Multiple Pre-Nominal Adjective Usages by Asian L2 Learners of English

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Abstract

This thesis focuses on adjective ordering in the English language, particularly in how it affects Asian ESL students' grasp on English grammar. In order to complete the thesis, research was done comparing the aforementioned ESL students' handling of pre-nominal adjective placement with that of generally accepted English adjective order. This was used for the following reasons: (i) to identify whether adjective placement is innate or learned; (ii) to discover common errors made by ESL students in adjective ordering; and (iii) to show that the findings may, upon extension, be used to implement ESL curriculum.

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Introduction

One of the most important subjects vital to ESL students' success in mastering the English language is grammar. The fundamentals of grammar are crucial for achieving fluency in any language, and acquiring another language's grammar can be difficult. This difficulty is related to the degree of difference between the speaker's native language (first language or L1) and the language being learned (second language or L2). To cover every nuance of English grammatical structure would require a great deal of extensive research, and is beyond the scope of this paper. The focus, instead, will be on one aspect of English grammar – linear ordering of adjectives.

Rationale

While the acquisition of a second language is often difficult, the difficulties presented in this task differ among linguistic groups. English language acquisition is difficult for speakers of Asian languages in different ways than it is for speakers of Germanic and Romance languages. The basic grammatical structure of Asian languages such as Chinese or Korean is dissimilar from the basis of English grammar. The compared structures are different in integral ways, creating obstacles difficult to overcome, whereas Germanic languages have structures more similar to English. Asian speakers have great difficulty with using articles correctly, as well as distinguishing the /r/ - /l/ sounds in English. These difficulties hinder pronunciation and discernment in listening, making communication very complicated. Other major factors of complexity include the difference in problems of syntax and word order, and the affects of linguistic

development on the ability to acquire another language.[1] All of these initial complications need to be overcome before or around the same time as adjective ordering. Mastering a second language so radically different from the first language is quite an intimidating task, and obviously, adjective placement is not the only obstacle.

Adjective placement varies widely from language to language, particularly in two areas: placement before or after the word modified, and order of each adjective within the adjective phrase. Some languages allow for adjectives before and after the modified noun, but English generally uses pre-nominal adjectives (with certain exceptions, such as "something different" or "nothing particular"). A specific adjective ordering system exists within the English language. This differs from certain other languages which have no specifically correct or incorrect adjective ordering. For example, many Asian speakers (i.e., Japanese, Chinese, and Korean, etc.) would find no error in saying "yellow dirty dog", while an American English speaker would instinctively correct that to "dirty yellow dog."

Because the English grammatical aspect of adjective ordering is especially difficult for Asian L2 learners of English to acquire, this thesis was originally intended to only focus on East Asian language groups. As the process of research developed, South Asian language groups (namely Nepali and Indian languages) were also included, for the purpose of comparison in adjective ordering difficulty.

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[1]To date, research has not established the most successful age for target language acquisition, so difficulty levels are hard to measure when judging solely by age of the learner.

Literature Review

The matter of studying how Asian L2 learners of English use grammar is certainly not a simple process. K. Hakuta (1983) wrote in the article "English Language Acquisition by Speakers of Asian Languages" that "[a] most striking fact is the scarcity of empirical studies involving the Asian-American population; a review would fill no more than five pages" (p. 32). Since that was written in 1983, more studies have been done, but not as many as have focused on comparisons between English and Romance languages such as Spanish. The lack of resources concerning how speakers of Asian languages struggle with English grammatical structure is narrowed down further when the subject concerns only adjective order.

Differences in Grammatical Structure

As previously stated, Asian languages have a drastically different syntax from English. English is primarily a subject-verb-object (*S-V-O*) language. Chinese, by contrast, allows for several sentence structures, including object-subject-verb (*O-S-V*), as shown in the following example[2]:

Ta jia   de ren   [mei-yi ge] wo *(dou) renshi

he family DE person every-one CL I all know

'I know each of his family members.' (Hsieh, 2005, p. 413)

In the Chinese sentence structure, the object "family members" comes before the subject "I", which comes before the verb "know," whereas English would always order the sentence after the *S-V-O* pattern.

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[2] The first line is Chinese, the second line is a literal interpretation of the previous sentence into English, and the third line is the English equivalent of the first statement.

In contrast to Chinese, the Bangla (Bengali) language often employs the sentence structure pattern *S-O-V*, demonstrated in the following:

    a.   *ami boi   du-To   dekhechi*

         I   book two-CLA seen-1P

         'I have seen the two books'

    b.   *o   phOl kO-Ta   kheyche*

         s/he fruit   some-CLA eaten-has-3P

         's/he has eaten some (specified) fruits.' (Bhattacharya, 1999, p. 81)

Japanese also follows this line of syntax. According to Kitagawa and Ross (1982), "Japanese, as generally agreed upon, is a typical SOV language" (p. 19). In "Indo-Aryan Languages" (1990), G. Cardona shows that Indian and Nepali languages, like those of their linguistic family, "illustrate the usual unmarked word order of most New Indo-Aryan languages: subject (including agentive forms), object (with attributive adjectives, including number words, before this and preceded by possessives), verb (with auxiliaries)" (pp. 446-47). As one can see from the examples given, grammatical structure ranges widely among language groups, not only between English and East Asian languages, but between East Asian and South Asian languages. The major components that form a sentence are arranged very differently across varied languages,[3]

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[3] Other syntactic differences between English and Asian languages include the issue of ergativity in transitive verbs and intransitive verbs. According to Li (2007), "Nepali is often claimed to be an ergative language …, 'an ergative type of language'…, or a split-ergative language" (p. 1463). English, on the other hand, is a strictly accusative language, while Chinese does not follow the rules of either accusative or ergative structure.

and many different grammatical issues and rules create syntactic fissures between

language groups.[4]

Adjective Order

The use of adjectives is a grammatical function that is common to every

language.[5] The difference between adjectival uses between languages can be found in the

order of the words. English generally uses pre-nominal order (with adjectives preceding

the head noun), but other languages have adjectives follow the noun, while some

language structures use post-verbal adjectives to modify the subject. One determinant

factor in the English adjective ordering system is denoted by E. Belke (2006) in reference

to study done in the 1970s: "The analyses revealed that the more absolute, intrinsic, and

definite a dimension is, the closer it will be placed to the noun" (p. 264).

Syntax and semantics of adjective ordering. Within every language, two areas

strongly influence how adjectives are used: syntax and semantics. Syntax is the logical

structure that organizes parts of speech within a sentence; semantics, on the other hand,

deals with the motive, meaning, or intention behind a speaker's word choice. As put by

O'Dwyer (2000), "words are … combined to produce phrases and clauses (*syntax*). The

latter three (*words*, *phrases and clauses*) are constituents from which we form our largest

syntactic unit – the *sentence*. The focus of sentence structures is to convey completed

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[4] Another factor in grammatical difference is the use of conjugation within a language's morphology. According to *The World's Major Languages*, the use of word parts to determine a word's femininity or masculinity is important in Indian languages: "Gujarati *ghɛr gayo/gaī* 'he/she went home' has masculine *gayo*, feminine *gaī*, depending on whether the agent is a man or a woman" (Cardona, 1990, p. 446).

[5] In Baker (2004), the case is presented that "all languages for which adequate information is available have one and only one syntactic category of adjectives" (p. 239), in order to distinguish the role of adjectives from that of nouns and verbs.

meaning (*semantics*)" (p. 17). In other words, syntax has to do with word order, while semantics has to do with emphasis.

An interesting phenomenon has been shown through the study of syntax in second language acquisition: learners of a second language tend to transfer knowledge of their own language's grammar onto the end language they seek to acquire. According to M. A. Sharwood Smith (Syntax in second language acquisition, 1999), early theories about this practice "predicted in a straightforward way that, where the learner mother tongue and target languages syntax differed, mother-tongue syntactic habits would show up in the form of 'interference'" (p. 592). While this phenomenon does not occur in every instance of syntactic difference, it would seem that syntax has a major impact on how second language learners (L2) use the grammar of their target language. Syntax has an important role in establishing grammatical convention, particularly in the ordering of pre-nominal adjectives.

Semantics comes into play when a speaker desires to place emphasis on a specific word or idea in their sentence. This factor, described by N. Dittmar (Semantics, 1999) as "the study of word-internal, referential, and compositional meaning of verbal expressions" (p. 587), is of importance in analysis of adjective ordering. If an adjective sequence seems to be out of order according to syntax, it may be that the speaker purposefully changed to order to distinguish the head noun from another possible noun. Semantics is also an important feature of adjective ordering, as it may occasionally surpass syntax in determining order. For example, if one desired to distinguish which "big house" he was referring to, "the *green* big house" (as opposed to the standard order "big green house") would be grammatically acceptable.

English Adjective Ordering Convention

While nearly every authority on adjective ordering would agree that English employs a particular order for pre-nominal adjectives, not all agree on categorization methods. Celce-Murcia and Larsen-Freeman (1999) cite K. Bailey (1975) as concluding that noun phrases have six sections: "1.) determiner, 2.) subjective or evaluative adjective, 3.) measurement adjective, 4.) coloration adjective, 5.) material adjective, 6.) head noun" (p. 393). Table 1 demonstrates examples of this ordering. Celce-Murcia and Larsen-Freeman also cite Svatko's (1979) research, which expanded on Bailey's classification (see Table 2), creating narrower categories within Bailey's six.

Table 1

Summary of Bailey's Research

1	2	3	4	5	6
The	poor	little	pink	plastic	doll
An	ugly	old	gray	wooden	statue

Note. Taken from Celce-Murcia & Larsen Freeman, p. 393.

Table 2

Summary of Svatko's Research

det	opinion	size	shape	condition	age	color	origin	noun
An	ugly	big	round	chipped	old	blue	French	vase

Note. Taken from Celce-Murcia & Larsen-Freeman, p. 394.

Table 3

Summary of Bache and Davidsen-Nielson's Research

Determiner	Modification zones for adjectives			Head noun
	Specification	Description	Classification	
The	same	beautiful	Italian	actress
Her	own	handsome	jazz	musician
The	next	big	guardian	dog
This	particular	tall	aboriginal	carving
The	same	gray	church	tower

Note. Taken from Kemmerer et al., p. 240. "Modification zones for adjective order (adapted from Bache and Davidsen-Nielsen, 1997)".

Kemmerer et al., in the study "*Big brown dog* or *brown big dog*? An electrophysiological study of semantic constraints on pronominal adjective order" (2007), cite Bache and Davidsen-Nielsen (1997) as having different classifications as well. Table 3 (taken from Kemerrer et al.) shows this arrangement. From this reference, Kemmerer et al. defined the "linear hierarchy of semantic classes" as "value > size > dimension > various physical properties > color" (p. 241). Hetzron's (1978) study, on the other hand, narrows this progression even further into: "Epistemic qualifier > evaluation > static permanent property > sensory contact property > speed > social property > age > shape > color > physical defect > origin > composition > purpose/destination." As shown by these two excerpts, the categorization of adjective classes varies widely. These categories do not include determiners (e.g., a, the, those, etc.) or numerals (ordinal and cardinal); these are not considered to be adjectives, thus they are dealt with separately. S. Wulff and W. Otto (2003) also categorize adjective order (numberings included), as seen in Table 4.

Table 4

Wulff and Otto's Ordering Scheme

Order	Example
a. logical qualifiers	*many flowers*
b. determiners	*these students*
c. possessive pronouns	*John's bicycle*
d. superlatives	*the cleverest mouse*
e. ordinal numbers	*the fourth grade*
f. cardinal numbers	*seven dwarfs*

Note. Taken from Wulff and Otto, p. 247.

One of the most recent studies of adjective ordering has gone into painstaking detail to describe the conventional placement of English pre-nominal adjectives: "Scott (2002) … propos[es the following] fine-grained hierarchy … Ordinal > Cardinal > Subject Comment > Evidential > Size > Length > Height > Speed > Depth > Width > Temperature >Wetness > Age > Shape > Color > Nationality/Origin > Material" (Svenonius, 2008, p. 35). As can be seen from the examples and tables above, the English language has an extensive and complicated order for linear adjectives.

Adjective Ordering Restrictions in Asian Language Families

Adjective ordering restrictions are often nonexistent in East and South Asian languages such as Korean, Chinese, Indian, and Nepali. For example: in Chinese, the following two adjective orders are grammatically equivalent:

a) hao-de yaun-de panzi

good   round   plate

     b) yaun-de hao-de panzi

        round   good   plate

Each, although reversing the order of the adjectives, is perfectly acceptable in the Chinese syntactic standard.

In *The Languages of the World*, K. Katzner (2002) categorizes languages from every region of the world into "language families" (p. 2). In this categorization, Katzner places Gujarati, Hindi, and Nepali in the same branch of the Indo-European linguistic family – Indo-Iranian (p. 2). Chinese and Korean, on the other hand, are categorized as not only in differing branches, but in separate families: Chinese is described as a Sino-Tibetan language, while Korean is an "Independent" (p. 4) family. These familial linguistic ties (or the lack thereof) present a basis for exploring how various Asian languages correlate in English language acquisition.

Motivation of Research

The literature available on adjective ordering strongly suggests that the adjective ordering system in the English language is primarily based upon grammatical convention, rather than an innate sense of order. V. C. Hare and W. Otto (1978) note that "Preferred prenominal adjective ordering can be characterized as follows: Given the words *yellow*, *duck*, *little*, *rubber* and asked to order them, most native adult English speakers would put them in a size-color-material-noun (SCMN) sequence – little yellow rubber duck – despite the fact that such a construction was never taught to them" (p. 190). The theory that adjective order is centered on grammatical convention would generally lead to a belief that those who come from similar linguistic backgrounds would have the same approach to ordering adjectives when learning English. Hence, theoretically, native

speakers of Korean and Chinese would produce similar patterns in attempting to order adjectives correctly, whereas Indian and Nepali L2 learners of English might produce distinctly different patterns.

Based on the idea that L2 learners of English tend to transfer knowledge of their original language onto their target language, the hypothesis of this thesis is that speakers from linguistically similar backgrounds will create related mistake patterns in their attempts to produce correct linear adjective progressions. The purpose of this thesis is to test the difficulties of Asian L2 learners of English in ordering adjectives in English. Based on the linguistic similarities, it was predicted that there would be correlations between Korean/Chinese error patterns and Nepali/Indian patterns. Through the research process described in the following section, a common mistake pattern was expected to be found in the East Asian ESL students' adjective ordering (as well as that of the South Asian ESL students), and, after having compared the findings with an established English adjective ordering paradigm, some pedagogical strategies will be suggested for effectively overcoming the mistake pattern.

Method

One of the first steps in the proposed research was to settle on an acceptable and well-known adjective ordering system. The best and simplest adjective paradigm, based on the study of those established by Svatko, Bailey, and Kemerrer et al., was derived from Svatko's nine division progression (see Table 2). In an attempt to keep the experiment at an acceptable but manageable size, six categories were selected: opinion, size, condition, age, color, and origin (each precedes the subsequent category). Each of these categories is distinct, and their progression is clearly defined by Svatko's research.

Subjects

The subjects interviewed for the study were all enrolled in Liberty University's English Language Institute (ELI), which provides a segue for international students whose first language is not English. The ELI affords these students the opportunity to become acclimated to English before entering regular university classes. The four language groups studied and compared were Korean, Chinese, Nepali[6], and Indian[7]. Participants ranged in age from 18-45, and the average age of the subjects was 23.2 years old (as follows per language group: Korean: 26.25 years; Chinese: 20.75 years; Nepali: 20.6 years; Indian: 20.3 years).
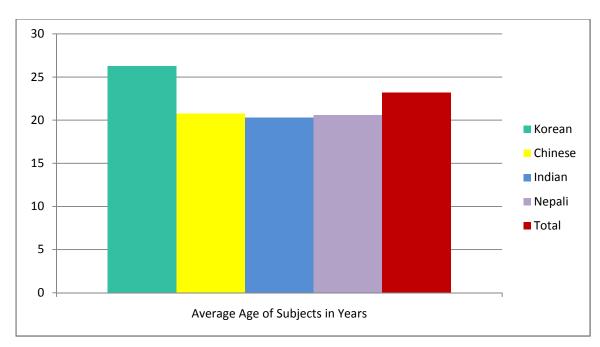
Figure 1. Average Age of Subjects in Years

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[6] The subjects from Nepal all claimed Nepali as their native language, excluding the other two prominent language groups from that country, "Maithili and Bhojpuri, [which] have the second and third largest numbers of speakers among all the Nepalese languages, being exceeded only by Nepali itself" (Whelpton, 1990, p. xiii).

[7] Most Indian subjects spoke Gujarati, with the exception of four, who had Hindi as their first language. Hindi and Gujarati are so closely related that no distinction is made in the results between the two languages, as they are mutually cooperative.

The majority of the subjects have been in the United States for less than six months, and most explained that while they had "begun" learning English at a young age, they had really only learned a few English words and sentences prior to coming to the U.S. The study consisted of forty-two participants, with twenty-four male students and eighteen female students. Of the forty-two, sixteen were Korean, thirteen were Indian, eight were Chinese, and five were Nepali.
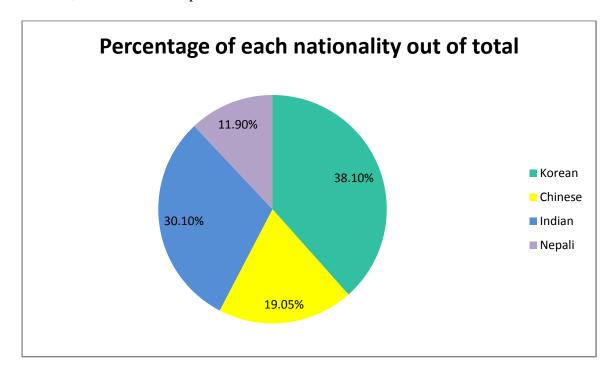
Figure 2. Percentage of each nationality out of total study.

The sample size was limited by the number of students enrolled in the ELI, and the limited number of students from the four desired language groups. The students' English proficiency ranged from beginner to advanced (categorized levels 1 through 4 by the ELI, 1 being beginner and 4 being advanced), with sixteen in level 1 classes, four in level 2, nineteen in level 3, and four in level 4 classes.

Data Collection Procedures

In order for the study to be effective and impartial, each subject that participated was interviewed individually, with no opportunity to hear other participants' answers. Every subject filled out a questionnaire, with name, age, gender, country of origin, first language, and length of time learning English. This information provided for the analysis of answer patterns once all data was collected. Subjects were informed that they were assisting a fellow student in research for a paper on how ESL students use grammar, but adjective placement was not specified, as it was desirable that the answers be given in as natural an order as possible.

A short story was designed so that each of three characters progressively accumulated pre-nominal adjectives in three of six different categories; the subjects were to put these adjectives in the correct order preceding the noun. The story was read aloud to each participant, and during the reading of the story, there was a pause every few sentences to ask the subject to supply adjectives (heard in the story) for completing a frame sentence shown to them. There were nine frame sentences in total; as adjectives were added to describe each character, each subject had to incorporate the new information along with previous adjectives already given. For example, given the information that "Ben is a tall boy" and that "Ben is an American boy," subjects were asked to read aloud this frame sentence – "Ben is a(n) _____ _____ boy" – and put the two adjectives [tall and American] in the order they thought best (the correct order would have been "Ben is a tall American boy").

The first three frame sentences consisted of only one adjective, in order to familiarize the subjects with the process of the interview. The story continued, and the

subjects were asked to supply two adjectives for each of the next set of frame sentences. The story culminated with frame sentences using three adjectives for each of the three characters, and each participant's answers were recorded on the questionnaire he or she filled out prior to the interview.

Possible Answers

For the two-adjective sentences, there were two logically possible adjective combinations for each sentence. For the three-adjective frame sentences, there existed six logically possible adjective progressions for each sentence. The correct progressions for each sentence are shown in Table 5. The alternative, incorrect progressions created by the subjects (i.e. color + size + opinion) were used to determine any patterns common to certain language groups.

Data Analysis

Once all data had been collected, the information was compiled into a spreadsheet to simplify the comparison process. Each logically possible adjective combination was given its own column, and the subjects' answers were marked so that calculation of the number of answers corresponding to each possibility was simplified. This was important because it made the percentage of correct and incorrect answers for each sentence, as well as the analysis of patterns within the mistakes, easier to see and understand.

Table 5

Correct Order for Progressions Used During Experiment

1) Ben is a tall boy. [size]
2) ….. tall American boy. [size + origin]
3) ….. tall wet American boy. [size + condition + origin]
4) Scruffy is a yellow dog. [color]
5) ….. young yellow dog. [age + color]
6) ….. dirty young yellow dog. [condition + age + color]
7) The tree is a wide tree. [size]
8) ….. wide green tree. [size + color]
9) ….. beautiful wide green tree. [opinion + size + color]

Results

When the research was compiled into a spreadsheet, it was set up in such a way that for each set of possible answers, the correct progression (see Table 2.1) preceded all of the others. Because of the hypothesis that Chinese and Korean subjects would produce similar adjective strings, while Indian and Nepali results would be similar to each other, the results were calculated in groups (total correct per language group vs. total incorrect, and in which areas).

Two-possibility Progressions

The sentences that involved the combinations [size + origin], [age + color], and [size + color] each had two possible answers: the correct order, and the incorrect order. Each progression, interestingly, had a different response based on which language basis

each subject had. In the matter of [size + origin], 50% of Korean subjects produced the correct order, while the other 50% chose to put origin before size [American tall]. The Chinese subject group overwhelmingly chose the correct order, with only one subject choosing the wrong answer. The Indian subjects as a group gave fewer right answers than wrong (38% correct, 62% incorrect), while the Nepali sample gave the correct progression, with the exception of one subject. In total, 57% of all subjects produced the correct order, while 43% gave incorrect answers.

For the sentence structure involving [age + color], a majority (81%) of the Korean group produced the incorrect progression [yellow young]. The Chinese subjects, on the other hand, once again had a majority of correct answers, although by a more modest margin of 62% (rather than the 88% majority in the [size + origin] example). The Indian students produced adjective order nearly opposite that of the Korean students, with 77% of progressions correct. Only one subject in the Nepali group gave the correct order for this example, with four out of five in favor of color preceding age. The total for all participants was 55% incorrect and only 45% correct.

The phrase "wide green tree," categorized as [size + color], was used correctly more often than any other structure in the study. Sixty-nine percent of Korean subjects, 75% of Chinese subjects, 77% of Indian subjects, and 80% of Nepali subjects gave the correct order for this progression. In all, 74% of all participants used the right order in their adjective use. These results are significant, as more subjects chose the right answer than they had for the prior example [young yellow], which also used color as the second category.

Six-possibility Progressions

The results of the three-category adjective progressions were much more expansive than those with two categories, as they range over six possible progressions. Because of the expansiveness of these results, their study requires much more analysis. This section will deal with the percentage of correct answers given by each group, and the following passages will show which incorrect progressions were used by the subjects.

Correct Progressions

1. *[Size + condition + origin]*. For the sentence "Ben is a tall wet American boy," the use of the correct progression was strikingly low. Only 13% of Korean subjects produced this answer, and 25% of Chinese subjects also gave the right answer. Of Indian and Nepali students, not one subject used the correct progression. In all, barely 10% of all subjects chose the accurate sequence.
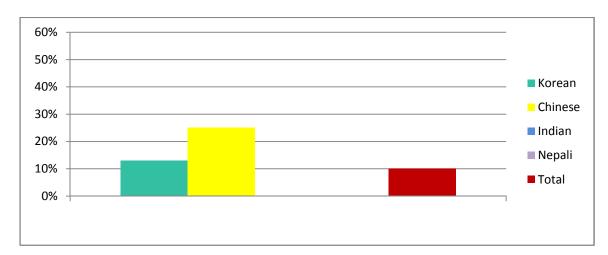
Figure 3. Size + condition + origin.

2. *[Condition + age + color].* This series of adjectives also had a low selection rate, with less than 10% choosing the order "dirty yellow dog." Korean students once again had only a 13% accuracy rate, while the Chinese group avoided this choice entirely. Fifteen percent of the Indian subjects exhibited correct sequencing in this area. The Nepali group avoided [condition + age + color] completely (making the combined results of Nepali subjects producing the correct order for this sample and the previous one 0%).
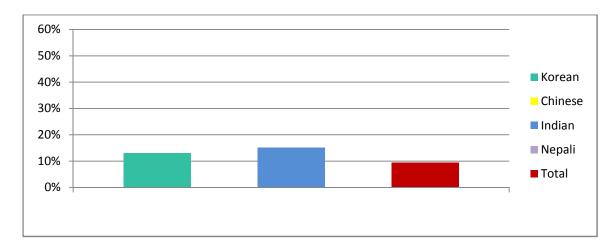
Figure 4. Condition + age + color.

3. *[Opinion + size + color].* Results for this item showed slight improvement compared to the other two. The Korean sample had the strongest showing, with 31% of participants choosing "beautiful wide green tree." Twenty-five percent of Chinese subjects chose this order as well, and 15% of Indian participants did the same. The Nepali group had a 20% rate of choosing this answer.[8] In total, 24% of all subjects chose [opinion + size + color]. While this result was greater than the results of the previous two correct options, it was still a meager percentage of the forty-two subjects.

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[8] Nepali results must be understood from the perspective that the Nepali sample size consisted of only five subjects; hence, the "twenty percent" was really only one student's answer.
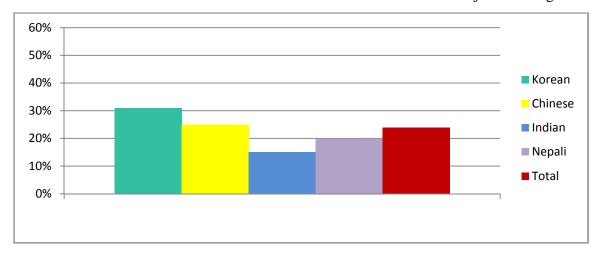
Figure 5. Opinion + size + color.

Most-commonly-used Incorrect Progressions

Within the sets of incorrect adjective patterns, there were certain progressions that, while inaccurate, were chosen by a high percentage of subjects. These progressions were as follows: "American tall wet boy" [origin + size + condition], "yellow young dirty dog" [color + age + condition], "young yellow dirty dog" [age + color + condition], "green wide beautiful tree" [color + size + opinion], and "wide green beautiful tree" [size + color + opinion].

1. (Origin + size + condition). "American tall wet boy" accounted for exactly half of the answers given by all the subjects studied. Fifty percent of Korean students gave this answer, as well as 50% of Chinese subjects. Over half (54%) of Indian participants gave this progression as the best, and 40% of Nepali students chose this order. This particular order of adjectives was the single most predominant set of errant linear adjective order in the three-category sentences.
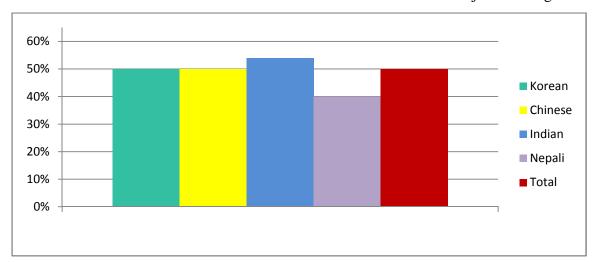
Figure 6. Origin + size + condition.

2. *[Color + age + condition]*. This error progression was one of the two most common choices for the sentence "Scruffy is a dirty young yellow dog." Equaled in frequency by its counterpart [age + color + condition], this option was chosen by nearly 44% of Korean subjects and 38% of Indian subjects. Interestingly enough, no Chinese subjects chose this, and only one Nepali subject selected this answer. In total, the adjective order "yellow young dirty dog" was used by about 31% of all participants.
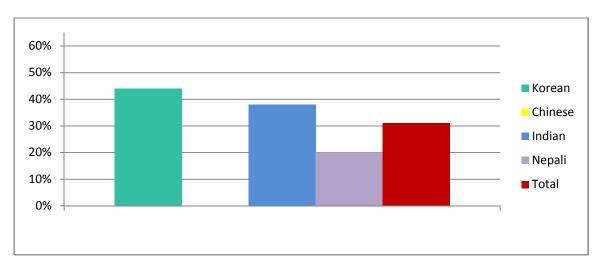
Figure 7. Color + age + condition.

3.   [Age + color + condition]. This sequence, "young yellow dirty dog," was also used by 31% of all the members of the study. Over 60% of the answers for the sentence dealing with condition, age, and color were directed toward these two progressions. Only 12.5% of the Korean subjects selected this choice, and 23% of Indian participants did the same, while 62.5% of the Chinese subjects selected this answer; the Nepali subjects followed closely with 60%.
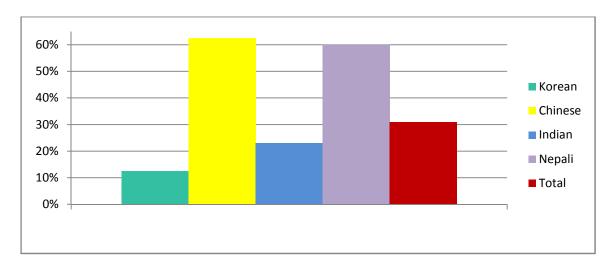
Figure 8. Age + color + condition.

4.   [Color + size + opinion]. Out of the six logically possible answers for the sentence "The tree is a beautiful wide green tree," three patterns gained significant responses. One was the correct pattern, with 24% of the answers, but the other two each out-ranked the right order. "Green wide beautiful tree" had the second highest percentage of answers, with one quarter of the Korean responses, 37.5% of the Chinese answers, and nearly 31% of the Indian answers. However, no Nepali subjects constructed this progression. In total, this structure comprised 26% of the answers for the third sentence.
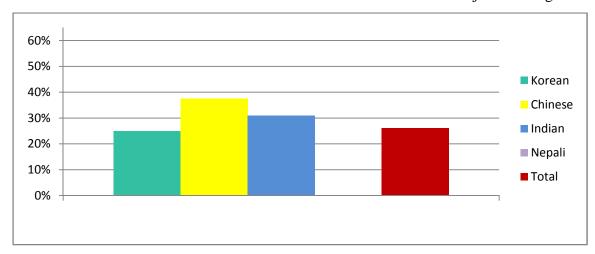
Figure 9. Color + size + opinion.

5. *[Size + color + opinion].* This construction was the most widely used error pattern for the third sentence, with particularly high percentages from the Nepali subjects (60%) and Korean subjects (37.5%). The number of responses from the Chinese subjects for this progression was also high, equaling the Korean results in percentage. The Indian subjects' answers followed with 30%. The percent of all answers for this sequence was 38%.
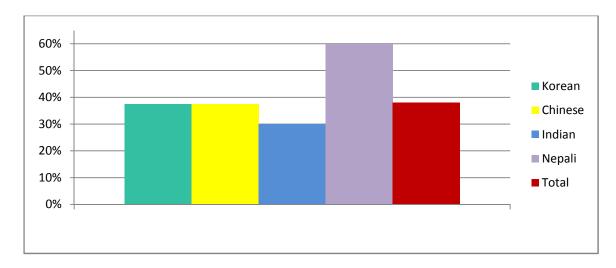
Figure 10. Size + color + opinion.

Seldom-used Incorrect Progressions

1. *[Size + origin + condition].* The incorrect option of "tall American wet boy" had very little response. No Korean or Chinese subjects used it, one Indian participant, and one Nepali participant used that answer, making the total usage less than 5% for the whole sample.
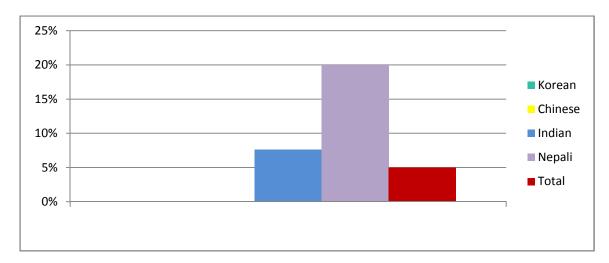
Figure 11. Size + origin + condition.

2. *[Origin + condition + size].* "American wet tall" had a slightly larger response rate than the previous option, but only by 2%. Six percent of the Korean group used this progression, no Chinese participants chose it, 15% of Indian subjects gave that answer, and no Nepali subjects used that particular combination. Only 7% of the subjects used the combination given.
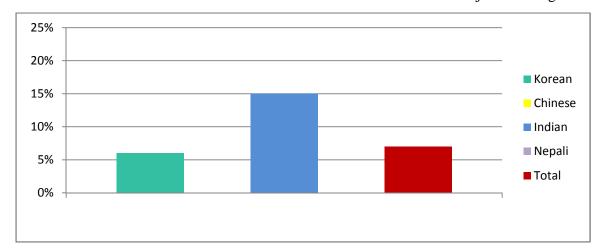
Figure 12. Origin + condition + size.

3. *[Condition + size + origin]*. This option was the second most-often selected mistake pattern of the group. While the total percentage of its usage does not come close to the preferred progression, the selection "wet tall American" had significantly higher results than any of the seldom-used orderings. Nineteen percent of answers from the Korean group fell into this category. This order was used by 13% of the Chinese subjects, 15% of Indian subjects, and 20% of Nepali participants. The total percent of all members of the study that used [condition + size + origin] was 17%.
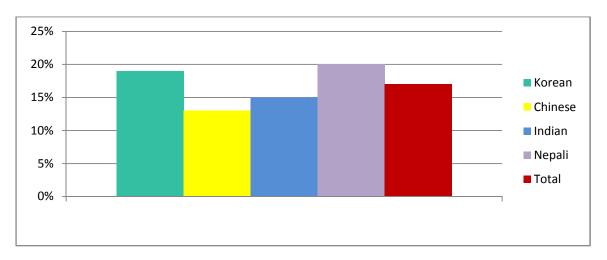
Figure 13. Condition + size + origin.

4. *[Condition + origin + size]*. The choice of "wet American tall" was not entirely ruled out by the research subjects, but not commonly used either. The Korean group had a 12.5% rate for this series, identical to the Chinese subject results. Slightly over 7.5% of Indian participants stated "wet American tall" and the Nepali group's result was twenty percent. The overall result was 12%.
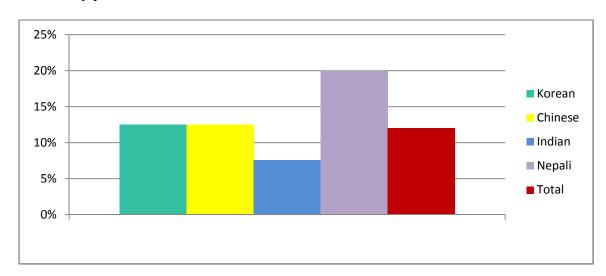
Figure 14. Condition + origin + size.

5. *[Condition + color + age]*.

The seldom-used error patterns taken from the second sentence, "Scruffy is a dirty young yellow dog," began with the reversal of color and age. Nineteen percent of the Korean participants interviewed produced this error. No Indian or Nepali subjects made this mistake, but 12.5% of the Chinese group did. Thus, this particular error was made by only Korean and Chinese subjects; these subjects composed 9.5% of the study.
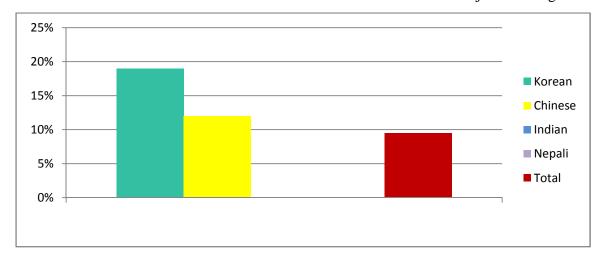
Figure 15. Condition + color + age.

6. *[Color + condition + age].* The only group of subjects that did not choose this error pattern was the Chinese group. The Korean set had 12.5%, the Indian group had 15%, and the Nepali group had 20%. This error pattern, "yellow dirty dog," was different from the correct structure in that the color was moved from closest proximity to the head noun to furthest distance from the noun; the total number who made this error was almost 12%.
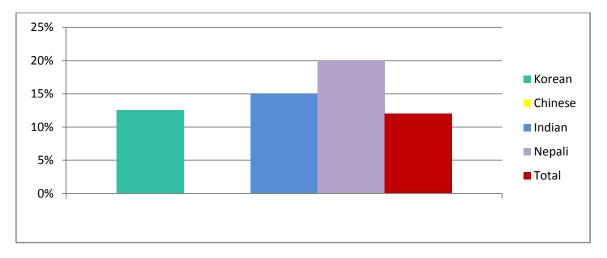

Figure 16. Color + condition + age.

7. *[Age + condition + color].* The final "seldom-used" error pattern within the second sentence was "young dirty yellow dog." No Nepali or Korean students chose this order, but 12.5% of Indian subjects and 25% of Chinese students chose this option. Overall, this pattern made up only 7% of incorrect choices for the second adjective structure.
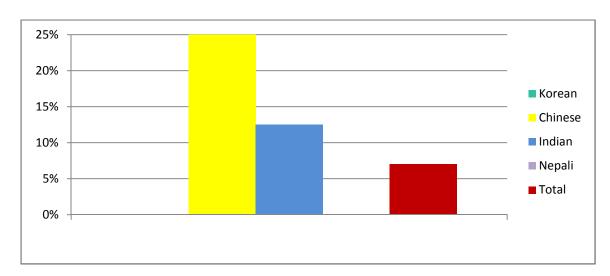
Figure 17. Age + condition + color.

8. *[Color + opinion + size].* This combination of adjectives, "green beautiful wide tree," was used only three times out of the forty-two subjects, giving it a ranking of 7%. No Korean or Chinese subjects chose it, but one Nepali subject did, as well as two Indian subjects.
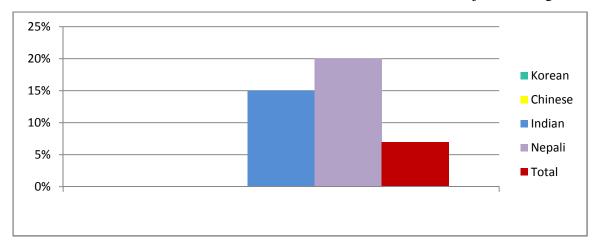
Figure 18. Color + opinion + size.

9. *[Opinion + color + size] and [size + opinion + color].* These two adjective progressions were the least used out of any other progressions, each making up only 2% of all answers given for "The tree is a beautiful wide green tree." The two choices, "beautiful green wide tree" and "wide beautiful green tree" each garnered only one subject's use, the first by a Korean participant, and the second by an Indian subject. The fact that nearly every participant avoided the use of these constructions suggests that while there may be multiple logically possible progressions of adjectives, not all of these progressions are linguistically possible.
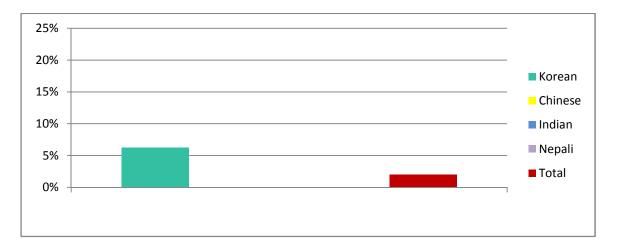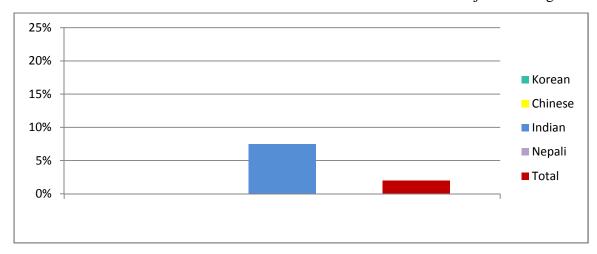

Figure 19. Opinion + color + size.

Figure 20. Size + condition + color.

Discussion

Based on the original hypothesis, it was expected that Korean and Chinese results would coincide. The Indian and Nepali results, while differing from East Asian results, would correspond to each other. Because of this, the charts on the following pages show the comparison between the Korean and Chinese results (Figures 21 and 22) and the comparison of Nepali and Indian results (Figures 23 and 24).
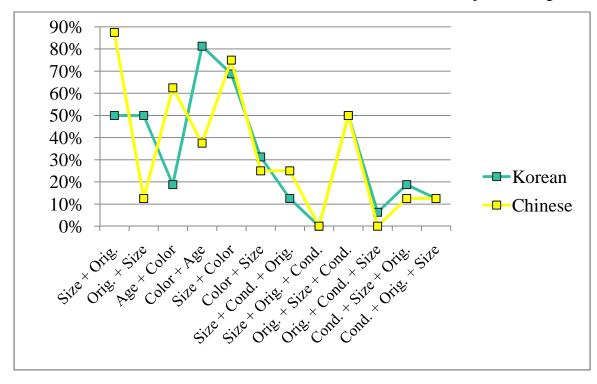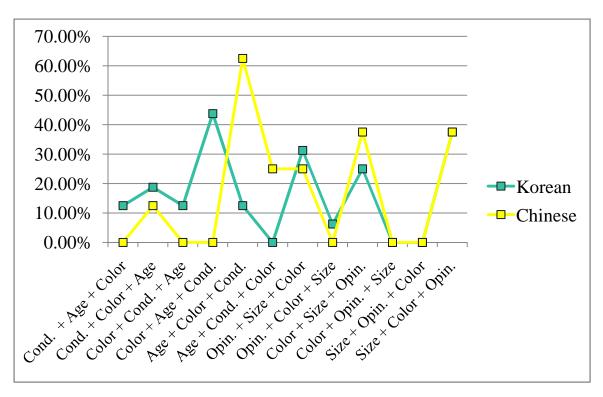
Figure 21. Korean vs. Chinese progressions.

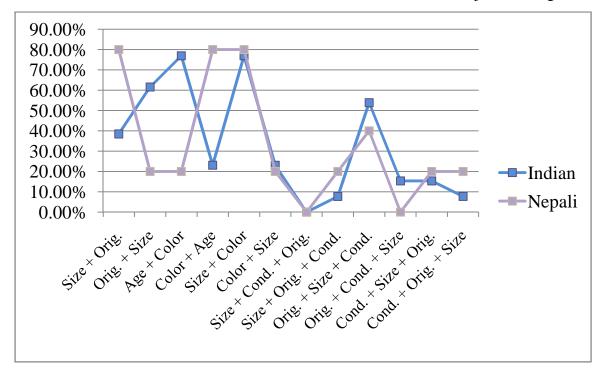

Figure 22. Korean vs. Chinese, cont.

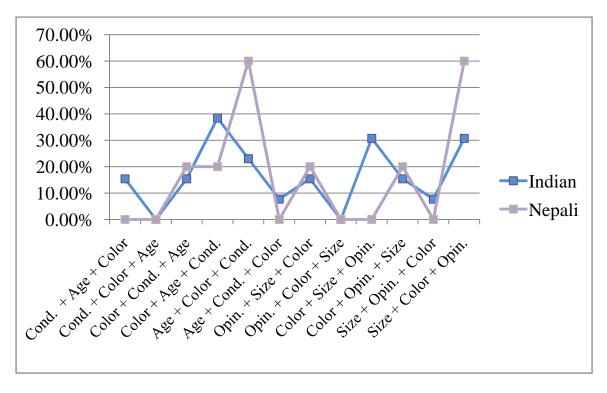*Figure 23.* Indian vs. Nepali progressions.

Figure 24. Indian vs. Nepali, cont.

Analysis of Expected Results

Comparison of Korean and Chinese Results

When analyzing the comparison charts between the Korean and Chinese results, there is strikingly less correlation than was expected. There is a significant difference in the types of response for the first two progressions ("tall American" and "young yellow"), as well as the variety of responses for the progression "dirty young yellow dog." A close connection does exist between the data for "wide green" and the two six-possibility progressions "wet tall American" and "beautiful wide green," particularly in the common error patterns.

Comparison of Indian and Nepali Results

There is significantly less relationship between the Indian and Nepali results in comparison to the Korean and Chinese results. This is quite contrary to the expected hypothetical result. As can be seen in Figures 23 and 24, the only direct correlation between the two groups is in the construction of [size + color], which all four groups tended to agree upon. While the lines in the line graph representation often follow similar directions, the percentages are considerably different.

Analysis of Unexpected Results

Comparison of Korean and Indian Results

When the expected results did not turn out as anticipated, an analysis was taken between the similarities and differences between those language groups predicted to have low correlations. The Korean results and Indian results were, surprisingly, notably similar to each other in certain aspects, while strikingly opposite in other categories. As can be seen in Figure 25, the vast majority of answers (percentage-wise) from each group

correlated highly. However, one sentence combination resulted in almost polar opposite responses from the two groups: the Korean speakers overwhelmingly gave incorrect answers for the [age + color] structure, while the speakers of Indian languages had an outstanding majority in favor of the correct answer. One interesting observation among the six-possibility constructions was that both the Korean and Indian subjects favored certain incorrect orderings over other options. For example, in the sentence "Ben is a tall wet American boy," no Indian subjects and very few Korean subjects chose the correct progression, [size + condition + origin], while about 50% of each group chose the progression [origin + size + condition], which reads, "Ben is an American tall wet boy." This pattern of similarity between incorrect options held throughout the answers, with one exception being the construction [condition + color + age] – although close to 19% of the Korean subjects chose this answer, not one Indian participant did.
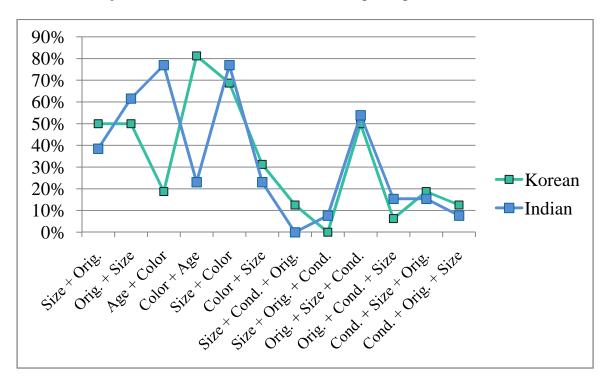

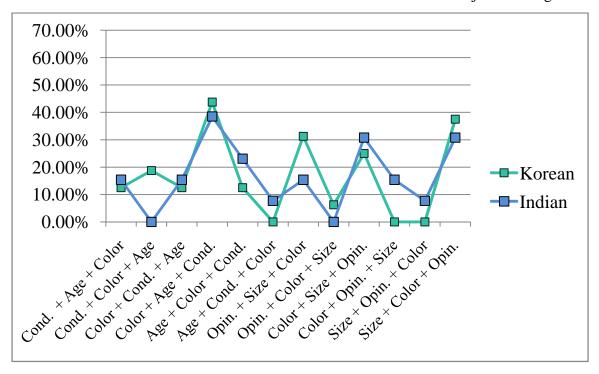*Figure 25*. Korean vs. Indian progressions.

Figure 26. Korean vs. Indian, cont.

Comparison of Chinese and Nepali Results

After the distinct correlation between the Korean and Indian results was recognized, an analysis was taken of any possible similarities between the other two groups, the Chinese and Nepali. While there did not appear to be as much correlation between these two as there was between the Indian and Korean groups, there still emerged distinct similarities. Interestingly enough, as can be seen in Figures 27 and 28, the one two-possibility progression that resulted in opposite responses was the same one that stood out from the correlations between the Korean-Indian results: [age + color]. The Chinese group produced this correct structure more often than the Nepali subjects.

Among the sets of six logically possible choices, the Chinese and Nepali groups had a noticeable similarity in their most highly chosen answers, all of which happened to

be incorrect progressions. The first, [origin + size + condition], composed 50% of the Chinese subjects' answers for that sentence, and 40% of the Nepali group's answers. This particular choice was significant in the study because every language group studied used it as their predominant answer. Another significant correlation between the Nepali and Chinese responses was [age + color + condition]. While the two groups' other incorrect selections in that progression differed over a wide range, [age + color + condition] made up 63% of the Chinese answers and 60% of the Nepali answers. The final set, "The tree is a beautiful wide green tree," resulted in another correlation, to a lesser degree. Sixty percent of the Nepali participants chose [size + color + opinion], while a significant percentage of the Chinese subjects chose the same option (38%). However, another 38% of the Chinese subjects chose the progression [color + size + opinion], which none of the Nepali subjects chose. From this we see that the majority of the Chinese results for that progression was evenly divided between [size + color + opinion] and [color + size + opinion], while the majority of the Nepali subjects were in favor of [size + color + opinion].
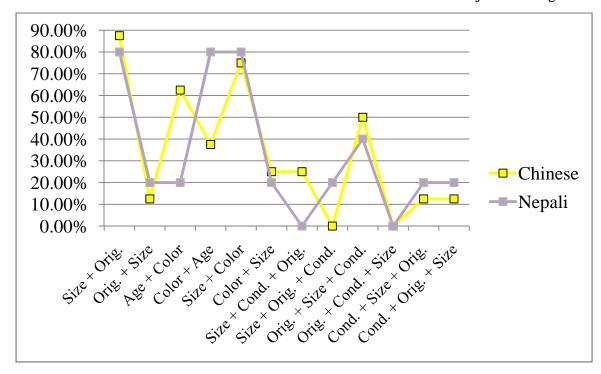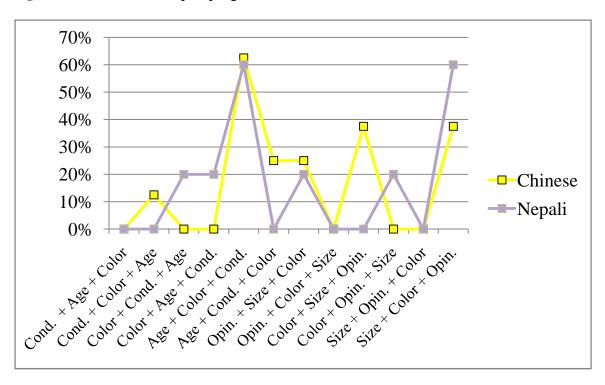
Figure 27. Chinese vs. Nepali progressions.

Figure 28. Chinese vs. Nepali, cont.

Comparison of Correct Results vs. Highest Incorrect Results

As can be seen throughout the results of this study, the correct English progression for each frame sentence was generally avoided by subjects of all four linguistic backgrounds. In the two-possibility progressions, this was not as much the case as in the six-possibility progressions, but enough subjects strayed from the correct order to create a significant mistake pattern. Figure 29 shows that the correct order, "tall American," was actually chosen more often than the alternate answer "American tall." Answers were split fairly evenly between incorrect and correct for "young yellow," but the vast majority of subjects from all groups chose the right progression "wide green" as opposed to "green wide."

In the six-possibility progressions, the study participants veered far from the correct choices. As can be seen in Figure 30, a very small percent of participants chose "tall wet American," while a significant majority chose the incorrect construction "American tall wet" over the other five logically possible options. The second sentence, "Scruffy is a dirty young yellow dog" also had an unimpressive response rate for the correct order. Interestingly enough, this sentence and the sentence "The tree is a beautiful wide green tree" each had two incorrect options that were highly favored. The top two inaccurate choices for the former were "yellow young dirty" and "young yellow dirty." For the final sentence, the top three chosen answers included the correct answer, "beautiful wide green," and two wrong answers – "green wide beautiful" and "wide green beautiful."
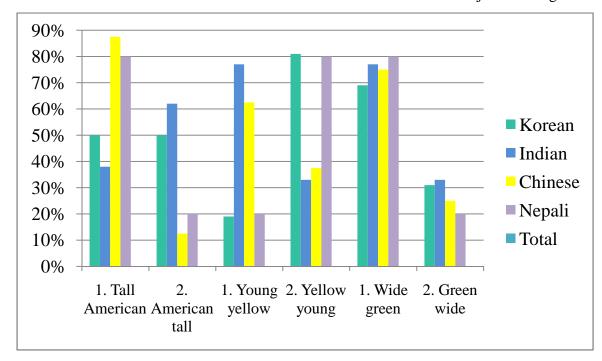
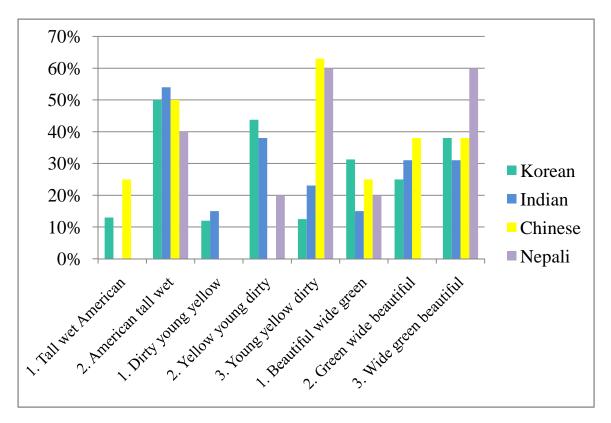*Figure 29.* Correct orders vs. most commonly used error patterns

Figure 30. Correct order vs. most commonly used error patterns, cont.

Conclusion

Summary

Upon reviewing the results of this research project, it becomes clear that the initial hypothesis about proximity in geographic region and language grouping affecting performance in L2 adjective ordering was not borne out. It was originally predicted that the results from the Korean and Chinese subjects would be alike because of the closeness between their linguistic backgrounds, and it was predicted that the same would hold true of the Indian and Nepali speakers. However, this turned out not to be the case, as the Korean and Indian results were far more similar than the expected end and the Chinese and Nepali results had interesting correlations as well. Based on these findings, it does appear that the postulation on there being no universal adjective ordering system was correct, because the results were not constrained by language families or backgrounds. The results indicate that geography and linguistic background do not factor into the choices L2 learners of English make in pre-nominal adjective ordering.

Limitations of the Study

This study was limited in several ways; the most substantial limitation lies in the shortage of participants. It is acknowledged that the results that emerged may well have been different had a larger study been possible, and that the study would have been better supported had there been an increased number of subjects from each linguistic background. In spite of these factors, definite patterns emerged from the results that were obtained through this pilot study.

Because of the limitations of this study, this thesis focused on preliminary data taken. There are multiple ways that this study could have been analyzed, including the

reasons for patterns within a language group. Another exception that must be taken into account is the possibility that subjects merely ordered adjectives in the order they appeared in the story. If this was the case, then subject's answers would have been affected, and may have distracted from the true results.

Possibilities for Expansion

It has already been stated that this study would have been better supported by a larger sample size. Another expansion within this would be to have and equal number of Gujarati and Hindi speakers, and compare them separately; while the two are considered to be mutually comprehensible, there may be differences in how speakers of each interpret adjective ordering. Because this was a pilot study, the categories tested were basic; thus, it might prove beneficial to examine more of Svatko's categories, and see where the differences lie between language groups for other adjective sequences. An interesting extension of this study would be to discover how various Romance and Germanic languages would compare to those of the language groups examined in this study. By extending the study in this manner, teachers of English as a Second Language may be able to pinpoint areas that are challenging for students from varying linguistic backgrounds, and be able to better develop strategies for teaching linear adjective ordering.

Concluding Thoughts

The research documented in this thesis clearly shows that the English adjective ordering scheme is merely a linguistic convention, rather than a universally innate ordering system. It also indicates that speakers of Asian languages from the same linguistic families are not necessarily linked in grammatical reasoning when acquiring a

second language. While there exist multiple possibilities for study and analysis in this field, this pilot study demonstrates that linguistic families are not primary factors in determining how L2 learners of English construe adjective placement. Pre-nominal adjective ordering exists in English as linguistic tradition, and is not related to other languages' adjectival traditions.

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