æ	0	2
438.	J11	a wolf	æ.ʔuæ	æ	u	0	2
439.	J11	but what's	bɛʔ.ʔuæt	ʔ	æ	0	2
440.	J11	hundred and	hændred.ʔɛn	d	æ	0	2
441.	J11	than I	dɛn.ʔæi	n	æi	0	2
442.	J11	I expected	æi.ʔɛkspekted	æi	e	0	2
443.	J12	can I	kɛnæi	n	æi	1	
444.	J12	help you	hɛopiu	p	i	1	
445.	J12	I want	æiwɛnt	æi	w	1	
446.	J12	Chicago on	sikægo.ʔõ	o	õ	0	2
447.	J12	on Wednesday	õwɛnzdei	õ	w	1	
448.	J12	seventh and	sevenθ.ʔɛn	θ	æ	0	2
449.	J12	return on	ritɛn.ʔõ	n	õ	0	2
450.	J12	of October	ov.ʔoktobər	v	o	0	2
451.	J12	much is	mætθ.ʔi	θ	i	0	2
452.	J12	fares are	fer.ʔiz	r	i	0	2
453.	J12	cheaper if	tʃipər.ʔifᵘ	r	i	0	2
454.	J12	if you	ifᵘiu	fᵘ	i	1	
455.	J12	stay over	ste.ʔovər	e	o	0	2

456.	J12	but unfortunately	bɐt.ʔɐnfortʃuneitᵘli	t	ɐ	0	2
457.	J12	unfortunately I've	ɐnfortʃuneitᵘli.ʔɐv	i	ɐ	0	2
458.	J12	I've already	ɐv.ʔolredi	v	o	0	2
459.	J12	already arranged	olredi.ʔɐreintʃt	i	ɐ	0	2
460.	J12	so I'll	so.ʔɐilʷ	o	ɐi	0	2
461.	J12	the extra	dze.ʔekstrɐ	e	e	0	2
462.	J12	time of	tɐim.ʔov	m	o	0	2
463.	J12	day would	de.ʔud	e	u	0	2
464.	J12	would you	udʒu	d	y	1	
465.	J12	morning or	morniŋ.ʔor	ŋ	o	0	2
466.	J12	or afternoon	or.ʔɐftɐnũ	r	ɐ	0	2
467.	J12	because I	bikos.ʔɐi	s	ɐi	0	2
468.	J12	by early	bɐi.ʔɐrli	ɐi	ɐ	0	2
469.	J12	early evening	ɐrli.ʔivᵘniŋ	i	i	0	2
470.	J12	there a	ðeɐ	e	ɐ	1	
471.	J12	and you'll	ɐnᵘiul	nᵘ	i	1	
472.	J12	you'll also	iul.ʔɐlso	l	ɐ	0	2
473.	J12	see a	si.ʔɐ	i	ɐ	0	2
474.	J12	show a	ʃo.ʔɐ	o	ɐ	0	2
475.	J12	feature on	futʃər.ʔon	r	o	0	2
476.	J12	going east	goiŋ.ʔist	ŋ	i	0	2
477.	J12	film is	film.ʔis	m	i	0	2
478.	J12	think it's	θiŋkᵘ.ʔits	k	i	0	2
479.	J12	it's a	itsɐ	s	ɐ	1	

480.	J12	going west	goiŋwest	ŋ	w	1	
481.	J12	west is	west.ʔiz	t	i	0	2
482.	J12	that's an	dets.ʔen	s	e	0	2
483.	J12	an adventure	en.ʔædᵘventʃər	n	æ	0	2
484.	J12	story about	stori.ʔæbæut	i	æ	0	2
485.	J12	about a	æbæut.ʔæ	t	æ	0	2
486.	J12	raises a	reiziz.ʔæ	z	æ	0	2
487.	J12	a wolf	æwelf	æ	w	1	
488.	J12	but what's	bæt.wæt	t	w	0	
489.	J12	hundred and	hændred.ʔen	d	æ	0	2
490.	J12	than I	dē.ʔei	ē	æi	0	2
491.	J12	I expected	æi.ʔekspekted	æi	e	0	2
492.	J13	can I	kenæi	n	æi	1	
493.	J13	help you	heopiu	p	i	1	
494.	J13	I want	æiwænt	æi	w	1	
495.	J13	Chicago on	ʃikægo.ʔē	o	ē	0	2
496.	J13	on Wednesday	ēwenzdei	ē	w	1	
497.	J13	seventh and	sevens.ʔen	s	æ	0	2
498.	J13	return on	riternō	n	ō	1	
499.	J13	of October	ævektobər	v	æ	1	
500.	J13	much is	mætʃi	tʃ	i	1	
501.	J13	fares are	fers.ʔer	s	æ	0	2
502.	J13	cheaper if	tʃipər.ʔif	r	i	0	2
503.	J13	if you	ifiu	f	i	1	

504.	J13	stay over	ste.ʔovər	e	o	0	2
505.	J13	but unfortunately	bɐt.ʔɐnfortʃuetwi	t	ɐ	0	2
506.	J13	unfortunately I've	ɐnfortʃuetwi.ʔɐiv	i	ɐi	0	2
507.	J13	I've already	ɐv.ʔolredi	v	o	0	2
508.	J13	already arranged	olredi.ʔɐlents	i	ɐ	0	2
509.	J13	So I'll	so.ʔɐio	o	ɐi	0	2
510.	J13	the extra	de.ʔekstrɐ	e	e	0	2
511.	J13	time of	tɐimov	m	o	1	
512.	J13	day would	de.ʔud	e	u	0	2
513.	J13	would you	udʒu	d	y	1	
514.	J13	morning or	moɐniŋ.ʔoɐ	ŋ	o	0	2
515.	J13	or afternoon	orɐftɐnū	r	ɐ	1	
516.	J13	because I	bikɐz.ʔɐi	z	ɐi	0	2
517.	J13	by early	bɐi.ʔɐri	ɐi	ɐ	0	2
518.	J13	early evening	ɐri.ʔivɐnĭ	i	i	0	2
519.	J13	there a	zeɐ	e	ɐ	1	
520.	J13	and you'll	ɐnyul	n	y	1	
521.	J13	you'll also	yul.ʔɐlso	l	ɐ	0	2
522.	J13	see a	siɐ	i	ɐ	1	
523.	J13	show a	ʃoɐ	o	ɐ	1	
524.	J13	feature on	fitʃər.ʔɐn	r	ɐ	0	2
525.	J13	going east	goiŋ.ʔist	ŋ	i	0	2
526.	J13	film is	film.ʔis	m	i	0	2
527.	J13	think it's	siŋk.ʔits	k	i	0	2

528.	J13	it's a	itsæ	s	æ	1	
529.	J13	going west	goiŋwest	ŋ	w	1	
530.	J13	west is	west.ʔis	t	i	0	2
531.	J13	that's an	zætsæn	s	æ	1	
532.	J13	an adventure	æn.ʔedᵘventʃər	n	æ	0	2
533.	J13	story about	storiæbæut	i	æ	1	
534.	J13	about a	æbæut.ʔæ	t	æ	0	2
535.	J13	raises a	ræizeæ	z	æ	1	
536.	J13	a wolf	æ.ʔwof	æ	w	0	2
537.	J13	but what's	bæt.ʔwæz	t	w	0	2
538.	J13	hundred and	hẽred.ʔẽ	d	ẽ	0	2
539.	J13	than I	dẽ.ʔæi	ẽ	æi	0	2
540.	J13	I expected	æi.ʔekspekted	æi	e	0	2
541.	J14	can I	kenæi	n	æi	1	
542.	J14	help you	heopiu	p	i	1	
543.	J14	I want	æiwent	æi	w	1	
544.	J14	Chicago on	sikego.ʔon	o	o	0	2
545.	J14	on Wednesday	õwenzdei	õ	w	1	
546.	J14	seventh and	sevens.ʔendæ	s	æ	0	2
547.	J14	return on	ritẽ.ʔõ	ẽ	õ	0	2
548.	J14	of October	ovoktobər	v	o	1	
549.	J14	much is	mætʃᵘ.ʔiz	tʃ	i	0	2
550.	J14	fares are	fers.ʔæ	s	æ	0	2
551.	J14	cheaper if	tʃipər.ʔifᵘ	r	i	0	2

105

552.	J14	if you	ifᵘ.ʔiu	f	i	0	2
553.	J14	stay over	steyovər	y	o	1	
554.	J14	but unfortunately	bɐtᵘ.ʔɐnfortʃœnetwi	t	ɐ	0	2
555.	J14	unfortunately I've	ɐnfortʃœnetwi.ʔɐiv	i	ɐi	0	2
556.	J14	I've already	ɐvoledi	v	o	1	
557.	J14	already arranged	oledi.ʔɐlenʒt	i	ɐ	0	2
558.	J14	So I'll	so.ʔɐil	o	ɐi	0	2
559.	J14	the extra	zɐ.ʔekstrɐ	ɐ	e	0	2
560.	J14	time of	tɐimovᵘ	m	o	1	
561.	J14	day would	de.ʔudʒ	e	u	0	2
562.	J14	would you	udʒu	d	y	1	
563.	J14	morning or	moniŋor	ŋ	o	1	
564.	J14	or afternoon	orɐftərnū	r	ɐ	1	
565.	J14	because I	bikosᵘ.ʔɐi	s	ɐi	0	2
566.	J14	by early	bɐi.ʔɐrli	ɐi	ɐr	0	2
567.	J14	early evening	ɐrli.ʔivɐnĩ	i	i	0	2
568.	J14	there a	zeɐ	e	ɐ	1	
569.	J14	and you'll	ɐnd.ʔiul	d	i	0	2
570.	J14	you'll also	iul.ʔɐlso	l	ɐ	0	2
571.	J14	see a	siɐ	i	ɐ	1	
572.	J14	show a	ʃoɐ	o	ɐ	1	
573.	J14	feature on	fitʃər.ʔon	r	o	0	2
574.	J14	going east	goiŋ.ʔist	ŋ	i	0	2
575.	J14	film is	film.ʔiz	m	i	0	2

576.	J14	think it's	siŋk.ʔits	k	i	0	2
577.	J14	it's a	itsɐ	s	ɐ	1	
578.	J14	going west	goiŋ.ʔwest	ŋ	w	0	2
579.	J14	west is	west.ʔiz	t	i	0	2
580.	J14	that's an	dzɐts.ʔẽ	s	ẽ	0	2
581.	J14	an adventure	ẽ.ʔedᵘventʃər	ẽ	ɐ	0	2
582.	J14	story about	storiɐbɐut	i	ɐ	1	
583.	J14	about a	ɐbɐutɐ	t	ɐ	1	
584.	J14	raises a	lɐiz.ʔɐ	z	ɐ	0	2
585.	J14	a wolf	ɐwelf	ɐ	w	1	
586.	J14	but what's	bɐduɐts	d	u	1	
587.	J14	hundred and	hɐndre.ʔen	e	ɐ	0	2
588.	J14	than I	ðẽ.ʔɐi	ẽ	ɐi	0	2
589.	J14	I expected	ɐi.ʔekspekted	ɐi	e	0	2
590.	J15	can I	kenɐi	n	ɐi	1	
591.	J15	help you	helpyu	p	y	1	
592.	J15	I want	ɐiwɐnt	ɐi	w	1	
593.	J15	Chicago on	ʃikɐgo.ʔen	o	ɐ	0	2
594.	J15	on Wednesday	ɐnwenzdei	n	w	1	
595.	J15	seventh and	sevenθ.ʔen	θ	ɐ	0	2
596.	J15	return on	ritərnɐn	n	ɐ	1	
597.	J15	of October	ɐv.ʔektobər	v	ɐ	0	2
598.	J15	much is	mɐʃi	ʃ	i	1	
599.	J15	fares are	ferzɐr	z	ɐ	1	

600.	J15	cheaper if	tʃipər.ʔif	r	i	0	2
601.	J15	if you	ifyu	f	y	1	
602.	J15	stay over	ste.ʔovər	e	o	0	2
603.	J15	but unfortunately	bɐt.ʔɐnfortʃɐnetli	t	ɐ	0	2
604.	J15	unfortunately I've	ɐnfortʃɐnetli.ʔɐiv	i	ɐi	0	2
605.	J15	I've already	ɐiv.ʔolredi	v	o	0	2
606.	J15	already arranged	olredi.ʔɐrentʃt	i	ɐ	0	2
607.	J15	So I'll	so.ʔɐiw°l	o	ɐi	0	2
608.	J15	the extra	ðɐ.ʔekstrɐ	ɐ	e	0	2
609.	J15	time of	tɐimov	m	o	1	
610.	J15	day would	ðewud	e	w	1	
611.	J15	would you	wudʒu	d	y	1	
612.	J15	morning or	morniŋ.ʔor	ŋ	o	0	2
613.	J15	or afternoon	or.ʔɐfternun	r	ɐ	0	2
614.	J15	because I	bikʌzɐi	z	ɐi	1	
615.	J15	by early	bɐi.ʔɐrli	ɐi	ɐ	0	2
616.	J15	early evening	ɐrli.ʔivniŋ	i	i	0	2
617.	J15	there a	derɐ	r	ɐ	1	
618.	J15	and you'll	ɐnyul	n	y	1	
619.	J15	you'll also	yul.ʔolso	l	o	0	2
620.	J15	see a	siɐ	i	ɐ	1	
621.	J15	show a	ʃoɐ	o	ɐ	1	
622.	J15	feature on	fyutʃər.ʔon	r	o	0	2
623.	J15	going east	goiŋ.ʔist	ŋ	i	0	2

624.	J15	film is	film.ʔiz	m	i	0	2
625.	J15	think it's	θiŋk.ʔits	k	i	0	2
626.	J15	it's a	itsæ	s	æ	1	
627.	J15	going west	goiŋwest	ŋ	w	1	
628.	J15	west is	west.ʔiz	t	i	0	2
629.	J15	that's an	ðætsæn	s	æ	1	
630.	J15	an adventure	ænædventʃər	n	æ	1	
631.	J15	story about	storiæbæud	i	ə	1	
632.	J15	about a	æbæudə	d	ə	1	
633.	J15	raises a	reizəzə	z	ə	1	
634.	J15	a wolf	əwulf	ə	w	1	
635.	J15	but what's	bæʔ.ʔuæt	ʔ	u	0	2
636.	J15	hundred and	hændred.ʔæn	d	æ	0	2
637.	J15	than I	ðænæi	n	æi	1	
638.	J15	I expected	æyekspektəd	y	e	1	

JSE Post-Test Speech Samples

639.	J6	can I	kenæi	n	æi	1	
640.	J6	help you	helᵘpiu	p	i	1	
641.	J6	I want	æiwæn	æi	w	1	
642.	J6	Chicago on	ʃikægo.ʔõ	o	õ	0	2
643.	J6	on Wednesday	õwenzᵘdei	õ	w	1	
644.	J6	seventh and	sevens.ʔẽ	s	ẽ	0	2
645.	J6	return on	ritẽ.ʔẽ	ẽ	ẽ	0	2

646.	J6	of October	ovᵘ. ʔokᵘtobɐ	vᵘ	o	0	2
647.	J6	much is	mɐtʃiz	tʃ	i	1	
648.	J6	fares are	fɐɐ. ʔɐ:	ɐ	ɐ	0	2
649.	J6	cheaper if	tʃipɐ. ʔifᵘ	ɐ	i	0	2
650.	J6	if you	ifᵘ. ʔiu	fᵘ	i	0	2
651.	J6	stay over	ste. ʔovɐ	e	o	0	2
652.	J6	but unfortunately	bɐt. ʔɐnfortʃunetᵘli	t	ɐ	0	2
653.	J6	unfortunately I've	ɐnfortʃunetᵘli. ʔɐvᵘ	i	ɐ	0	2
654.	J6	I've already	ɐvᵘ. ʔorɐri	vᵘ	o	0	2
655.	J6	already arranged	orɐri. ʔɐlendᵘsᵘ	i	ɐ	0	2
656.	J6	So I'll	so. ʔɐilʷ	o	ɐi	0	2
657.	J6	the extra	ðɐ. ʔekⁱstʀɐ	ɐ	e	0	2
658.	J6	time of	tɐim. ʔovᵘ	m	o	0	2
659.	J6	day would	de. ʔud	e	u	0	2
660.	J6	would you	udʒu	d	y	1	
661.	J6	morning or	moniŋ. ʔoɐ	ŋ	o	0	2
662.	J6	or afternoon	oɐ. ʔɐftɐnū	ɐ	ɐ	0	2
663.	J6	because I	bikozᵘ. ʔɐi	zᵘ	ɐi	0	2
664.	J6	by early	bɐi. ʔɐli	ɐi	ɐ	0	2
665.	J6	early evening	ɐli. ʔiveniŋs	i	i	0	2
666.	J6	there a	zɐɐ. ʔɐ	e	ɐ	0	2
667.	J6	and you'll	ɐnyul	n	y	1	
668.	J6	you'll also	yul. ʔɐlso	l	ɐ	0	2
669.	J6	see a	siɐ	i	ɐ	1	

110

670.	J6	show a	ʃo.ʔæ	o	æ	0	2
671.	J6	feature on	fyutʃæ.ʔõ	æ	õ	0	2
672.	J6	going east	goiŋ.ʔist	ŋ	i	0	2
673.	J6	film is	firᵘm.ʔis	m	i	0	2
674.	J6	think it's	θiŋkᵘ.ʔits	kᵘ	i	0	2
675.	J6	it's a	itsæ	s	æ	1	
676.	J6	going west	goiŋwest	ŋ	w	1	
677.	J6	west is	west.ʔidzᵘ	t	i	0	2
678.	J6	that's an	dzets.ʔẽ	s	ẽ	0	2
679.	J6	an adventure	ẽ.ʔedæbentʃæ	ẽ	æ	0	2
680.	J6	story about	stori.ʔæbæᵘt	i	æ	0	2
681.	J6	about a	æbæᵘtæ	t	æ	1	
682.	J6	raises a	leizæ	z	æ	1	
683.	J6	a wolf	æ.ʔuf	æ	u	0	2
684.	J6	but what's	bætᵘ.ʔuæts	tᵘ	u	0	2
685.	J6	hundred and	hendʀed.ʔenᵘ	d	æ	0	2
686.	J6	than I	θẽ.ʔæ	ẽ	æ	0	2
687.	J6	I expected	æ.ʔekspekted	æ	e	0	2
688.	J7	can I	kenæi	n	æi	1	
689.	J7	help you	heopiu	p	i	1	
690.	J7	I want	æiwent	æi	w	1	
691.	J7	Chicago on	ʃikægoõ	o	õ	1	
692.	J7	on Wednesday	õwenzdei	õ	w		
693.	J7	seventh and	sevens.ʔendᵃ	s	æ	0	2

694.	J7	return on	riteõ	ē	õ	1	
695.	J7	of October	of.ʔoktobər	f	o	0	2
696.	J7	much is	mɐtʃi	tʃ	i	1	
697.	J7	fares are	ferɐr	r	ɐ	1	
698.	J7	cheaper if	tʃipər.ʔifᵘ	r	i	0	2
699.	J7	if you	ifᵘiu	fᵘ	i	1	
700.	J7	stay over	ste.ʔovər	e	o	0	2
701.	J7	but unfortunately	bɐt.ʔɐnfortʃunetri	t	ɐ	0	2
702.	J7	unfortunately I've	ɐnfortʃunetri.ʔɐiv	i	ɐi	0	2
703.	J7	I've already	ɐiv.ʔolredi	v	o	0	2
704.	J7	already arranged	olredi.ʔɐlenz	i	ɐ	0	2
705.	J7	So I'll	so.ʔɐilʷ	o	ɐ	0	2
706.	J7	the extra	ðɐ.ʔekstrɐ	ɐ	e	0	2
707.	J7	time of	tɐimov	m	o	1	
708.	J7	day would	de.ʔut	e	u	0	2
709.	J7	would you	udʒu	d	y	1	
710.	J7	morning or	moɐniŋ.ʔor	ŋ	o	0	2
711.	J7	or afternoon	or.ʔɐfternū	r	ɐ	0	2
712.	J7	because I	bikɐs.ʔɐi	s	ɐi	0	2
713.	J7	by early	bɐi.ʔɐli	ɐi	ɐ	0	2
714.	J7	early evening	ɐli.ʔivenī	i	i	0	2
715.	J7	there a	ðeɐ	e	ɐ	1	
716.	J7	and you'll	endᵃyul	dᵃ	y	1	
717.	J7	you'll also	yul.ʔolso	l	o	0	2

112

718.	J7	see a	siɐ	i	ɐ	1	
719.	J7	show a	ʃo.ʔɐ	o	ɐ	0	2
720.	J7	feature on	fyutʃɐ.ʔõ	ɐ	õ	0	2
721.	J7	going east	goiŋ.ʔist	ŋ	i	0	2
722.	J7	film is	film.ʔis	m	i	0	2
723.	J7	think it's	θiŋkits	k	i	1	
724.	J7	it's a	itsɐ	s	ɐ	1	
725.	J7	going west	goiŋ.ʔwest	ŋ	w	0	2
726.	J7	west is	westᵘ.ʔiz	tᵘ	i	0	2
727.	J7	that's an	ðetsɐ	s	ɐ	1	
728.	J7	an adventure	ɐnɐventʃɐ	n	ɐ	1	
729.	J7	story about	storiyɐbɐut	y	ɐ	1	
730.	J7	about a	ɐbɐutɐ	t	ɐ	1	
731.	J7	raises a	lɐizɐ	z	ɐ	1	
732.	J7	a wolf	ɐ.ʔuf	ɐ	u	0	2
733.	J7	but what's	(Speaker drops this pair)	-	-	-	-
734.	J7	hundred and	hɐndred.ʔɐn	d	ɐ	0	2
735.	J7	than I	dẽ.ʔɐi	ẽ	ɐi	0	2
736.	J7	I expected	ɐi.ʔekspekted	ɐi	ɐi	0	2
737.	J8	can I	kenɐi	n	ɐi	1	
738.	J8	help you	heopiu	p	i	1	
739.	J8	I want	ɐiwent	ɐi	w	1	
740.	J8	Chicago on	sⁱkẽgõ.ʔõ	õ	õ	0	2
741.	J8	on Wednesday	õ.wẽnsde	õ	w	0	2

113

742.	J8	seventh and	sevenθ.ʔēn	θ	ē	0	2
743.	J8	return on	ritē.ʔō	ē	ō	0	2
744.	J8	of October	ō.ʔoktobər	ō	o	0	2
745.	J8	much is	metʃiz	tʃ	i	1	
746.	J8	fares are	ferzɐ	z	ɐ	1	
747.	J8	cheaper if	tʃipɐ.ʔifᵘ	ɐ	i	0	2
748.	J8	if you	ifiu	f	i	1	
749.	J8	stay over	ste.ʔovɐ	e	o	0	2
750.	J8	but unfortunately	bɐdɐnfortʃœnetli	d	ɐ	1	
751.	J8	unfortunately I've	ɐnfortʃœnetli.ʔɐivᵘ	i	ɐi	0	2
752.	J8	I've already	ɐivoledi	v	o	1	
753.	J8	already arranged	oledi.ʔɐrens	i	ɐ	0	2
754.	J8	So I'll	so.ʔɐilʷ	o	ɐi	0	2
755.	J8	the extra	dɐ.ʔekstrɐ	ɐ	e	0	2
756.	J8	time of	tɐĭo	ĭ	o	1	
757.	J8	day would	de.ʔudʒ	e	u	0	2
758.	J8	would you	udʒu	dʒ	u	1	
759.	J8	morning or	moniɳor	ɳ	o	1	
760.	J8	or afternoon	orɐftɐnū	r	ɐ	1	
761.	J8	because I	bikozɐ	z	ɐ	1	
762.	J8	by early	bɐi.ʔɐli	ɐi	ɐ	0	2
763.	J8	early evening	ɐli.ʔivɐnĭ	i	i	0	2
764.	J8	there a	ðeɐ	e	ɐ	1	
765.	J8	and you'll	ɐnⁱyul	n	y	1	

766.	J8	you'll also	yul.ʔolso	l	o	0	2
767.	J8	see a	siɐ	i	ɐ	1	
768.	J8	show a	ʃowɐ	w	ɐ	1	
769.	J8	feature on	fitʃər.ʔõ	r	õ	0	2
770.	J8	going east	goiɲist	ŋ	i	1	
771.	J8	film is	filmis	m	i	1	
772.	J8	think it's	θiŋkits	k	i	1	
773.	J8	it's a	itsɐ	s	ɐ	1	
774.	J8	going west	goiŋ.west	ŋ	w	1	
775.	J8	west is	westiz	t	i	1	
776.	J8	that's an	dɐtsē̃	s	ē̃	1	
777.	J8	an adventure	ē̃.ʔɐdᵘventʃər	ē̃	ɐ	0	2
778.	J8	story about	stori.ʔɐbɐut	i	ɐ	0	2
779.	J8	about a	ɐbɐutɐ	t	ɐ	1	
780.	J8	raises a	rɐizɐzɐ	z	ɐ	1	
781.	J8	a wolf	ɐ.ʔuf	ɐ	w	0	2
782.	J8	but what's	bɐ.ʔwɐts	ɐ	w	0	2
783.	J8	hundred and	hɐndred.ʔɐn	d	ɐ	0	2
784.	J8	than I	dē̃.ʔɐi	ē̃	ɐi	0	2
785.	J8	I expected	ɐyekspektet	y	e	1	
786.	J9	can I	kenɐi	n	ɐi	1	
787.	J9	help you	heopiu	p	i	1	
788.	J9	I want	eiwɐnt	ei	w	1	
789.	J9	Chicago on	sikɐgo.ʔon	o	o	0	2

790.	J9	on Wednesday	on.wenzdei	n	w	1	
791.	J9	seventh and	sevenθ.ʔɐn	θ	ɐ	0	
792.	J9	return on	ritɐŋ.ʔõ	ŋ	õ	0	2
793.	J9	of October	of.ʔokᵘtobər	f	o	0	2
794.	J9	much is	mɐtʃi	tʃ	i	0	2
795.	J9	fares are	fers.ʔɐ	s	ɐ	0	2
796.	J9	cheaper if	tʃipər.ʔifᵘ	r	i	0	2
797.	J9	if you	ifyu	f	y	1	
798.	J9	stay over	ste.ʔover	e	o	0	2
799.	J9	but unfortunately	bɐt.ʔɐnfortʃœnetᵘlʷi	t	ɐ	0	2
800.	J9	unfortunately I've	ɐnfortʃœnetᵘlʷi.ʔɐvᵘ	i	ɐ	0	2
801.	J9	I've already	ɐvᵘ.ʔolredi	v	o	0	2
802.	J9	already arranged	olredi.ʔɐrentst	i	ɐ	0	2
803.	J9	So I'll	so.ʔɐilʷ	o	ɐi	0	2
804.	J9	the extra	dɐ.ʔekstrɐ	ɐ	e	0	2
805.	J9	time of	tɐim.ʔov	m	o	0	2
806.	J9	day would	de.ʔut	e	u	0	2
807.	J9	would you	udʒu	dʒ	u	1	
808.	J9	morning or	moɐniŋ.ʔoɐ	ŋ	o	0	2
809.	J9	or afternoon	oɐ.ʔɐftɐnū	ɐ	ɐ	0	2
810.	J9	because I	bikozɐi	z	ɐi	1	
811.	J9	by early	bɐi.ʔɐli	ɐ	ɐ	0	2
812.	J9	early evening	ɐli.ʔivɐnī	i	i	0	2
813.	J9	there a	de.ʔɐ	e	ɐ	0	2

116

814.	J9	and you'll	ɐnyul	n	y	1	
815.	J9	you'll also	yul.ʔolso	l	o	0	2
816.	J9	see a	siɐ	i	ɐ	1	
817.	J9	show a	ʃo.ʔɐ	o	ɐ	0	2
818.	J9	feature on	fyutʃɐ.ʔon	ɐ	o	0	2
819.	J9	going east	goiŋ.ʔist	ŋ	i	0	2
820.	J9	film is	film.ʔis	m	i	0	2
821.	J9	think it's	θiŋkᵘ.ʔits	k	i	0	2
822.	J9	it's a	itsɐ	s	ɐ	0	2
823.	J9	going west	goiŋwest	ŋ	w	1	
824.	J9	west is	west.ʔiz	t	i	0	2
825.	J9	that's an	detsɐn	s	ɐ	1	
826.	J9	an adventure	ɐnɐbentʃɐ	n	ɐ	1	
827.	J9	story about	stori.ʔɐbɐud	i	ɐ	0	2
828.	J9	about a	ɐbɐudɐ	d	ɐ	1	
829.	J9	raises a	lezɐzɐ	z	ɐ	1	
830.	J9	a wolf	ɐ.ʔuf	ɐ	u	0	2
831.	J9	but what's	bɐtᵘwets	t	w	1	
832.	J9	hundred and	hɐndred.ʔɐn	d	ɐ	0	2
833.	J9	than I	dẽ.ʔɐi	ẽ	ɐi	0	2
834.	J9	I expected	ɐi.ʔekspekted	ɐi	e	0	2
835.	J11	can I	kenɐi	n	ɐi	1	
836.	J11	help you	heopiu	p	i	1	
837.	J11	I want	ɐiwent	ɐi	w	1	

117

838.	J11	Chicago on	sikɐgo.ʔō	o	ō	0	2
839.	J11	on Wednesday	ōwensde	ō	w	1	
840.	J11	seventh and	sevenθɐn	θ	ɐ	1	
841.	J11	return on	ritenē	n	ē	1	
842.	J11	of October	ɐv.ʔektɐbər	v	ɐ	0	2
843.	J11	much is	metʃ.ʔi	tʃ	i	0	2
844.	J11	fares are	ferzər	z	ə	1	
845.	J11	cheaper if	tʃipərif	r	i	1	
846.	J11	if you	ifyu	f	y	1	
847.	J11	stay over	ste.ʔovər	e	o	1	
848.	J11	but unfortunately	beʔ.ʔenfortʃunetli	ʔ	ɐ	0	2
849.	J11	unfortunately I've	ɐnfortʃunetli.ʔeivᵘ	i	ɐi	0	2
850.	J11	I've already	ɐivᵘ.ʔeledi	vᵘ	ɐ	0	2
851.	J11	already arranged	oledi.ʔelenʃt	i	ɐ	0	2
852.	J11	So I'll	so.ʔeilʷ	o	ɐi	0	2
853.	J11	the extra	ðe.ʔekstrɐ	e	e	0	2
854.	J11	time of	tɐim.ʔev	m	ɐ	0	2
855.	J11	day would	de.ʔudʒ	e	u	0	2
856.	J11	would you	udʒu	d	y	1	
857.	J11	morning or	moɐniŋ.ʔo	ŋ	o	0	2
858.	J11	or afternoon	o.ʔæftɐnū	o	æ	1	2
859.	J11	because I	bikɐzɐi	z	ɐi	1	
860.	J11	by early	bɐi.ʔeli	ɐi	ɐ	0	2
861.	J11	early evening	ɐli.ʔivɐnī	i	i	0	2

862.	J11	there a	ðeɐ	e	ɐ	1	
863.	J11	and you'll	ɐn.ʔiu	n	i	0	2
864.	J11	you'll also	iu.ʔɐlso	i	ɐ	0	2
865.	J11	see a	siɐ	i	ɐ	1	
866.	J11	show a	ʃo.ʔɐ	o	ɐ	0	2
867.	J11	feature on	fitʃɐ.ʔɐn	ɐ	ɐ	0	2
868.	J11	going east	goiŋ.ʔist	ŋ	i	0	2
869.	J11	film is	film.ʔis	m	i	0	2
870.	J11	think it's	θiŋkits	k	i	1	
871.	J11	it's a	itsɐ	s	ɐ	1	
872.	J11	going west	goiŋ.west	ŋ	w	1	
873.	J11	west is	west.ʔiz	t	i	0	2
874.	J11	that's an	θɐtɐ	t	ɐ	1	
875.	J11	an adventure	ɐ.ʔɐdventʃər	n	ɐ	0	2
876.	J11	story about	storiyɐbɐut	y	ɐ	1	
877.	J11	about a	(Drops article)	-	-	-	-
878.	J11	raises a	lɐizɐ	z	ɐ	1	
879.	J11	a wolf	ɐ.ʔof	ɐ	u	0	2
880.	J11	but what's	bɐʔ.ʔuɐt	ʔ	ɐ	0	2
881.	J11	hundred and	hɐndred.ʔɐn	d	ɐ	0	2
882.	J11	than I	dæ̃.ʔɐi	n	ɐi	0	2
883.	J11	I expected	ɐikspekted	ɐi	e	1	
884.	J12	can I	kenɐi	n	ɐi	1	
885.	J12	help you	heopiu	p	i	1	

119

886.	J12	I want	ɐiwɐnt	ɐi	w	1	
887.	J12	Chicago on	sikɐgoō	o	ō	1	
888.	J12	on Wednesday	ōwenzdei	ō	w	1	
889.	J12	seventh and	sevenθ.ʔɐn	θ	ɐ	0	2
890.	J12	return on	ritɐnō	n	ō	1	
891.	J12	of October	ovoktobər	v	o	1	
892.	J12	much is	mɐtʃi	tʃ	i	1	
893.	J12	fares are	ferzər	z	ə	1	
894.	J12	cheaper if	tʃipər.ʔifᵘ	r	i	0	2
895.	J12	if you	ifᵘiu	fᵘ	i	0	2
896.	J12	stay over	steyovər	y	o	1	
897.	J12	but unfortunately	bedenfortʃuneitᵘli	d	ɐ	1	
898.	J12	unfortunately I've	enfortʃuneitᵘli.ʔɐiv	i	ɐi	0	2
899.	J12	I've already	ɐivolredi	v	o	1	
900.	J12	already arranged	olrediyɐreintʃt	y	ɐ	1	
901.	J12	so I'll	so.ʔɐilʷ	o	ɐi	0	2
902.	J12	the extra	ðiyekstrɐ	y	e	1	
903.	J12	time of	tɐimov	m	o	1	
904.	J12	day would	de.ʔud	e	u	0	2
905.	J12	would you	udʒu	d	y	1	
906.	J12	morning or	morniŋ.ʔor	ŋ	o	0	2
907.	J12	or afternoon	orɐftɐnü	r	ɐ	1	
908.	J12	because I	bikozɐi	z	ɐi	1	
909.	J12	by early	bɐyɐrli	y	ɐ	1	

910.	J12	early evening	ɐrli.ʔivᵘniŋ	i	i	0	2
911.	J12	there a	ðeɐ	e	ɐ	1	
912.	J12	and you'll	ɐnyul	n	y	1	
913.	J12	you'll also	yulɐlso	l	ɐ	1	
914.	J12	see a	siyɐ	y	ɐ	1	
915.	J12	show a	ʃoɐ	o	ɐ	1	
916.	J12	feature on	futʃəron	r	o	1	
917.	J12	going east	goiŋ.ʔist	ŋ	i	0	2
918.	J12	film is	filmis	m	i	1	
919.	J12	think it's	θiŋkits	k	i	1	
920.	J12	it's a	itsɐ	s	ɐ	1	
921.	J12	going west	goiŋwest	ŋ	w	1	
922.	J12	west is	westiz	t	i	1	
923.	J12	that's an	ðetsɐn	s	e	1	
924.	J12	an adventure	enɐdventʃər	n	ɐ	1	
925.	J12	story about	storiyɐbɐut	y	ɐ	1	
926.	J12	about a	ɐbɐutɐ	t	ɐ	1	
927.	J12	raises a	reizizɐ	z	ɐ	1	
928.	J12	a wolf	ɐwɐlf	ɐ	w	1	
929.	J12	but what's	bɐt.wɐt	t	w	0	
930.	J12	hundred and	hɐndredɐn	d	ɐ	1	
931.	J12	than I	denɐi	n	ɐi	1	
932.	J12	I expected	ɐyekspekted	y	e	1	
933.	J13	can I	kenɐi	n	ɐi	1	

934.	J13	help you	heopiu	p	i	1	
935.	J13	I want	ɐiwɛnt	ɐi	w	1	
936.	J13	Chicago on	ʃikɐgowē	w	ē	1	
937.	J13	on Wednesday	ēwenzdei	ē	w	1	
938.	J13	seventh and	sevens.ʔɐn	s	ɐ	0	2
939.	J13	return on	ritɚnō	n	ō	1	
940.	J13	of October	ɐvɛktobɚ	v	ɐ	1	
941.	J13	much is	mɐtʃi	tʃ	i	1	
942.	J13	fares are	ferzɚ	z	ɐ	1	
943.	J13	cheaper if	tʃipɚ.ʔif	r	i	0	2
944.	J13	if you	ifyu	f	y	1	
945.	J13	stay over	ste.ʔovɚ	e	o	0	2
946.	J13	but unfortunately	bɐɐnfortʃuetwi	ɐ	ɐ	1	
947.	J13	unfortunately I've	ɐnfortʃuetwi.ʔɐiv	i	ɐi	0	2
948.	J13	I've already	ɐv.ʔolredi	v	o	0	2
949.	J13	already arranged	olredi.ʔɐlents	i	ɐ	0	2
950.	J13	So I'll	so.ʔɐil	o	ɐi	0	2
951.	J13	the extra	de.ʔekstrɐ	e	e	0	2
952.	J13	time of	tɐimov	m	o	1	
953.	J13	day would	de.ʔud	e	u	0	2
954.	J13	would you	udʒu	d	y	1	
955.	J13	morning or	moɐniŋor	ŋ	o	1	
956.	J13	or afternoon	orɐftɐnū	r	ɐ	1	
957.	J13	because I	bikɐzɐi	z	ɐi	1	

958.	J13	by early	bɛi.ʔɛri	ɛi	ɐ	0	2
959.	J13	early evening	ɐriyivɛnĭ	y	i	1	
960.	J13	there a	zeɐ	e	ɐ	1	
961.	J13	and you'll	ɐnyul	n	y	1	
962.	J13	you'll also	yul.ʔɛlso	l	ɐ	0	2
963.	J13	see a	siɐ	i	ɐ	1	
964.	J13	show a	ʃoɐ	o	ɐ	1	
965.	J13	feature on	fitʃɐrɐn	r	ɐ	1	
966.	J13	going east	goiŋ.ʔist	ŋ	i	0	2
967.	J13	film is	filmis	m	i	1	
968.	J13	think it's	siŋkits	k	i	1	
969.	J13	it's a	itsɐ	s	ɐ	1	
970.	J13	going west	goiŋwest	ŋ	w	1	
971.	J13	west is	westis	t	i	1	
972.	J13	that's an	zetɐn	t	ɐ	1	
973.	J13	an adventure	ɐnɐdventʃər	n	ɐ	1	
974.	J13	story about	storiɐbɐut	i	ɐ	1	
975.	J13	about a	ɐbɐut.ʔɐ	t	ɐ	0	2
976.	J13	raises a	rɛizeɐ	z	ɐ	1	
977.	J13	a wolf	ɐwof	ɐ	w	1	
978.	J13	but what's	bɐt.ʔwɐz	t	w	0	2
979.	J13	hundred and	hɛ̆red.ʔɛ̆	d	ɛ̆	0	2
980.	J13	than I	denɐi	n	ɐi	1	
981.	J13	I expected	ɐyekspekted	y	e	1	

123

982.	J14	can I	kenɐi	n	ɐi	1	
983.	J14	help you	heopiu	p	i	1	
984.	J14	I want	ɐiwɐnt	ɐi	w	1	
985.	J14	Chicago on	sikego.ʔon	o	o	0	2
986.	J14	on Wednesday	õwenzdei	õ	w	1	
987.	J14	seventh and	sevensɐndɐ	s	ɐ	1	
988.	J14	return on	ritē̃.ʔõ	ē	õ	0	2
989.	J14	of October	ovoktobər	v	o	1	
990.	J14	much is	mɐtʃiz	tʃ	i	1	
991.	J14	fares are	fers.ʔɐr	s	ɐ	0	2
992.	J14	cheaper if	tʃipər.ʔifᵘ	r	i	0	2
993.	J14	if you	ifᵘyu	f	y	1	
994.	J14	stay over	steyovər	y	o	1	
995.	J14	but unfortunately	bɐtᵘ.ʔɐnfortʃœnetwi	t	ɐ	0	2
996.	J14	unfortunately I've	ɐnfortʃœnetwi.ʔɐiv	i	ɐi	0	2
997.	J14	I've already	ɐvoledi	v	o	1	
998.	J14	already arranged	olediyɐlenʒt	y	ɐ	1	
999.	J14	So I'll	so.ʔɐil	o	ɐi	0	2
1000.	J14	the extra	zɐ.ʔekstrɐ	ɐ	e	0	2
1001.	J14	time of	tɐim.ʔov	m	o	0	2
1002.	J14	day would	de.ʔudʒ	e	u	0	2
1003.	J14	would you	udʒu	d	y	1	
1004.	J14	morning or	moniŋ.ʔor	ŋ	o	0	2
1005.	J14	or afternoon	orɐftərnũ	r	ɐ	1	

124

1006.	J14	because I	bikosᵘ.ʔɐi	s	ɐi	0	2
1007.	J14	by early	bɐi.ʔɜrli	ɐi	ɜr	0	2
1008.	J14	early evening	ɜrli.ʔivenī	i	i	0	2
1009.	J14	there a	zeɐ	e	ɐ	1	
1010.	J14	and you'll	ɐnyul	n	y	1	
1011.	J14	you'll also	iul.ʔɐlso	l	ɐ	0	2
1012.	J14	see a	siɐ	i	ɐ	1	
1013.	J14	show a	ʃoɐ	o	ɐ	1	
1014.	J14	feature on	fitʃɜr.ʔon	r	o	0	2
1015.	J14	going east	(Speaker drops pair)	-	-	-	-
1016.	J14	film is	(Speaker drops pair)	-	-	-	-
1017.	J14	think it's	(Speaker drops pair)	-	-	-	-
1018.	J14	it's a	(Speaker drops pair)	-	-	-	-
1019.	J14	going west	goiŋwest	ŋ	w	1	
1020.	J14	west is	westiz	t	i	1	
1021.	J14	that's an	dzɐtsɐn	s	ē	1	
1022.	J14	an adventure	ɐnɐdᵘventʃɜr	ē	ɐ	1	
1023.	J14	story about	storiɐbɐut	i	ɐ	1	
1024.	J14	about a	ɐbɐutɐ	t	ɐ	1	
1025.	J14	raises a	lɐizɐ	z	ɐ	1	
1026.	J14	a wolf	ɐwelf	ɐ	w	1	
1027.	J14	but what's	bɐdᵘwɐts	d	u	1	
1028.	J14	hundred and	hɐndredɐn	d	ɐ	1	
1029.	J14	than I	ðē.ʔɐi	ē	ɐi	0	2

1030.	J14	I expected	ɐyekspekted	y	e	1	
1031.	J15	can I	kenɐi	n	ɐi	1	
1032.	J15	help you	helpyu	p	y	1	
1033.	J15	I want	ɐiwɐnt	ɐi	w	1	
1034.	J15	Chicago on	ʃikɐgo.ʔɐn	o	ɐ	0	2
1035.	J15	on Wednesday	ɐnwenzdei	n	w	1	
1036.	J15	seventh and	sevenθɘn	θ	ɘ	1	
1037.	J15	return on	ritɘrnɐn	n	ɐ	1	
1038.	J15	of October	ɐvɐktobɘr	v	ɐ	1	
1039.	J15	much is	mɐʃi	ʃ	i	1	
1040.	J15	fares are	ferzɐr	z	ɐ	1	
1041.	J15	cheaper if	tʃipɘr.ʔif	r	i	0	2
1042.	J15	if you	ifyu	f	y	1	
1043.	J15	stay over	steyovɘr	y	o	1	
1044.	J15	but unfortunately	bɐt.ʔɐnfortʃenetli	t	ɐ	0	2
1045.	J15	unfortunately I've	ɐnfortʃenetli.ʔɐiv	i	ɐi	0	2
1046.	J15	I've already	ɐiv.ʔolredi	v	o	0	2
1047.	J15	already arranged	olredi.ʔɐrentʃt	i	ɐ	0	2
1048.	J15	So I'll	so.ʔɐiw°l	o	ɐi	0	2
1049.	J15	the extra	ðɐ.ʔekstrɐ	ɐ	e	0	2
1050.	J15	time of	tɐimov	m	o	1	
1051.	J15	day would	ðewud	e	w	1	
1052.	J15	would you	wudʒu	d	y	1	
1053.	J15	morning or	morniŋor	ŋ	o	1	

1054.	J15	or afternoon	orɛftərnun	r	ɐ	1	
1055.	J15	because I	bikʌzɐi	z	ɐi	1	
1056.	J15	by early	bɐi.ʔɚrli	ɐi	ɐ	0	2
1057.	J15	early evening	ɚrli.ʔivniŋ	i	i	0	2
1058.	J15	there a	derɐ	r	ɐ	1	
1059.	J15	and you'll	ɐnyul	n	y	1	
1060.	J15	you'll also	yul.ʔolso	l	o	0	2
1061.	J15	see a	siɐ	i	ɐ	1	
1062.	J15	show a	ʃoɐ	o	ɐ	1	
1063.	J15	feature on	fyutʃər.ʔon	r	o	0	2
1064.	J15	going east	goiŋ.ʔist	ŋ	i	0	2
1065.	J15	film is	filmiz	m	i	1	
1066.	J15	think it's	θiŋkits	k	i	1	
1067.	J15	it's a	itsɐ	s	ɐ	1	
1068.	J15	going west	goiŋwest	ŋ	w	1	
1069.	J15	west is	west.ʔiz	t	i	0	2
1070.	J15	that's an	ðɐtsɐn	s	ɐ	1	
1071.	J15	an adventure	ɐnɛdventʃər	n	ɐ	1	
1072.	J15	story about	storiɐbɐud	i	ə	1	
1073.	J15	about a	əbɐudə	d	ə	1	
1074.	J15	raises a	reizəzə	z	ə	1	
1075.	J15	a wolf	əwulf	ə	w	1	
1076.	J15	but what's	bɐtᵘwɐt	t	u	1	
1077.	J15	hundred and	hɐndredɐn	d	ɐ	1	

| 1078. | J15 | than I | ðenei | n | ei | l | |
| 1079. | J15 | I expected | eiyekspektəd | y | e | l | |

Due to the lengthy nature of this appendix (22 pages), the legend will preface the data in order to assist in the reading of the following transcriptions. The numbers in columns seven and eight were used to facilitate Excel calculations.

Some transcriptions in column four show a period (" . ") in order to indicate a temporal pause where no sound has been produced. Also, there will be some transcriptions with a colon (" : ") in column four; this indicates that the vowel or consonant has been lengthened. These symbols are in keeping with IPA transcription conventions.

Column seven will show either "0," which means disconnected, or "1" which means connected. Column eight may sometimes show a "2," which means that a glottal was inserted during disconnection.

Note that the transcriptions are given for four native speakers of English in order to give a baseline. The transcriptions of the nine Japanese speakers of English are provided for pre- and post-test conditions. The number of word pairs that were to be linked vary for each speaker.

NSE Baseline Speech Samples

Datum Number	Participant Code	Word Pairs – C(G)V or V(G)V	Transcription	Final sound	Initial sound	Connected?	Glottal?
1.	N1	well on	wɛl.ʔɔn	l	ɔ	0	2
2.	N1	on or[28]	ɔn.ʔɔə	n	ɔ	0	2
3.	N1	or about	ʔɔəəbawt	ə	ə	1	
4.	N1	'cause I	kɔzay	z	ay	1	
5.	N1	did a	dɪdə	d	ə	1	
6.	N1	lot of	laɾə	t	ə	1	

---

[28] Please note this native speaker of English is of Afro-Hispanic origin and lives in New York. His speech moves freely between rhotic and non-rhotic varieties of English.

7.	N1	you wanna	yəwanə	ə	w	1	
8.	N1	know everything	nowɛvriyθɪŋ	ow	ɛ	0	
9.	N1	that I	ðəɾay	t	ay	1	
10.	N1	well um	wɛl.ʔəvm	l	ə	0	2
11.	N1	first I	fərst.ʔay	t	ay	0	2
12.	N1	with a	wəθə	θ	ə	1	
13.	N1	and uh	æandə	d	ə	1	
14.	N1	uh afterwards	ə.ʔæftəwɔədz	ə	æ	0	2
15.	N1	afterwards uh	æftəwɔədzə	z	ə	1	
16.	N1	went uh	wɛntə	t	ə	1	
17.	N1	for a	fɔəə	ə	ə	1	
18.	N1	couple of	kʌplə	l	ə	1	
19.	N1	drinks at the	drɪnksəʔðə	s	ə	1	2
20.	N1	be a	biyə	y	ə	1	
21.	N1	have uh	hævə	v	ə	1	
22.	N1	uh a	ə.ʔəv	ə	ə	0	2
23.	N1	lounging area	lawndʒɪŋɛriyə	ŋ	ɛ	1	
24.	N2	ok what	owkey.wʌt˥	ey	w	0	
25.	N2	did I	dɪday	d	ay	1	
26.	N2	Well I	wɛlːay	l	ay	1	
27.	N2	and as	ænd.ʔæz	d	æ	0	2
28.	N2	as I	æz.ʔay	z	ay	0	2
29.	N2	class it	klæsɪt	s	ɪ	1	
30.	N2	so I	sow.ʔay	ow	ay	0	2

31.	N2	that I	ðæɾay	t	ay	1	
32.	N2	get out	gɛɾawɾ	t	aw	1	
33.	N2	out of	awɾəv	t	ə	1	
34.	N2	rain at	reynæt	n	æ	1	
35.	N2	same you	seym.yuw	m	y	0	
36.	N2	with one	wɪθwʌn	θ	w	1	
37.	N2	the uh	ðə.ʔə	ə	ə	0	2
38.	N2	pharmacy and	farməsiyən	y	ə	1	
39.	N2	spent extra	spɛnt.ʔɛkstrə	t	ɛ	0	2
40.	N3	couple of	kʌpləv	l	ə	1	
41.	N3	because I	biykəzay	z	ay	1	
42.	N3	home uh	howm.ʔə	m	ə	0	2
43.	N3	uh earlier	ə.ʔərliyər	ə	ə	0	2
44.	N3	from a	frəm.ʔə	m	ə	0	2
45.	N3	stay overseas	steyowvərsiyz	y	ow	1	
46.	N3	went overseas	wɛntowvərsiyz	t	ow	1	
47.	N3	overseas uh	owvərsiyzə	z	ə	1	
48.	N3	week of	wiykəv	k	ə	1	
49.	N3	was in	wəzɪn	z	ɪ	1	
50.	N3	for a	fɔɾə	r	ə	1	
51.	N3	week and	wiykən	k	ə	1	
52.	N3	then I	ðɛnay	n	ay	1	
53.	N3	was in	wəzɪn	z	ɪ	1	
54.	N3	in England	ɪn.ʔɪŋglənd	n	ɪ	0	2

55.	N3	weeks I	wiyksay	s	ay	1	
56.	N3	for a	fɔrə	r	ə	1	
57.	N3	month in	mʌnθɪn	θ	ɪ	1	
58.	N3	and when	ənwɛn	n	w	1	
59.	N3	when I	wɛnay	n	ay	1	
60.	N3	home um	howm.ʔəm	m	ə	0	2
61.	N3	course I	kɔrsay	s	ay	1	
62.	N3	had a	hædə	d	ə	1	
63.	N3	lot of	larəv	r	ə	1	
64.	N3	catch up	kætʃəp	tʃ	ə	1	
65.	N3	up on	əpan	p	ə	1	
66.	N3	on and	anən	n	ə	1	
67.	N3	and uh	ændə	d	ə	1	
68.	N3	uh yesterday	ə.yɛstərdey	ə	y	0	
69.	N3	yesterday in	yɛstərdeyɪn	ey	ɪ	1	
70.	N4	night I	nayɾay	t	ay	1	
71.	N4	gym and	dʒɪmən	m	ə	1	
72.	N4	take out	teykawt˥	k	a	1	
73.	N4	out Indian	awt˥.ʔɪniyən	t	ɪ	0	2
74.	N4	um it's	əm.ʔɪts	m	ɪ	0	2
75.	N4	it's a	ɪtsə	s	ə	1	
76.	N4	place on	pleysan	s	a	1	
77.	N4	Prince Arthur	prɪnsarθər	s	a	1	
78.	N4	Arthur and	arθərən	r	ə	1	

79.	N4	chicken with	tʃɪkən.wɪθ	n	w	0	
80.	N4	yeah and	yæ.ʔænd	æ	æ	0	2
81.	N4	and I	ænday	d	a	1	
82.	N4	I I	ay.ʔay	ay	ay	0	2
83.	N4	I was	aywəz	ay	w	1	
84.	N4	so I	soway	w	ay	1	
85.	N4	ate it	eyɾɪt	t	ɪ	1	
86.	N4	then I	ðɛnay	n	ay	1	
87.	N4	lots of	latsə	s	ə	1	

JSE Pre-Test Speech Samples

88.	J6	school uh	skul:.ʔɐ	l	ɐ	0	2
89.	J6	had a	hɐdɐ	d	ɐ	1	
90.	J6	and uh	ɐndɐ	d	ɐ	1	
91.	J6	ha I	hɐ.ʔɐy	ɐ	ɐi	0	2
92.	J6	got a	got.ʔɐ	t	ɐ	0	2
93.	J6	and uh	ɐndɐ	d	ɐ	1	
94.	J6	one hour	wɛnɐwɐ	n	ɐ	1	
95.	J6	hour and	ɐwɐ.ʔɐ̄	ɐ	ɐ̄	0	2
96.	J6	then I	zɐ̄.ʔɐi	ɐ̄	ɐi	0	2
97.	J6	no I	no.ʔɐi	o	ɐi	0	2
98.	J6	it's uh	itθɐ	θ	ɐ	1	
99.	J7	yesterday I	yestɐde.ʔɐi	e	ɐi	0	2
100.	J7	I went	ɐiwɐ̄	ɐi	w	1	

101.	J7	went uh	wentɐ	t	ɐ	1	
102.	J7	two of	tuovᵘ	u	o	1	
103.	J7	friends and	frenz.ʔɐn	z	ɐ	0	2
104.	J7	and uh	ɐnɐ	n	ɐ	1	
105.	J7	uh we	ɐ.wi	ɐ	w	0	
106.	J7	we went	wi.wē	i	w	0	
107.	J7	Nickels and	nikoz.ʔend	z	ɐ	0	2
108.	J7	then we	zenwi	n	w	1	
109.	J7	salad and	sɐlɐd.ʔend	d	ɐ	0	2
110.	J7	and uh	ɐndɐ	d	ɐ	1	
111.	J7	uh we	ɐ.we	ɐ	w	0	
112.	J7	had one	hɐd.wē	d	w	0	
113.	J7	one of	ēov	ē	o	1	
114.	J7	friend uh	frendɐ	d	ɐ	1	
115.	J7	uh is	ɐiz	ɐ	i	1	
116.	J7	major in	medzɐĭ	ɐ	ĭ	1	
117.	J7	in education	ĭedzukeʃō	ĭ	e	1	
118.	J7	education and	edzukeʃō.ʔen	ō	ɐ	0	2
119.	J7	and I	ɐnɐi	n	ɐi	1	
120.	J7	I am	ɐim	ɐi	ɐ	1	
121.	J7	minor in	mɐinɐ:.ʔĭ	ɐ	ĭ	0	2
122.	J7	in education	ĭ.ʔedzukeʃō	ĭ	e	0	2
123.	J7	so we	sowi	o	w	1	
124.	J7	we are	wiɐ:	i	ɐ	1	

134

125.	J7	talking about	tokɪŋɐbɐut	ŋ	ɐ	1	
126.	J7	bet what's	bet.wɐts	t	w	0	
127.	J7	Japanese and	dzɐpɐnizɐn	z	ɐ	1	
128.	J7	and uh	ɐnɐ	n	ɐ	1	
129.	J7	Canadian educational	kɐnediẽ.ʔeʤukeʃõno	ẽ	e	0	2
130.	J7	systems and	sistems.ʔɐːn	s	ɐ	0	2
131.	J7	and uh	ɐːnɐ	n	ɐ	1	
132.	J7	both of	bosov	s	o	1	
133.	J7	of us	ovɐs	v	ɐ	1	
134.	J7	took a	tukɐ	k	ɐ	1	
135.	J7	teacher and	titʃɐ.ʔend	ɐ	ɐ	0	2
136.	J7	she is	ʃiizᵘ	i	i	1	
137.	J7	her opinion	hɐopɪnyõ	ɐ	o	1	
138.	J7	opinion is	opɪnyõiz	õ	i	1	
139.	J7	is anyway	iz.ʔeniwe	z	e	0	2
140.	J7	strong and	stroŋ.ʔen	ŋ	ɐ	0	2
141.	J7	and uh	ɐnɐ	n	ɐ	1	
142.	J7	uh it	ɐ.ʔit	ɐ	i	0	2
143.	J7	have a	hɐvɐ	v	ɐ	1	
144.	J7	lot of	lotof	t	o	1	
145.	J7	of influence	ofɪfluens	f	ɪ	1	
146.	J7	influence on	ɪfluensõ	s	õ	1	
147.	J7	so we	so.wi	o	w	0	2

148.	J7	consider oh	cõsidɐ.ʔo	ɐ	o	0	2
149.	J7	oh ah	o.ʔɐ	o	ɐ	0	2
150.	J7	ka opinions	kɐ.ʔopinyons	ɐ	o	0	2
151.	J8	ok I	oke.ʔɐi	e	ɐi	0	2
152.	J8	homework and	homwɐːkᵘ.ʔɐnd	k	ɐ	0	2
153.	J8	and uh	ɐndɐ	d	ɐ	1	
154.	J8	uh I	ɐ.ʔɐi	ɐ	ɐi	0	2
155.	J8	which was	witʃwɐs	tʃ	w	1	
156.	J8	letterman and	uɾɛɾɐmẽ.ʔẽ	ẽ	ẽ	0	2
157.	J8	yes um	yes.ʔɐmː	s	ɐ	0	2
158.	J8	showed ah	ʃod.ʔɐ	d	ɐ	0	2
159.	J8	ah at	ʔɐ.ʔɐd	ɐ	ɐ	0	2
160.	J8	at the	ɐdɐ	d	ɐ	1	
161.	J8	middle of	midoːv	o	o	1	
162.	J8	program uh	progɾɐmɐ	m	ɐ	1	
163.	J8	uh I	ɐ.ʔɐi	ɐ	ɐ	0	2
164.	J8	I went	ɐiwent	ɐi	w	1	
165.	J8	bed I	bed.ʔɐi	d	ɐi	0	2
166.	J8	I I	ɐi.ʔɐi	ɐi	ɐi	0	2
167.	J8	I went	ɐiwent	ɐi	w	1	
168.	J8	but uh	bɐtɐː	t	ɐ	1	
169.	J8	they were	ðewɐː	e	w	1	
170.	J8	showing a	ʃoiŋ.ʔɐ	ŋ	ɐ	0	2
171.	J8	driver uh	dɾɐivɐ.ʔɐ	ɐ	ɐ	0	2

136

172.	J8	not a	noteɐ	t	ɐ	1	
173.	J8	teen agers	tĭ.ʔɛdʒɐs	ĭ	ɛ	0	2
174.	J8	driver uh	drɐivɐs.ʔɐn	s	ɐ	0	2
175.	J9	ok I	oke.ʔɐi	e	ɐi	0	2
176.	J9	I went	ɐiwent	ɐi	w	1	
177.	J9	to a	tuɐ	u	ɐ	1	
178.	J9	concert uh	kõnsərt.ʔɐ	t	ɐ	0	2
179.	J9	that was	t̪ɐt̚ᵘ.wɐz	t	w	0	
180.	J9	was um	wɐzɐm	z	ɐ	1	
181.	J9	um arabic	ɐm.ʔɐrɐbik	m	ɐ	0	2
182.	J9	concert and	kõnsərt.ʔɐnd	t	ɐ	0	2
183.	J9	and um	ɐndɐm	d	ɐ	1	
184.	J9	um ok	ɐm.ʔoke	m	o	0	2
185.	J9	ok uh	oke.ʔɐ:	e	ɐ[l]	0	2
186.	J9	no actually	no:.ʔɐktʃuɐi	o	ɐ	0	2
187.	J9	actually I	ɐktʃuɐi.ʔɐi	i	ɐi	0	2
188.	J9	forgot and	fo:gɐt.ʔɐnd	t	ɐ	0	2
189.	J9	and uh	ɐndɐ	d	ɐ	1	
190.	J9	at uh Côte	ɐtɐkot	t	ɐ	1	
191.	J9	name of	nemov	m	o	1	
192.	J9	place was	pleswɐz	s	w	1	
193.	J9	so I	soɐi	o	ɐi	1	
194.	J9	forgot also	fo:gɐt.ʔolso	t	o	0	2
195.	J9	also um	olso.ʔɐm	o	ɐ	0	2

137

196.	J9	it's a	itsɐ	s	ɐ	1	
197.	J9	kind of	kɐnov	d	o	1	
198.	J9	think um	sink.ʔem	k	ɐ	0	2
199.	J9	dun it's	dɐno.ʔits	o	i	0	2
200.	J9	it's a	itsɐ	s	ɐ	1	
201.	J9	kind of	kɐinof	n	o	1	
202.	J9	space you	spes.yu	s	y	0	
203.	J11	OK I	oke.ʔɐi	e	ɐi	0	2
204.	J11	I I	ɐi.ʔɐi	ɐi	ɐi	0	2
205.	J11	write assignment	wɐiresɐîment	t	ɐ	1	
206.	J11	for ESL	fo.ʔiesel	o	i	0	2
207.	J11	so I	so.ʔɐi	o	ɐi	0	2
208.	J11	I write	ɐireit	ɐi	r	1	
209.	J11	for about	foɐbɐut	o	ɐ	1	
210.	J11	three hours	θri.ʔɐuɐs	i	ɐ	0	2
211.	J11	hours on	ɐuɐs.ʔõ	s	õ	0	2
212.	J11	on only	õ.ʔõli	õ	õ	0	2
213.	J11	only an	õli.ʔɐn	i	ɐ	0	2
214.	J11	an argumentative	ɐn.ʔɐːgumentetiv	n	ɐ	0	2
215.	J11	argumentative essay	ɐːgumentetiv.ʔese	v	e	0	2
216.	J11	essay about	ese.ʔɐbɐut	e	ɐ	0	2
217.	J11	the all	zɐ.ʔol	ɐ	o	0	2
218.	J11	all immigrant	ol.ʔimiglɐnt	o	i	0	2

138

219.	J11	that is	zæt.ʔiz	t	i	0	2
220.	J11	then I	zẽ.ʔɐi	ẽ	ɐi	0	2
221.	J11	I wrote	ɐirot	ɐi	r	1	
222.	J11	hm after	m.ʔæftɐ	m	ɐ	0	2
223.	J11	that I	zæt.ʔɐi	t	ɐi	0	2
224.	J11	then I	zẽ.ʔɐi	ẽ	ɐi	0	2
225.	J11	I went	ɐi.went	ɐi	w	0	
226.	J11	do you	dəyə	ə	y	1	
227.	J12	night uh	nɐit.ʔɐ:	t	ɐ	0	2
228.	J12	uh I	ɐ:.ʔɐi	ɐ	ɐi	0	2
229.	J12	homework and	howmwɐ:k.ʔɐndᵘ	k	ɐ	0	2
230.	J12	homework is	howmwɐ:k.ʔizᵘ	k	i	0	2
231.	J12	and uh	ɐndɐ	d	ɐ	1	
232.	J12	yes um	yɛs.ʔɐ:m:	s	ɐ	0	2
233.	J12	um about	ɐ:m:.ʔɐbɐutᵘ	m	ɐ	0	2
234.	J12	Kossovo and	kosobo.ʔɐnd	o	ɐ	0	2
235.	J12	and uh	ɐndɐ	d	ɐ	1	
236.	J12	uh and	ɐ.ʔɐnd	ɐ	ɐ	0	2
237.	J12	and about	ɐndɐbɐutᵘ	d	ɐ	1	
238.	J12	about Ottawa	ɐbɐutᵘ.ʔotɐwɐ	t	o	0	2
239.	J12	Ottawa about	otɐwɐ.ʔɐbɐut	ɐ	ɐ	0	2
240.	J12	about uh	ɐbɐutɐ	t	ɐ	1	
241.	J12	gun-man yeah	gẽm:ẽ.ʔyɐ	ẽ	y	0	2
242.	J13	OK uh	oke.ʔɐ:	e	ɐ	0	2

139

243.	J13	since I	sins.ʔei	s	ei	0	2
244.	J13	I was	eiwez^u	ei	w	1	
245.	J13	having a	hevine	ŋ	e	1	
246.	J13	today I	tude.ʔei	e	ei	0	2
247.	J13	I was	eiwez	ei	w	1	
248.	J13	was working	wezwekiŋ	z	w	1	
249.	J13	working on	wekiŋ.ʔõ:	ŋ	õ	0	2
250.	J13	presentation I	preseteʃon.ʔei	n	e	0	2
251.	J13	I went	eiwent	ei	w	1	
252.	J13	library ah	leiberi.ʔe	i	e	0	2
253.	J13	some information	semĩfomeʃon	m	i	1	
254.	J13	information up	ĩfomeʃonep	n	e	1	
255.	J13	up and	ep.ʔend	p	e	0	2
256.	J13	and uh	ende	d	e	1	
257.	J13	I wanted	eiwened	ei	w	1	
258.	J13	but even	bet.ʔivẽ	t	i	0	2
259.	J13	though I	ðo.ʔei	o	ei	0	2
260.	J13	card at	kerd.ʔet	d	e	0	2
261.	J13	at of	et.ʔov	t	o	0	2
262.	J13	Mcgill it	megel.ʔit	l	i	0	2
263.	J13	doesn't work	dezinwerk	n	w	1	
264.	J13	because it's	bikoz.ʔits	z	i	0	2
265.	J13	it's only	its.ʔonli	s	o	0	2

140

266.	J13	summer ah	sɛmɐr.ʔɐ	r	ɐ	0	2
267.	J13	so I	so.ʔɐi	o	ɐi	0	2
268.	J13	there uh	ðer.ʔɐ	r	ɐ	0	2
269.	J13	ten o'clock	tenɐklɐk	n	ɐ	1	
270.	J13	o'clock or	oklɐk.ʔoɐ	k	o	ʊ̃	2
271.	J13	or eleven	oɐ.ʔileven	ɐ	i	0	2
272.	J13	eleven o'clock	ilevenoklɐk	l	o	1	
273.	J14	what I	wɐtɐi	t	ɐi	1	
274.	J14	did uh	did.ʔɐ	d	ɐ	0	2
275.	J14	did uh	didɐ:	d	ɐ	1	
276.	J14	things at	siŋsɛt	s	ɐ	1	
277.	J14	at all	ɐto:	t	o	1	
278.	J14	just I	dʒɐsɐi	s	ɐi	1	
279.	J14	maybe I	mebiɐi	i	ɐi	1	
280.	J14	talk with	tok.wiʔ	k	w	0	
281.	J14	because I	bikozᵘɐi	z	ɐi	1	
282.	J14	live with	livwis	v	w	1	
283.	J14	maybe I	mebi.ʔɐi	i	ɐi	0	2
284.	J14	talked with	tokt̥ɐwis	t	w	1	n
285.	J14	night oh	nɐyto	t	o	1	
286.	J14	uh what	ɐwɐt	ɐ	w	1	
287.	J15	night I	nɐiʔ.ʔɐi	ʔ	ɐi	0	2
288.	J15	made a	medɐ	d	ɐ	1	
289.	J15	and I	ɐnɐi	n	ɐi	1	

290.	J15	I watched	ɐiwɐtʃ	ɐi	w	1	
291.	J15	movie with	muviwiθ	i	w	1	
292.	J15	boyfriend and	boifrenɐn	n	ɐ	1	
293.	J15	made uh	medɐː	d	ɐ	1	
294.	J15	uh I	ɐː.ʔɐi	ɐ	ɐi	0	2
295.	J15	made a	medɐ	d	ɐ	1	
296.	J15	thing it's	θiŋits	ŋ	i	1	
297.	J15	called uh stew	koldɐ.sityu	d	ɐ	1	
298.	J15	stew and	styu.ʔɐnd	u	ɐ	0	2
299.	J15	and uh	ɐndɐ	d	ɐ	1	
300.	J15	vegetables are	vedztɐbəlzɐr	z	ə	1	
301.	J15	are inside	ɐrinsɐid	r	i	1	
302.	J15	inside uh	insɐid.ʔɐ	d	ɐ	0	2
303.	J15	carrot onion	cɐrot.ʔɐniɐn	t	ɐ	0	2
304.	J15	onion and	ɐniɐn.ʔɐnd	n	ɐ	0	2
305.	J15	broccoli and	brɐkoli.ʔɐnd	i	ɐ	0	2
306.	J15	yeah and	iɐ.ʔɐn	ɐ	ɐ	0	2
307.	J15	and it's	ɐnits	n	i	1	
308.	J15	it's uh	itsɐ	s	ɐ	1	
309.	J15	ha as	hɐ.ʔɐs	ɐ	ɐ	0	2
310.	J15	as you	ɐzyu	z	y	1	
311.	J15	creamy and	krimiɐnd	i	ɐ	1	
312.	J15	and white	ɐnd.wɐit	d	w	0	
313.	J15	and uh	ɐndɐ	d	ɐ	1	

314.	J15	uh it's	ɐ.ʔits	ɐ	i	0	2
315.	J15	it's uh delicious	itsɐdeliʃɐs	s	ɐ	1	

JSE Post-Test Speech Samples

316.	J6	tonight I	tunɐit.ʔei	t	ɐi	0	2
317.	J6	cook uh because	kukɐbikoz	k	ɐ	1	
318.	J6	because uh	bikozɐ	z	ɐ	1	
319.	J6	uh I	ɐ.ʔei	ɐ	ɐi	0	2
320.	J6	so I	so.ʔei	o	ɐi	0	2
321.	J6	beef yeah	bihu.ʔyɐ	hu	y	0	2
322.	J6	maybe I	mebiɐi	i	ɐi	1	
323.	J6	I will	ɐiwio	ɐi	w	1	
324.	J6	yeah uh	yɐ.ʔɐ	ɐ	ɐ	0	2
325.	J6	hm yeah	m.ʔyɐ	m	y	0	2
326.	J7	hope I	hopɐi	p	ɐi	1	
327.	J7	I will	ɐiwil	ɐi	w	1	
328.	J7	hope uh well	hopɐwe	p	ɐ	1	
329.	J7	because I	bikozɐi	z	ɐi	1	
330.	J7	have a	hɐvɐ	v	ɐ	1	
331.	J7	lot of	lotov	t	o	1	
332.	J7	yeah uh	yɐ.ʔɐ	ɐ	ɐ	0	2
333.	J7	uh yeah	ɐ.ʔiɐ	ɐ	i	0	2
334.	J7	because I	bikoz.ʔei	z	ɐi	0	2
335.	J7	just went	dʒɐst.went	t	w	0	2

336.	J7	went over	wentobɐ	t	o	1	
337.	J7	so I	soɐi	o	ɐi	1	
338.	J7	do it	duit	u	i	1	
339.	J7	it you	ityu	t	y	1	
340.	J7	have I	hɐv.ʔɐi	v	ɐi	0	2
341.	J7	memorise everything	memorɐiz.ʔeverisĩ	z	e	0	2
342.	J7	but I	bɐtɐi	t	ɐi	1	
343.	J7	music I'm	miuzik.ʔɐim	k	ɐi	0	2
344.	J7	I'm uh thinking	ɐimɐsinkiŋ	m	ɐ	1	
345.	J7	something else	sɐmsiŋ.ʔels	ŋ	e	0	2
346.	J7	because I'm	bikozɐim	z	ɐi	1	
347.	J8	meeting uh	mitiŋɐ	ŋ	ɐ	1	
348.	J8	uh one	ɐ.wɐn	ɐ	w	0	
349.	J8	one of	wɐnof	n	o	1	
350.	J8	friend uh	fᵘlendɐ	d	ɐ	1	
351.	J8	uh I'm	ɐɐim	ɐ	ɐi	1	
352.	J8	and we	ɐndwi	d	w	1	
353.	J8	to eat	tɯit	ɯ	i	1	
354.	J8	have any	hɐveni	v	e	1	
355.	J8	oh yes	oyes	o	y	1	
356.	J8	yes I	yesɐi	s	ɐi	1	
357.	J8	yeah it's	iɐ.ʔits	ɐ	i	0	2
358.	J8	not yet	notyet	t	y	1	

359.	J9	tonight I	tuneit.ʔei	t	ei	0	2
360.	J9	but uh	bɐtɐ	t	ɐ	1	
361.	J9	maybe I'll	mebiɐio	i	ɐi	1	
362.	J9	and uh	ɐndɐ	d	ɐ	1	
363.	J9	uh I	ɐ.ʔei	ɐ	ɐi	0	2
364.	J9	homework what	homwɐk.wɐt	k	w	0	
365.	J9	final exam	fɐinɐligᵘzɐm	l	i	1	
366.	J9	but uh	bɐtɐ	t	ɐ	1	
367.	J9	uh it's	ɐ.ʔits	ɐ	i	0	2
368.	J9	to uh next	tuɐnɛkᵘsᵘtᵘ	u	ɐ	1	
369.	J9	so I'm	so.ʔeim	o	ɐi	0	2
370.	J9	not in	not.ʔin	t	i	0	2
371.	J9	no only	no.ʔõnli	o	õ	0	2
372.	J11	tomorrow's exam	tumowosɐksɐm	s	e	1	
373.	J11	uh international	ɐ.ʔĩtɐnɐʃõnɐl	ɐ	ĩ	0	2
374.	J11	there are	zeɐ:	e	ɐ	1	
375.	J11	part uh one	pɐ:t.ʔɐwẽ	t	ɐ	0	2
376.	J11	part is	pɐ:t.ʔiz	t	i	0	2
377.	J11	short one	ʃɐt.wẽ	t	w	0	
378.	J11	just I	dʒɐstᵘ.ʔei	t	ɐi	0	2
379.	J11	to explain	tu.ʔekᵘsᵘpᵘlen	u	e	0	2
380.	J11	what is	wɐtiz	t	i	1	
381.	J11	for example	foɯɐksɐmpo	ɯ	e	1	

382.	J11	what is	wɛtiz	t	i	1	
383.	J11	global warming	globolwemĩŋ	l	w	1	
384.	J11	the other	d̥e.ʔeð̥ɐ	e	ɐ	0	2
385.	J11	part is	pɛːt.ʔiz	t	i	0	2
386.	J11	is I	izᵘ.ʔɐi	z	ɐi	0	2
387.	J11	choose a	tʃuz.ʔɐ	z	ɐ	0	2
388.	J11	and I	ɐnd.ʔɐi	d	ɐi	0	2
389.	J11	should explain	ʃud.ʔeksplẽ	d	e	0	2
390.	J11	explain about	eksplẽ.ʔɐbɐt	ẽ	ɐ	0	2
391.	J11	five or	fɐivoɐ	v	o	1	
392.	J11	pages I	pedziz.ʔɐi	z	ɐi	0	2
393.	J11	choose a	tʃusᵘ.ʔɐ	s	ɐ	0	2
394.	J11	so I	so.ʔɐi	o	ɐi	0	2
395.	J11	guess I	ges.ʔɐi	s	ɐi	0	2
396.	J11	I will	ɐiwio	ɐi	w	1	
397.	J12	I will	ɐiwio	ɐi	w	1	
398.	J12	yes um	ies.ʔɐm	s	ɐ	0	2
399.	J12	um I	ɐm.ʔɐi	m	ɐi	0	2
400.	J12	I I	ɐi.ʔɐi	ɐi	ɐi	0	2
401.	J12	some interviews	sɐmĩntɐvius	m	ĩ	1	
402.	J12	interviews on	ĩntɐvius.ʔõ	s	õ	0	2
403.	J12	Friday about	frɐide.ʔɐbɐᵘt	e	ɐ	0	2
404.	J12	fitness and	fitᵘnesɐnd	s	ɐ	1	
405.	J12	diet uh	dɐiet.ʔɐ	t	ɐ	0	2

146

406.	J12	uh I	ɐ.ʔei	ɐ	ei	0	2
407.	J12	to write	turɐit	u	r	1	
408.	J12	something about	sɐmsiŋ.ʔɐbɐut	ŋ	ɐ	0	2
409.	J12	about about	ɐbɐut.ʔɐbɐut	t	ɐ	0	2
410.	J12	just uh	dʒɐstɐ	t	ɐ	1	
411.	J12	uh one	ɐ.wɐn	ɐ	w	0	
412.	J12	one or	wɐnoɐ	n	o	1	
413.	J13	tonight uh	tunɐit.ʔɐ	t	ɐ	0	2
414.	J13	friend of	frendofᵘ	d	o	1	
415.	J13	here who	hir.hu	r	h	0	
416.	J13	who ah	fu.ʔɐ	u	ɐ	0	2
417.	J13	ah yeah	ɐ.ʔyɐ	ɐ	y	0	2
418.	J13	doing a	duiŋɐ	ŋ	ɐ	1	
419.	J13	final with	fɐinowiθ	o	w	1	
420.	J13	and uh	ɐndɐ	d	ɐ	1	
421.	J13	uh yeah	ɐ.yɐ	ɐ	y	0	
422.	J13	final in	fɐinɐolīn	l	i	1	
423.	J13	in Indo	ī.ʔindo	ī	i	0	2
424.	J13	Indo European	indoyuropiē	o	y	1	
425.	J13	Indo European	indoyuropiē	o	y	1	
426.	J13	uh it's	ɐ.ʔits	ɐ	i	0	2
427.	J13	because uh	bikozɐ	z	ɐ	1	

147

428.	J13	uh it's	ɐ.ʔits	ɐ	i	0	2
429.	J13	har# it's[29]	hɐ.ʔits	ɐ	i	0	2
430.	J13	and uh	ɐndɐ	d	ɐ	1	
431.	J13	uh I	ɐ.ʔɐi	ɐ	ɐi	0	2
432.	J13	read uh lots	ridɐ	d	ɐ	1	
433.	J13	lots of	lɐtsof�socᵘ	s	o	1	
434.	J13	for it	fodit	d	i	1	
435.	J13	it and	it.ʔɐn	t	ɐ	0	2
436.	J13	and uh	ɐnɐ	n	ɐ	1	
437.	J13	uh yeah	ɐ.ʔiɐ	ɐ	i	0	2
438.	J13	do you	duiu	u	i	1	
439.	J13	know it	noɯit	o	i	1	
440.	J14	so on	so.ʔõ	o	õ	0	2
441.	J14	Friday I	fᵘlɐide.ʔɐi	e	ɐi	0	2
442.	J14	what I	wɐtɐi	t	ɐi	1	
443.	J14	do on	du.ʔõ	u	õ	0	2
444.	J14	Saturday and	sɐtɐde.ʔɐnd	e	ɐ	0	2
445.	J14	and I	ɐnd.ʔɐi	d	ɐi	0	2
446.	J14	made a list	medɐlist	d	ɐ	1	
447.	J14	and I	ɐnd.ʔɐi	d	ɐi	0	2
448.	J14	have uh lot	hɐvɐlot	v	ɐ	1	
449.	J14	lot uh things	lotɐsiŋs	t	ɐ	1	

---

[29] Incomplete attempt in saying the word "hard."

450.	J14	know what	no.wɐt	o	w	0	
451.	J14	what uh	wɐt.ʔɐ	t	ɐ	0	2
452.	J14	uh what	ɐ.wɐt	ɐ	w	0	
453.	J14	what I	wɐtɐi	t	ɐi	1	
454.	J14	so I	so.ʔɐi	o	ɐi	0	2
455.	J14	finish up	finiʃ.ʔɐp	ʃ	ɐ	0	2
456.	J14	ha it's	hɐ.ʔits	ɐ	i	0	2
457.	J14	still I'm	sᵘtioɐim	o	ɐ	1	
458.	J14	grammar yeah	gᵘlɛmɐ.ʔiɐ	ɐ	i	0	2
459.	J14	and uh	ɐndɐ	d	ɐ	1	
460.	J14	uh yeah	ɐ.ʔiɐ	ɐ	i	0	2
461.	J15	well uh	welɐ	l	ə	1	
462.	J15	uh I'm	ɐ.ʔɐim	ɐ	ɐi	0	2
463.	J15	to airport	du.ʔɐrport	u	e	0	2
464.	J15	and I'm	ɐndɐim	d	ɐi	1	
465.	J15	oh at	o.ʔɐt	o	ɐ	0	2
466.	J15	at um	ɐtɐm	t	ɐ	1	
467.	J15	at I'm	ɐt.ʔɐim	t	ɐi	0	2
468.	J15	house at	hɐus.ʔæt	s	æ	0	2
469.	J15	s-six oh	sɪks.ʔo	s	o	0	2
470.	J15	seven or	sevenor	n	o	1	
471.	J15	yeah in	yɐ.ʔin	ɐ	i	0	2
472.	J15	then uh	ðenɐ	n	ɐ	1	
473.	J15	uh I'm	ɐ.ʔɐim	ɐ	ɐ	0	2

474.	J15	I'm I'm	ɐimɐim	m	ɐi	1	
475.	J15	to arrive	tuɐrɐiv	u	ɐ	1	
476.	J15	arrive in	ɐrɐivin	v	i	1	
477.	J15	Japan at	dʒɐpɐnɐt	n	ɐ	1	
478.	J15	at uh	ɐtɐ	t	ɐ	1	
479.	J15	uh afternoon	ɐ.ʔɐft	ɐ	ɐ	0	2

150