

THE PERCEPTION OF ARTICLES IN SPOKEN ENGLISH BY JAPANESE COLLEGE STUDENTS

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1. INTRODUCTION

Quite a few studies have been made on the listening behaviors of Japanese learners of English which have demonstrated several factors contributing to the difficulty that Japanese listeners experience perceiving English (Yoshida, 1971; Ito, 1975; Koike et al., 1978, 1979, 1980; Kakehi et al., 1979; Kohno, 1981; Yamada, 1982; Fujiwara, 1986). In these studies, factors at all levels--phonetic, phonological, lexical, syntactic, semantic and discourse levels--have been observed to influence listening difficulty. Among these, one phonetic factor is the presence of weak forms, unstressed units, in spoken English. Rhythm in English is based on stress, i.e. a combination of stressed and unstressed units, while rhythm in Japanese is based on the mora. It is no wonder that Japanese learners of English have trouble perceiving stress-related variants and/or variations.

Yoshida (1971) analyzed the dictations taken by Japanese college students and found twice as many errors in function words, which are weak forms, compared to content words. A similar result is also reported in Ito (1975) and Asao (1979). Kakehi et al.'s data (1979) showed that 55.2% of articles and 40.7% of pronouns were incorrectly perceived in the dictations of college students. In addition, Asao's study suggests that the relative difference between the strong form and the weak form of a function word influences the degree of difficulty in its perception.

We examined the aural perception of weak forms in English by Japanese learners of English, paying special attention to the phonetic environments for the weak forms, for which detailed analyses have not yet been made. As a first step, we selected one of weak forms, i.e. articles, as the linguistic material for this study.

2. SUBJECTS AND LINGUISTIC MATERIALS

We tested 188 Japanese speakers of English. All of the subjects were college undergraduate students in their early twenties. The listening sessions were held in a sound-proofed room at a university. All of the subjects had normal speaking and hearing according to self-report.

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A partial dictation test was designed to test the listening abilities of one of the weak forms in English, i.e. the article. We devised a total of 56 sentences for the purpose of this listening test (Table 1). As shown in Table 1, there were two categories of materials. In the case of the sentences in Category 1, listeners could rely on their grammatical knowledge in addition to the phonetic input when they took the dictation of the part of the sentences with articles. In Category 2, however, the choice of the article, including the choice of no article, had to be based on what was heard, because more than one choice was grammatically acceptable. We expected that Japanese listeners would do better in Category 1 than Category 2, because their grammatical knowledge would help them to choose the correct article without actually hearing the weak form. There were 24 sentences in Category 1 and 32 sentences in Category 2.

### 3. PROCEDURE

A reading text with 56 sentences was arranged in a pseudo-random order. An American professor of English, a speaker of General American, served as the speaker. He was asked to produce the sentences at a natural speaking rate. He repeated each sentence three times in succession with a short pause between the first and second repetitions, and with a pause of 8 seconds after the third repetition.

On the answer sheet, not only the target article but also the preceding and following words were blanked out. The listeners were instructed to write down what they heard. They were allowed to write any time during the repetitions of the sentences and during the longer pause after the last repetition. However, they were told not to change their answers after they heard the next sentence. The listeners did not know the specific purpose of this test.

### 4. RESULTS

Out of the 188 students, 15 had perfect scores on the partial dictation test. Thirteen of the 15 students with perfect scores had lived overseas for more than 3 years, and one of them had lived in the U.S. for 1 year. Only one student had a perfect score without having had the experience of living overseas. In what follows, the results of the listening test for the remaining 173 students with errors on the test will be reported.

The overall average of correct answers was 81%, the averages for Category 1 and Category 2 being 84% and 78%, respectively. As expected, the listeners did better in Category 1 than Category 2. In more than half of the sentences in Category 1 and in 11 out of the 32 sentences in Category 2, more than 90% of the listeners answered correctly. There were a total of 21 sentences, 8 in Category 1 and 13 in Category 2, in which less than 80% of the

listeners chose the correct article.

Table 2 shows in detail the errors which the listeners made in this test. In Category 1, we can observe a clustering of errors in several sentences. In Sentences 7, 8 and 10 of the "a" Group, more than 20% of the listeners dropped the article. This error pattern seems to be due to the fact that they did not know the expressions involved and that the article was coarticulated with the preceding consonant, /t/ or /r/. In Sentence 4 of the "an" Group, quite a few listeners did not answer at all, because they did not know the expression. In the case of Sentence 3 of the "the" Group, 26% of the listeners dropped the article, perhaps because of an incorrect belief that a proper name in English never carries an article. In Sentence 5 of the "the" Group, "a" was the most frequent incorrect answer, which was probably caused by the incorrect belief that a first reference should always occur with "a". Sentences 8 and 10 of the "the" Group turned out to be the most difficult two sentences in Category 1 because of the unfamiliarity of their expressions. Thus, the error patterns seem to be due to a combination of grammatical knowledge and sound liaisons.

Turning to Category 2, we can observe that the phonetic environment exerts a significant influence on the degree of difficulty in the perception of articles for Japanese listeners. Table 3 presents the phonetic environments in which more than 20% of the listeners answered incorrectly and those in which less than 20% of them answered incorrectly. The alveolar sounds such as /d/, /t/ and /n/ formed difficult environments for the perception of "the", while the fricatives, /v/ and /z/ were relatively favorable environments for the perception of "the". On the other hand, the fricative /z/ made the listeners mishear "a" as "the", because the preceding consonant /z/ and the /ð/ of "the" sound similar to the ears of Japanese listeners. /l/ was another difficult environment for the perception "a". Many listeners dropped this article here. This might be related to their own production of /l/ with an extra vowel-like sound following it.

Thus, phonetic environments play a significant role in the degree of difficulty experienced perceiving articles. Further research on this factor with a comprehensive set of phonetic environments is now being carried out. The incorrect answers formed in this study under the category of "other" will be reported elsewhere. In this report, we would like to point out that the articles were frequently misheard as several kinds of pronouns.

## References

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Table 1 Linguistic materials

I. Group of sentences in which the selection of an article is grammatically conditioned.

<a> Group

1. He acts like a child.
2. May I have a glass of water?
3. Once upon a time, there was a brave king.
4. Once upon a time, there was a beautiful queen.
5. Take a look at them.
6. She goes to New York twice a week.
7. She is quite a character.
8. He worked for a living.
9. I haven't seen you for a long time.
10. Quite a few people came to the party.

<an> Group

1. I'd like an egg for my breakfast.
2. We have an experienced teacher.
3. Do you have an appointment?
4. Let's bring this discussion to an end.

<the> Group

1. Those men were, for the most part, intelligent.
2. Most of the people are infected with the virus.
3. Baseball will be popular in the Soviet Union.
4. Look at the sun.
5. He went to his room and shut the window.
6. Someone is at the door.
7. He took me by the hand.
8. I can't give you off-the-cuff advice..
9. Pass me the butter, please.
10. Don't you know Alfred the Great?

II. Group of sentences in which more than one choice is possible.

1. Where can I find a policeman?  
Where can I find the policeman?  
Where can I find policemen?
2. We're speaking of a constitution.  
We're speaking of the constitution.
3. The scholar was invited to an interview.  
The scholar was invited to the interview.
4. Have you heard about Queen Elizabeth?  
Have you heard about the Queen Elizabeth?

5. We are obliged to use language.  
We are obliged to use a language.  
We are obliged to use the language.
6. They've got to have reason.  
They've got to have a reason.
7. There is still class conflict.  
There is still a class conflict.  
There is still the class conflict.
8. Give me paper.  
Give me a paper.  
Give me the paper.
9. There is always hope.  
There is always a hope.  
There is always the hope.
10. They made improvements.  
They made an improvement.  
They made the improvement.
11. They made me vice president.  
They made me a vice president.  
They made me the vice president.
12. Have you ever seen Chinese characters?  
Have you ever seen a Chinese character?  
Have you ever seen the Chinese character?

Table 2 Percentages of listeners with incorrect answers for each sentence. Errors were classified into six categories: an, the, Ø, Ø+plural, no answer and other. "Ø" stands for no article. "Other" refers to answers which could not be included in the other categories.

CATEGORY I

	Correct answers	Errors (%)					
		an	the	Ø	Ø+pl	NA	Other
1	98		2				
2	100						
3	94	1	3			2	
4	99		1				
5	98			1			1
6	99			1			
7	60			26		12	2
8	75			20		2	3
9	98			2			
10	78			21			1

<an>

	Correct answers	Errors					
		a	the	0	0+pl	NA	Other
1	83	3	3	5	2	3	1
2	90	10					
3	93	5		2			
4	71	2	6	3		17	1

<the>

	Correct answers	Errors			
		a	0	NA	Other
1	93		3	2	2
2	98		2		
3	69		26	5	
4	100				
5	75	24	1		
6	98			2	
7	100				
8	17	9	5	54	15
9	95	3		2	
10	40		11	33	16

CATEGORY II

	Correct answers	Errors					
		a	an	the	0	0+pl	NA
1	81	*	16	2	1		
	61	34	*	5			
	81	10	5	4	*		
2	68	*	12	12			8
	93	4	*	3			
3	65	10	*	7	9	6	3
	88	1	*	5		6	1
4	71	3		14	*	12	
	47	6		*	32	15	
5	91	6		3	*		
	69	*		27			4
	100			*			
6	86	13		*	1		
	100	*					

7	93	5		*		2	
	52	*	4	39		5	
	84	8	*	5		3	
8	94	6		*			
	100	*					
	100		*				
9	81	5	1	*		10	3
	58	*	21	11		9	1
	82	3	*	5		10	
10	84		1		6	*	6
	40	1	*	3	42		7
	45	2	3	*	23	11	7
							9
11	94	1		2	*		3
	94	*			3		3
	75	6	*	14			3
							2
12	97	1					2
	80	*	18	2			
	57	35	*	8			

Table 3 Phonetic environments.

More than 20% of the listeners answered incorrectly in the following cases.

<THE>	<A>	<AN>
d+the	v+a	d+an
t+the	z+a	Vowel
nd	l	
n		
Vowel		

Less than 20% of the listeners answered incorrectly in the following cases.

v+the	nd+a
z	n
l	v
Vowel	Vowel