

Acquisition of the Easy-to-V Structure

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Introduction

This paper is a study based on “The acquisition of the easy-to-V structure by Korean adult learners of English: What influences their interpretive behavior?” by Boram Kim (1998). While Kim (1998) studied Korean adult English foreign language learners, I studied Taiwanese adult English second language learners. This paper will follow the form of Kim’s (1998) study, but will differ in the method and in the discussion of the results.

In this paper, first, I will discuss the syntactic structure of easy-to-V, and review some of the previous research done on the easy-to-V structure. Then I will discuss my experiment concerning the method, materials, procedures, analyses, results, and the discussion/conclusion. In the results, I will compare the results of my study to Kim’s (1998) study.

Kim’s (1998) study takes into account a semantic as well as a syntactic approach to language acquisition. To do this, Kim (1998) based his study on the competition model (Bates & MacWhinney, 1982; MacWhinney, 1987; MacWhinney & Bates, 1989).

Structure of Easy-to-V

This structure can be misleading for an L2 learner in the ways that it differs from some English sentences. In the sentence:

Bill drank coffee.

There is little confusion since the sentence follows standard SVO word order. As to the thematic roles assigned for the arguments, “Bill” would take agent and “coffee” would take

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theme. This is relatively easy for an L2 learner who is familiar with English word order.

Now consider the sentence:

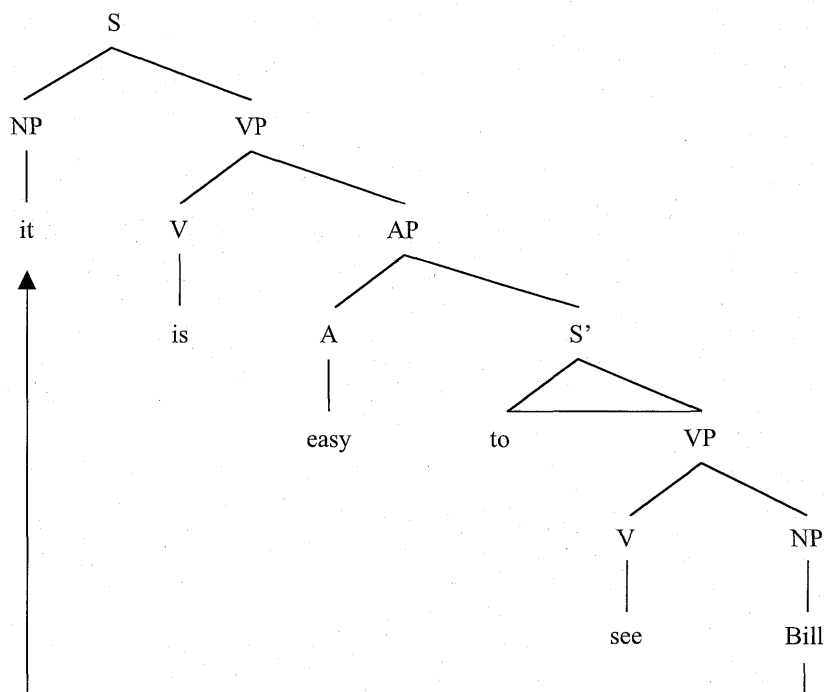
Bill is easy to see.

This sentence deviates from the SVO word order commonly associated with English. “Bill” now takes the thematic role of theme and someone “outside” of the sentence fills the role of agent. There is an implied part of the sentence that is not shown on the surface structure, unlike “Bill drank coffee,” which has no additional “hidden” arguments. A similar example would be a passive sentence such as:

- (1) Bill was hit.
- (2) Bill was hit by Fred.
- (3) Fred hit Bill.

As shown in (1), it is possible to omit the agent in that sentence, although the agent is understood. It must be someone or something that hit Bill. (2) shows the agent added to the original sentence, while (3) shows the active paraphrase.

Figure 1. Syntactic transformation of Easy-to-V (adapted from Kim, 1998)



If indeed a transformation takes place (Figure 1) to form some sentences in English, the transformation occurs in the deep structure. Adult L2 learners, while they may have a deep-structure schema for their L1, will undoubtedly have a different deep structure for English than a NS of English since English is, for the most part, being learned, not acquired.

Previous Studies of the Easy-to-V Structure

Carol Chomsky (1969) studied the easy-to-V structure as part of her study titled "The acquisition of Syntax in Children from 5 to 10." Her study consisted of 40 children from varying socioeconomic backgrounds (all native English speakers). She conducted oral interviews with the children in which she asked a number of different questions (testing a number of different structures). She presented the child with a doll, that was blindfolded, and asked the child, "Is this doll easy to see or hard to see?" If the child answered incorrectly (Hard to see), the researchers then asked:

Would you make her easy to see?

Why was she hard to see?

What did you do to her to make her easier to see?

Why did that make her easier to see?

If the child answered the initial question correctly (Easy to see), the researchers asked:

Would you make her hard to see?

Chomsky (1969) discovered that none of the children tested correctly answered her questions consistently that were under the age of nine. At ages nine and ten, the children obtained 100% accuracy on the easy-to-see questions. This implied that the structure is a candidate for late acquisition. Some criticism was brought toward the study because of the blindfolded doll. This may have tricked the children into thinking their answer must involve the doll seeing (since a blindfold obstructs vision).

Cambon and Sinclair (1974) extended Chomsky's research testing native French speakers and their acquisition of the easy-to-V structure. They grouped their results into three categories:

- 1) Those children that gave correct answers to all questions ('the doll' has the grammatical function of object).
- 2) Those children who gave incorrect answers to all questions ('the doll' fulfills the grammatical function of subject).

- 3) Those children who gave object answers to some questions and subject answers to others.

Their results revealed the same things as Chomsky's (1969) study: only after eight years of age do children start to comprehend the easy-to-V structure correctly. Their subjects did score higher than Chomsky's (1969) though. Cambon and Sinclair (1974) offered many psychological reasons why children have trouble with the easy-to-V structure and concluded that "the nature of this gradual construction appears to be more complex and less straight forward than Chomsky's (1969) results led up to suppose" (p. 139-140).

Kim (1998) studied the easy-to-V structure and the acquisition of the structure for Korean adult learners of English. His hypotheses were that native speakers of English will rely on syntactic intuitions when judging grammaticality, while L2 learners may rely on other cues since they do not have the acquired grammar as a native speaker does.

Kim's (1998) study consisted of two groups: 32 native speakers of English (NS); and 130 Korean learners of English as a foreign language (KEFL). He used a questionnaire that the subjects responded to regarding grammaticality of easy-to-V sentences. The sentences were grouped according to whether the subjects were animate/inanimate and grammatical/ungrammatical. Kim's (1998) results are shown below in Table 1:

Table 1 *Descriptive Statistics for Group Type and Sentence Sub-type (Kim, 1998)*

Group Type	Sub-type of test sentences											
	Ani-G			Inani-G			Ani-Ug			Inani-Ug		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
NS	32	1.62	0.46	32	1.71	0.44	32	-1.86	0.27	32	-1.42	0.41
KEFL	130	-0.22	0.73	130	0.39	0.67	130	-0.18	0.90	130	0.38	0.66

Kim (1998, p.70) found that "native speakers of English and the Korean EFL learners showed different degrees of sensitivity to two different cues in interpreting the easy-to-V sentences." Kim (1998) also discovered that the KEFL learners did rely more on animacy because they were lacking reliable grammatical cues in their mental grammar.

Research Questions and Hypotheses

Since this project started as a replication study, my research questions and hypotheses are the same as in Kim's (1998, p.60) study. I have modified them to account for the fact that I studied Taiwanese adult learners of English as a second language (TWLL), while Kim (1998) studied Korean adult learners of English as a foreign language (KEFL). This study deals with the following research questions:

1. Do native speakers of English and Taiwanese ESL learners respectively show different degrees of sensitivity to cues in interpreting the easy-to-V sentences?
2. Do Taiwanese ESL learners depend more on animacy (lexical-semantic) cues than on grammatical (syntactic) cues in order to comprehend the easy-to-V sentences?

The hypothesis for research question 1 is that for native speakers of English there would be no significant effect for animacy cues, but there would be one for grammatical cues in interpreting easy-to-V sentences. Since native speakers have already developed the required sensitivity to the cue strengths of various linguistic input, they will be more likely to use their relevant mental structural knowledge, while Taiwanese ESL learners will apply animacy cues to understand the sentences due to the unavailability of proper grammatical cues.

As for research question 2, Kim (1998) believes that Korean EFL learners will rely more on animacy cues than grammatical cues. Kim (1998) then offers evidence that native speakers of Korean will rely more on animacy cues because in Korean, the meaning of a sentence could be affected by the animacy of the subject. The following examples (Kim, 1998, p.61) are given to support the hypothesis (*neun*, ie, and *ga* are particles that mark subject noun phrases):

- | | | | | | |
|-----|----------------------------------|-------------|------------|-----------|----------|
| (1) | Chack | <i>ie</i> | iyhaehagui | <i>ga</i> | uryubda. |
| | Book | SUBJ | understand | SUBJ | hard |
| | "The book is hard to understand" | | | | |
| (2) | Mary | <i>neun</i> | iyhaehagui | <i>ga</i> | uryudba. |
| | Mary | SUBJ | understand | SUBJ | hard |
| | "Mary is hard to understand" | | | | |

Sentence (1) in Korean is understood with only one possible interpretation due to the inanimate subject. On the other hand, sentence (2) has two possible interpretations: (1) it is hard to understand

Mary and (2) it is hard for Mary to understand (something). Therefore, we can say that within the domain of the easy-to-V structure, animacy cues are more determinant than case-marking cues in Korean.

While I was not able to find an example in Taiwanese that mirrors Kim's (1998) example of animacy in Korean, it still may be possible to find one. I continued the study even though I cannot support the claim that Taiwanese rely on animacy cues in their native language(s). It still should prove interesting to see if a relationship between animacy and grammaticality is revealed for Taiwanese ESL learners.

METHOD

Subjects

Two groups participated in this study. The first group was comprised of 5 native speakers of English (NS): Four graduate students and one undergraduate student. The second group was comprised of 10 Taiwanese ESL Learners (TWLL) studying at a university in the United States. They were at very different levels of English study; five of the Taiwanese students were taking regular university classes, and five were studying in the university's intensive English program. The average age for the TWLL was 23 years old. There were 3 males and 7 females in this group. Their majors were varied; however, none of the Taiwanese students were English majors.

Materials

Kim's (1998) questionnaire, containing 36 questions, was used for this study. The questions required a response marked on a five-point Likert-type scale (see Appendix). Kim (1998, p.62) describes the questionnaire as follows:

The questionnaire contained two types of sentences, 28 easy-type sentences and eight eager-type sentences which served as distractors. In the easy-type sentences, six adjectives, such as *easy*, *difficult*, *hard*, *interesting*, *amusing*, and *fun*, were used as predicates, and six eager-type adjectives, *eager*, *anxious*, *happy*, *sad*, *glad*, and *willing* were used in the eager-type sentences. Within easy-type, there were four sub-types devised to investigate the effect of animacy and grammaticality on the test sentences: (a) grammatical easy-type

sentences with an animate subject (Ani-G) (e.g., Mary is hard to understand sometimes); (b) grammatical easy-type sentences with an inanimate subject (Inani-G) (e.g., A good impression is difficult to make); (c) ungrammatical easy-type sentences with an animate subject (Ani-Ug) (e.g., *John was fun to go fishing); (d) ungrammatical easy-type sentences with an inanimate subject (Inani-Ug) (e.g., *The theater is easy to be filled with people).

Procedures

For the NS group, the participants were allowed to complete the questionnaire individually and without supervision. They read the instructions and the researcher answered any questions they had before they started (relating to the directions only). There was no time limit imposed on the NS's, but none of them took longer than 10 minutes.

For the TWLL, they were asked to respond individually to the questionnaire; however, they were observed while responding and they could not collaborate with others. The directions were not translated into the TWLL native language(s); in order to facilitate comprehension, they were allowed to use a dictionary (English or foreign language) to translate the instructions. They were not allowed to use a dictionary when responding to the questions. While no time limit was imposed on the TWLL, none of them took longer than 20 minutes to complete the questionnaire.

Analyses

The data used for analyses is the same as in Kim's (1998) study. As mentioned earlier, 28 sentences (out of 36) were used in the analyses. The other eight sentences were distractors. Out of the 28 sentences, four sub categories can be made: Ani-G; Inani-G; Ani-Ug; and Inani-Ug. Each sub-type consisted of seven test sentences.

The dependent variable of this study was the five-point (-2 - +2) Likert scale scores. Three independent variables were considered in this study. "The principle independent variable of interest here was grammaticality of the sentences, that is whether the sentence is grammatical or ungrammatical (Kim, 1998; p.63). This independent variable is labeled Grammaticality and carries two levels. Kim (1998, p.63-64) continues to describe the independent variables as follows:

A second independent variable of interest was animacy of the surface subject of the test sentences, that is, whether the surface subject of the

sentence is animate or inanimate. This variable is labeled Animacy and has two levels.

The third independent variable was the subjects' native language. It is concerned with either native speakers of English or Taiwanese (native Mandarin/Taiwanese speakers) English language learners. This variable is labeled Group Type (and also carries two levels).

This study differs from Kim's (1998) in that different analyses of variance (ANOVA) were used. Kim calculated a three-way ANOVA with the Likert scale scores as the dependant variable and Group Type treated as a grouping factor, while Grammaticality and Animacy were treated as repeated measures factors. In this study a one-way ANOVA was calculated by comparing the native speakers' and learners' mean Likert scale scores for each of the four different types of sentences. The one-way ANOVA is sensitive to two types of differences: 1) differences between groups for the same types of sentences, and 2) differences within groups for different types of sentences. The alpha level was set at .05. Pearson correlations were figured for all subjects and then for the TWLL only. I also compared Kim's (1998) chart showing the means and sentence sub-types to my results to look for similarities and differences.

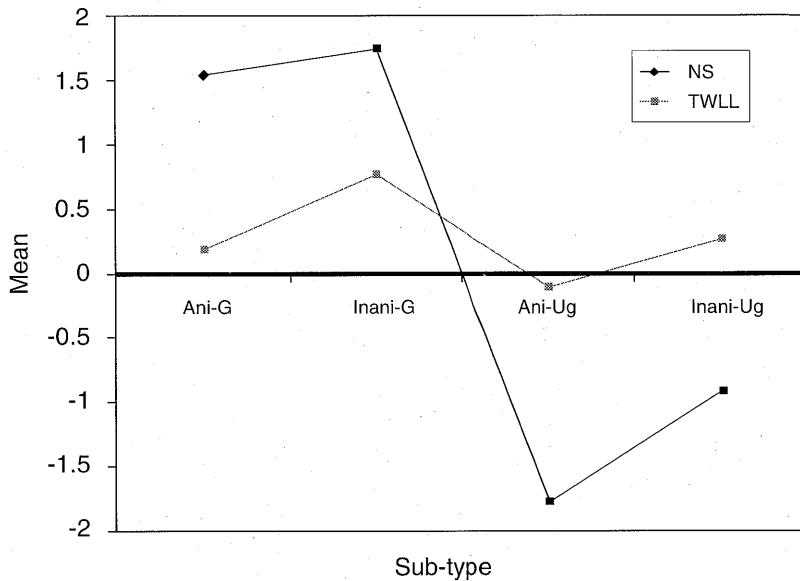
RESULTS

The means and standard deviations for the grammaticality judgements by the NS and the TWLL group are shown in Table 2. The scores reported here are based on the five-point Likert scale (-2, -1, 0, 1, 2). Figure 2 also represents the mean differences between the NS group and the TWLL in sentence sub-type. After looking at Figure 2, it becomes clear that the NS results can be grouped by grammaticality. Regardless of their animacy, the NS grouped sentences purely on the basis of grammaticality. This is quite different from the TWLL who do not have such clear groupings of the tested sentence types.

Table 2 Descriptive Statistics for Group Type and Sentence Sub-type

Group Type	Sub-type of test sentences											
	Ani-G			Inani-G			Ani-Ug			Inani-Ug		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
NS	5	1.54	0.44	5	1.74	0.24	5	-1.77	0.29	5	-0.91	0.33
TWLL	10	0.19	0.83	10	0.77	0.61	10	-0.11	1.2	10	0.27	0.86

Figure 2. Mean differences in four sub-types of easy-to-V Sentences by TWLL group in comparison to NS group



It is almost possible to group the TWLL results into animate and inanimate. The means are fairly flat, so this may be “reading into” the chart too much, but the potential is there (with more data) to see a clearer grouping for the TWLL sentences.

The results shown in the one-way ANOVA (Table 3) reveal that there is significance between the TWLL and the NS for all sentence sub-types. The Ani-G sub-type had a significance level of .005. The Inani-G sub-type also had a significance level of .005. The Ani-Ug sub-type had a significance level of .011, while the Inani-Ug sub-type had a significance of .012.

Table 3 *One-way ANOVA*

		Sum of Squares	df	Mean Square	F	Sig.
Ani-G	Between Groups (Combined)	6.16	1	6.16	11.55	0.005
	Within Groups	6.92	13	0.53		
	Total	13.09	14			
Inani-G	Between Groups (Combined)	3.6	1	3.16	11.38	0.005
	Within Groups	3.61	13	0.28		
	Total	6.78	14			
Ani-Ug	Between Groups (Combined)	9.16	1	9.16	3.91	0.011
	Within Groups	13.36	13	1.03		
	Total	22.53	14			
Inani-Ug	Between Groups (Combined)	4.69	1	4.69	8.55	0.012
	Within Groups	7.13	13	0.55		
	Total	11.82	14			

Table 4 *Correlations-All subjects*

		Ani-G	Ani-Ug
Inani-G	Pearson Correlation	0.797 **	
	Sig (2-tailed)	0.000	
	N	15.000	
Inani-Ug	Pearson Correlation		0.724 **
	Sig (2-tailed)		0.002
	N		15.000

***. Correlation is significant at the 0.01 level (2-tailed)

Table 5 *Correlations-TWLL only*

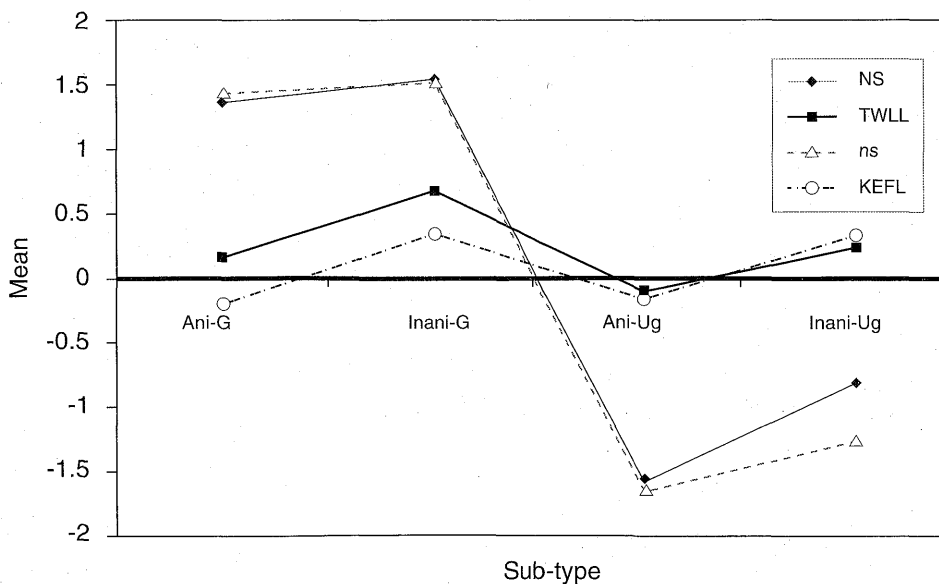
		Ani-G
Inani-G	Pearson Correlation	0.632 *
	Sig (2-tailed)	0.050
	N	10.000
Ani-Ug	Pearson Correlation	0.650 *
	Sig (2-tailed)	0.042
	N	10.000

*. Correlation is significant at the 0.05 level (2-tailed)

Correlation tests were also calculated for all subjects and for the TWLL only. The results of those calculations reveal that both groups (NS and TWLL) seem to be sensitive to the grammaticality of the sentences (Table 4). Table 5 shows that the TWLL only are sensitive to the animacy of the test sentences.

Lastly, I compared the average means from my subjects (NS and TWLL) for the four sentence sub-types to the average means of Kim's (1998) subjects (NS and KEFL) to look for any similarities and/or differences (Figure 5). This was the most surprising result that I discovered during the research. My results almost mirrored Kim's (1998) results for the means on the sentence sub-types from the questionnaire. The scores for the TWLL group were slightly higher than the KEFL group for the Ani-G and the Inani-G sub-types. I attribute this to a number of factors that differ between the studies and groups. The TWLL are studying English full-time (or had studied full-time) in an English speaking country. They have had more exposure to the target language than the KEFL who were studying in Korea. I believe that because of the different environments, the TWLL have had more experience with English leading to slightly higher scores in some categories. The ungrammatical sub-types were closer for both the TWLL and the KEFL groups.

Figure 3. Comparison of means of this study's groups and the groups from Kim's (1998) study



The similarity in the NS scores was also surprising. The only significant difference was in the Inani-Ug sub-type. This also could become closer with more testing. My NS group contained only five subjects; therefore, even one subject's responses could greatly alter the average mean for the entire NS group.

In Figure 3, the uppercase "NS" represents my native speaker group and the lowercase "ns" represents Kim's (1998) native speaker group.

DISCUSSION/CONCLUSION

Regarding research question 1, Taiwanese English language learners and native speakers of English do seem to rely on different cues within the easy-to-V structure. Native speakers of English seem to rely more on grammaticality cues than animacy cues. While it is not clearly evident from this study, there may be a relationship between judging grammaticality and animacy for the Taiwanese adult language learners (research question 2). Therefore, this study should be expanded to look for further evidence of L2 learners using various cues to judge grammaticality.

As this was only a preliminary study, I feel that it does present a case for further study of the easy-to-V structure. Some topics that should stimulate further research include:

- 1) Are there clear examples in Mandarin/Taiwanese that show a difference in meaning due to the animacy of a subject?
- 2) If the study is replicated with more subjects, will the results be similar?
- 3) Would a four-point Likert scale elicit clearer data because it forces the participant to make a clear decision between grammatical/ungrammatical?
- 4) How would the results differ if a similar study were done with Taiwanese adult EFL learners?
- 5) Will calculating a three-way ANOVA provide any new insight concerning the use of cues in judging grammaticality?

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APPENDIX

(Questionnaire adopted from Kim, 1998)

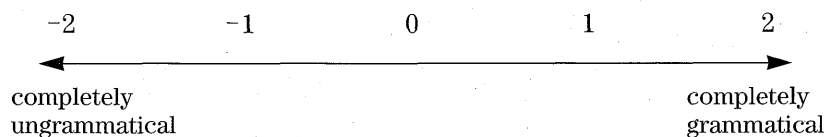
Please read the following instructions!

Sentence intuitions for grammaticality judgment

People have a linguistic ability in their native languages to distinguish grammatical sentences from ungrammatical ones without any grammar training. For example, in English you may judge the first sentence below is a grammatical English sentence, while the second one is not.

- 1) John is likely to win the race.
- 2) John is probable to win the race.

On the following pages is a list of sentences. We want you to tell us for each one whether you think it sounds grammatical in English. Please read each sentence carefully before you answer. **Concentrate on the structure of the sentence.** Rate the grammaticality of each sentence using five-point rating scale. In case you have no clear feeling for whether they are grammatically possible or not mark *zero (0)*.



1. The book is interesting to read.

-2 -1 0 1 2

2. A good impression is difficult to make.

-2 -1 0 1 2

3. This violin is easy to play sonatas on.

-2 -1 0 1 2

4. Mary is hard to understand sometimes.

-2 -1 0 1 2

5. John was sad to have been rejected.

-2 -1 0 1 2

6. The story books are amusing to be read by children.

-2 -1 0 1 2

7. John was fun to go fishing.

-2 -1 0 1 2

8. John is willing to become famous.

-2 -1 0 1 2

9. John is interesting to listen to.

-2 -1 0 1 2

10. My mother is eager to meet you.

-2 -1 0 1 2

11. John is easy to eat rice with chopsticks.

-2 -1 0 1 2

12. Jack was hard to meet the President.

-2 -1 0 1 2

13. That school is not fun to go to.

-2 -1 0 1 2

14. Mary was amusing to play the guitar.

-2 -1 0 1 2

15. The place is interesting to be visited.

-2 -1 0 1 2

16. Mary is happy to be visited by her friends.

-2 -1 0 1 2

17. A wine glass is easy to be broken.

-2 -1 0 1 2

18. Mary was difficult to be accepted by that group.

-2 -1 0 1 2

19. Movies are fun to watch.

-2 -1 0 1 2

20. Some children are amusing to play with.

-2 -1 0 1 2

21. Mary is anxious to go.

-2 -1 0 1 2

22. John is easy to see in a game of hide-and-seek.

-2 -1 0 1 2

23. John was interesting to go into politics.

-2 -1 0 1 2

24. John is difficult to get along with.

-2 -1 0 1 2

25. The computer is hard to be installed.

-2 -1 0 1 2

26. Mistakes are not fun to be made.

-2 -1 0 1 2

27. Good gossip is amusing to share.

-2 -1 0 1 2

28. Everybody was anxious to know her name.

-2 -1 0 1 2

29. The bag is difficult to carry four books.

-2 -1 0 1 2

30. The seller was eager to finalize the deal.

-2 -1 0 1 2

31. Jack is easy to write letters to.

-2 -1 0 1 2

32. The problem is hard to deal with.

-2 -1 0 1 2

33. The girl was fun to dance with John.

-2 -1 0 1 2

34. Jack was glad to return.

-2 -1 0 1 2

35. Mary is fun to tease.

-2 -1 0 1 2

36. The theater is easy to be filled with people.

-2 -1 0 1 2