THE DEVELOPMENT OF SPEAKING/WRITING VARIABILITY IN NARRATIVES OF NON-NATIVE ENGLISH SPEAKERS[1]

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This study investigates target language variability between speaking and writing in the second language acquisition of non-native English speakers. Spoken and written narratives from three groups of non-native English speakers, representing three levels of English proficiency, are analyzed and compared to the spoken and written narratives of native English speakers.

Eleven linguistic features, representing three dimensions of the oral/literate continuum, are examined with the multi-feature/multi-dimensional approach developed by Biber (1986). Results indicate that as narrators advance in English proficiency, they develop more abstract content and more reported style in both speech and writing. Conversely, both speech and writing become more interactive as speakers develop in English proficiency. Results indicating variability between spoken and written narratives show that non-native speakers develop systematically toward native English variability between speaking and writing.

INTRODUCTION

Little interlanguage research investigates the ways in which non-native speakers vary their discourse to accommodate different contexts. This type of discourse *variabilility* is usually studied by sociolinguists. Previous studies into non-native speaker interlanguage are dominated by a focus on the variation between correct vs. incorrect target language forms (Tarone, 1985, 1988; Tarone & Parrish, 1988; Schachter, 1986; Ellis, 1986, 1987; Ellis & Roberts, 1987; Preston, 1989). We must distinguish between these studies of interlanguage *variation* and the study of target language *variability* in the discourse of non-native speakers, which is the topic of this paper. While each type of study investigates non-native speaker interlanguage, studies of *variation* focus on correct versus

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incorrect target language forms; studies of *variability* focus on discourse that is inherently variable in the target language, that is, discourse that varies depending upon the context in which it is produced.[2] In this study I focus on discourse variability which is standard in the target language and on how non-native speakers acquire and develop this variability. While little empirical evidence about this sort of interlanguage discourse variability and its development is available, studies into interlanguage variation illuminate some aspects of this topic.

In one study, Tarone (1985) finds that non-native speakers' attention to form (careful attention in a written test and more relaxed attention in a narrative) influences interlanguage variability. In another study, Schachter (1986) examines the functions of four forms of negation in one non-native speaker's usage and finds a "surprising regularity in his pairing of forms and functions, with a strong tendency to associate with each function a very limited set of syntactic forms and to associate with each syntactic form a very limited set of functions" (p. 131). Ellis (1987) finds that "the influence of the target language seems to be most apparent in planned discourse where there is opportunity to attend to form" (p. 14). These conclusions support the ideas that target language contextual variability is acquired along with the target language itself and that planned discourse elicits interlanguage which is more like the target language than does unplanned discourse.

Sociolinguists have established that speakers use different linguistic variables for different discourse contexts (Labov, 1972; Kroch & Small, 1978; Trudgill, 1975). Specifically, linguistic choices are determined by the context of the discourse interaction, that is, factors such as the relationship between speaker and addressee or the type of discourse (formal or casual, spoken or written, etc.). Other factors that determine linguistic choices are the speaker's age, race, sex, socio-economic status, and education level. Thus, that speakers use different linguistic resources for different contexts means that they have the ability to appropriately vary their linguistic choices to fit the context. This *variability* between discourse contexts (specifically the variability between speaking and writing) is studied here, with the assumption that non-native speakers, as well as native speakers, vary their linguistic choices according to discourse context.

In order to study variability between contexts, the contexts must be controlled and research into these contexts well-established. Discourse analysis research provides many studies that describe the relationship between speaking and writing (Chafe, 1982; Tannen,

1982, 1984; Beaman, 1984; Chafe & Tannen, 1987; Biber, 1988) as well as the characteristics of the narrative genre (Labov & Waletzky, 1967; Labov, 1972).

The studies of speaking and writing focus on such aspects as the degree of complexity, explicitness, planning, and involvement inherent in spoken and written discourse. Many of these studies focus on the narrative genre (Tannen, 1982, 1984; Beaman, 1984); Tannen (1982) argues that written narrative combines the involvement of speech with the integration of writing. From these aspects of speaking and writing, Chafe (1982) introduces the concept of discourse dimensions. Biber (1986, 1988) develops this idea of discourse dimensions by identifying three dimensions in English discourse: (1) interactive versus edited text, (2) abstract versus situated content, and (3) reported versus immediate style. The present study uses Biber's method of analysis, and consequently it is discussed in detail below.

In Biber's (1988, pp. 47-58) review of the literature into the relationship between speaking and writing, he finds six generalizations. Among these are that writing is

1. less personally involved than speech, and more detached and abstract than speech (Blankenship, 1974; Chafe, 1982; Chafe and Danielewicz, 1986);

2. more deliberately organized and planned than speech (Ochs, 1979; Rubin, 1980; Akinnaso, 1982; Brown and Yule, 1983; Gumperz, Kaltman & O'Connor, 1984).

However, Biber argues that these generalizations are not substantiated because they are based on studies in which discourse contexts have not been controlled.

In this study I control for discourse contexts by investigating only spoken and written narratives. I control for other contextual factors by eliciting data in the same way from students of similar ages in the same environment. Additionally, I control for target language variability by comparing the spoken and written narratives of native speakers to those of non-native speakers. None of the interlanguage studies discussed above account for target language variability, nor do they control for the target language accuracy against which they measure interlanguage variation. But Wolfson (1982) stresses that researchers of language acquisition must compare non-native discourse to native discourse in order to analyze non-native discourse accurately.

METHODS

This section describes the subjects who participated in the study, the data elicited from these subjects, and how the results of Biber's dimensional analysis are used to evaluate this data.

Subjects

Data from three groups of non-native English speakers were collected and compared to similar data from native English speakers, who served as a control group for this study.

Non-Native English Speakers

Three levels of non-native English speakers were used in this study. These levels represent three separate interlanguage systems as well as three levels of English proficiency--beginning, intermediate, and advanced. None of these subjects were raised in the United States. Once these groups were established, volunteers from each group were used as subjects. A total of 64 non-native speakers participated by speaking and/or writing English narratives.

Beginning level: Beginning non-native English speakers came from English-as-a-second-language (ESL) classes sponsored by the city of College Station, Texas. Many of these students were spouses of students and professors at Texas A&M University, who had lived in the United States for less than three months.

Intermediate level: Intermediate non-native English speakers came from the English Language Institute (ELI) at Texas A&M University. These students had TOEFL scores of 550 or higher, but they had not passed the oral and/or written English proficiency tests required before being allowed to take a regular university courseload.

Advanced level: Advanced non-native English speakers came from international classes of freshman English composition at Texas A&M University. These students had passed the oral and written English proficiency tests required for taking a regular university courseload.

Native English Speakers

The native English speakers were enrolled in freshman English composition classes at Texas A&M University. All of these subjects were raised in the United States. A total of 23 native speakers participated.

Narrative Data

The narrative genre was chosen for this study because a broad base of previous research concerns narratives (Labov & Waletzky, 1967; Labov, 1972; Tannen, 1982, 1984), and so the genre is well-defined. Some of this research concerns spoken and written narratives (Tannen, 1982, 1984). In addition to this base of research, narratives are not only relatively easy to elicit, they are a good indicator of language proficiency because the genre itself is relatively transparent; that is, almost all of my subjects had a story to tell and were comfortable telling it.

Since both spoken and written narratives were collected from each subject, the corpus totals 164 narratives. All spoken narratives were elicited under similar circumstances (in a small room with me and a tape recorder as audience) and by the same prompt: What was your most frightening experience? Labov (1972) points out that this prompt is likely to yield relatively unselfconscious, fluent speech. The spoken narratives elicited were usually between one and three minutes in length.

When they told their spoken narratives, the subjects did not know that written narratives would later be asked for. Written narratives were collected 2-3 weeks after the spoken narratives. Subjects were directed to write down the same experience they had told the researcher before, so the spoken and written narratives from any one subject are on the same topic. This method of collecting comparable spoken and written narratives was first used by Tannen (1982).

Eight categories of narratives thus form the data for analysis. The number following each category represents the number of narratives included in that category:

1. spoken non-native speaker--beginning (21)
2. spoken non-native speaker--intermediate (22)
3. spoken non-native speaker--advanced (21)
4. spoken native speaker (20)
5. written non-native speaker--beginning (20)
6. written non-native speaker--intermediate (17)
7. written non-native speaker--advanced (20)
8. written native speaker (23)

The number of texts differ within subject groups because some students who participated in the elicitation of spoken narratives were not available to provide written narratives, and vice versa for the native speakers.

Application of Biber's Analysis to the Present Study

Biber (1986, 1988) developed a quantitative method of textual analysis that he calls "multi-feature/multi-dimensional analysis." He used this method, which involves factor analysis, to correlate 41 linguistic features with functional dimensions in discourse. Through statistical analysis, he developed three primary discourse dimensions to describe a total of 587 texts (1986, p. 392). Biber began (and ended) his analysis with no assumptions about overall similarities or differences between speaking and writing. His is the only objective quantitative study of the differences between speaking and writing; since he did find discernable differences between speaking and writing, these constitute a reproducible measure of the variability between speaking and writing contexts.

In the present study, I use the results Biber obtained from his analysis to describe the variability between speech and writing in narratives produced by non-native and native English speakers. I base my analysis on the three discourse dimensions described in Biber (1986). Biber's 1988 study is an expansion of his 1986 work; he extended his discourse dimensions to six and based these dimensions on 67 linguistic features, 26 more features than the 1986 study. Overall, however, Biber (1988) concludes that

> the major aspects of the 1986 dimensions are replicated and confirmed by the present [1988] analysis. Specifically, in both analyses there are three major dimensions that mark (1) interactive, involved discourse versus edited, informational discourse; (2) formal, abstract information versus non-abstract

> types of information; and (3) reported, narrative discourse versus non-narrative types of discourse. (p.119)

Thus, since the fundamental results of the 1986 study were replicated in the 1988 study, my analysis focuses on Biber's 1986 findings. Because I examine only 11 of Biber's original 41 linguistic features, Biber's 1986 dimensions are scaled more closely to the scope of my analysis than is his 1988 study of 67 features. Analyzing 11 features in the present study is justified by the similar results of Biber's two studies. In the following subsections, the basis of Biber's analysis is described, which involves selection of features and text corpora, factor analysis, and determination of dimensions. After describing Biber's analysis and results, I will explain how these results were used for the analysis of my narrative data.

Selection of Features

Biber selected linguistic features for analysis based on previous research into the differences between speaking and writing. His 1986 results were based on 41 linguistic features, such as yes/no questions, contractions, nominalizations, and adjectives. Even though Biber used features that had discourse functions previously associated with them, he did not assume that these previously described functions were valid. Only through factor analysis and subsequent dimensional analysis of the frequency of the features occurring in a substantial text corpus did he assign discourse functions to the features he examined.

Text Corpora

Biber (1986) used two separate corpora for his text samples. Together these corpora included 587 text samples, comprising one and one-half million words and 16 major text types. Biber examined all of these texts with respect to the 41 features; his is by far the most broadly based quantitative study ever accomplished in the investigation of the relationship between speaking and writing.

Factor Analysis

Biber (1988) used factor analysis as "the primary statistical tool of the multi-feature/multi-dimensional approach to textual variation" (p. 79). In this analysis, frequency counts of linguistic

features occurring in the texts of the corpora were used to identify sets of features that co-occur within these texts; thus Biber (1988) assumed "that frequently co-occurring linguistic features have at least one shared communicative function" (p. 63). The frequent co-occurrence of a group of linguistic features in texts thus indicated some underlying function that those features share. From this assumption, Biber then used these sets of co-occurring features to determine a functional discourse dimension underlying each set.

In addition, factor analysis yielded values of factor loading for each feature; that is, each feature which helped make up the set of features constituting one factor has a factor-loading value. Higher factor-loading values indicate that features "are better representatives of the dimension underlying the factor" (Biber, 1988, p. 81).

Determination of Dimensions

Dimensions are distinguished from *factors* in that a dimension represents the underlying function or relationship between a set of features; a factor is merely the set of co-occurring features. Dimensions, then, are factors that have been interpreted. Biber (1988) states that dimensions have three distinctive characteristics: (a) no single dimension will be adequate in itself to account for the range of linguistic variation in language; rather, a multi-dimensional analysis is required; (b) dimensions are continuous scales of variation rather than dichotomous poles; and (c) the co-occurrence patterns underlying dimensions are identified empirically rather than proposed on an a priori functional basis (p. 24).

By examining the relationships among the features within each factor and between these features and the texts in which they originate, Biber ascribed a functional discourse dimension to each factor (or set of co-occurring features). Thus, from the factor analysis and examination of the textual relationships of features, three discourse dimensions are used in my study:

1. edited versus interactive text

   Edited text is concise, possibly indicating more planning than interactive text. Features that indicate interaction are "characterized as verbal, interactional, affective, fragmented, reduced in

form, and generalized in content" (Biber, 1988, 105).

2. abstract versus situated content

   Abstract discourse focuses on ideas or thoughts and is "semantically complex"; often the "active agentive participant" is lost, and this results in the "promotion of a more abstract concept" (Biber, 1986, 395). Situated discourse refers "directly to an external situation" and is more concrete than than abstract discourse (Biber, 1986, 396).

3. reported versus immediate style

   Reported discourse refers to a removed situation and is narrative in nature. Immediate discourse has little reference to a removed situation.

I applied Biber's results, the defined dimensions of discourse, to the present study by assuming that these primary dimensions are valid for English discourse. I then selected a group of 11 features to represent the three dimensions. The linguistic features chosen exhibit high factor loadings for each dimension; that is, the features analyzed here are the strongest representatives of the dimensions underlying the factors. (They were also the most practical features to analyze for the narrative genre, as some features representing the dimensions, such as yes/no questions, were unlikely to occur in narratives.) The features analyzed, according to the dimensions they represent, were as follows:

Dimension 1: edited versus interactive text

1. pro-verb *do* (indicates interactive text)
2. pronoun *it* (indicates interactive text)
3. general hedges (indicate interactive text)
4. *that* clauses (indicate interactive text)

Dimension 2: abstract versus situated content

5. nominalizations (indicate abstract content)
6. prepositions (indicate abstract content)
7. place adverbs (indicate situated content)
8. time adverbs (indicate situated content)

Dimension 3: reported versus immediate style

9. past tense (indicates reported style)
10. third-person pronouns (indicate reported style)
11. present tense (indicates immediate style)

By analyzing my narrative data with respect to these features, I determined patterns for non-native and native English speaker variability between spoken and written discourse. Since Biber defined these dimensions of discourse to contain the features described above, I was able to apply my narrative data to these dimensions to see how these dimensions describe my eight narrative types. I compared the dimensional descriptions to see if a systematic pattern could be observed from the interlanguage system of the beginning non-native speakers to the target language system of native speakers. In other words, these dimensional descriptions allowed me to determine the variability between the spoken and written discourse of one interlanguage system; for instance, variability between beginning non-native speakers' spoken and written discourse could be quantified and compared to this variability in the other levels. To accomplish this, factor values were calculated first for each narrative and them for each narrative type. Factor values were determined by counting the features in each narrative. This procedure is detailed below.

Determination of Factor Values

For each narrative: The sum of the number of features within each factor determined the three factor values for each narrative. dimensions are equivalent to factors in this study, since dimensions are factors which Biber interpreted.[3] Example 1 shows the numbers of each feature and the factor values for a beginning non-native speaker spoken narrative. The features for Dimension 1 (edited versus interactive text) are italicized in the narrative. This narrative contains one *that* clause, one pro-verb do, one pronoun it, and two general hedges; all of these features indicate interaction, so

the number of features are merely added together, and the factor value for Dimension 1 is 5, as shown. The features for Dimension 2 (abstract versus situated content) are underlined in the narrative. This narrative contains no nominalizations, 12 prepositions, so place adverbs, and three time adverbs; since nominalizations and prepositions indicate abstract content, and place and time adverbs indicate situated content, the three time adverbs must be subtracted from the 12 prepositions. The factor value for Dimension 2 is therefore 9. The features for Dimension 3 (reported versus immediate style) are in boldface in the narrative. This narrative contains 12 past tense verbs and 15 third-person pronouns; these features indicate reported style. This narrative also contains eight present tense verbs, which indicate immediate style, so these eight present tense verbs must be subtracted from the sum of 12 past tense verbs and 15 third-person pronouns. The factor value for Dimension 3 is thus 19, as shown.

In determining factor scores for this narrative, as well as for all the others, I did not count features that were repeated together or which were produced when the subject seemed to be stuttering; so in line 3 of Example 1, for instance, although the subject says he came twice, I only counted on third-person pronoun (he) and one past tense verb (came). I counted features in this way to avoid false factor values. In this narrative alone, there are none repeated phrases (lines 3, 9, 10, 11, 12, 12-13, 13, 13-14, 15). I also deleted anything I said during the narrative.[4]

Example 1: Beginning NNS Spoken Narrative

1 my mas most frightening history **was** when
2 my father **crashed** with another car and this **was** um 1946
3 uh *more or less* one week before **he came** he came to to my country
4 because **he was** traveling around the Europe and
5 this **was** in December 25
6 one car **came** to the other place and **take** a curve
7 and my father **was** driving **his** car and
8 and crash and and my father **broke his** leg
9 but the Red Cross **came** for **him** after two hours after two hours and t**hey**
10 they **suffer** very much because **they can** they can they **couldn't** move
11 because he **he had his** leg broke
12 and since the crash until now **he can't** walk

13 can't walk very good because uh his **his** leg **is** not good
14 *its* not good until now and *maybe*
15 **he needs** to he needs another surgery but now **he's** traveling in Spain
16 because **he *doesn't*** know *that **he needs** another another surgery*
17 that's all

Factor 1	Factor 2	**Factor 3**
1 *that* clause	0 nominalizations	12 past verbs
1 *do* pro-verb	12 prepositions	+15 third per.pro.
1 *it* pronoun	0 place adverbs	27
+2 general hedges	- 3 time adverbs	- 8 present verbs
5 = Factor 1 value	9 = Factor 2 value	19 = Factor 3 value

For each narrative type: Once the dimension values for each narrative were determined, mean dimension values for each narrative type were calculated. This calculation involved eight steps. The following example calculations are for Dimension 1 for the beginning non-native speaker written narrative type:

1. Determine sum of all Dimension 1 values.

   My corpus contains five beginning non-native speaker written narratives. Dimension 1 values for these five narratives are 7, 0, 2, 2, and 0. I added these values to get a sum of 11:

   7+0+2+2+0 = 11 = sum of Dimension 1 values

2. Determine mean Dimension 1 value.

   I divided 11 by the number of beginning non-native speaker written narratives, 5:

   11/5 = 2.2 = mean Dimension 1 value

Because not all of the sets of narratives were the same length (native speakers write more than non-native speakers, for example), it would be misleading simply to compare average numbers of times a set of features occurred. The scores were therefore normalized so

they can be compared to Dimension 1 values for other narrative types. The remaining steps show this process:

3. Find the sum of the lengths of narratives in the narrative type.

   The sum of the lengths of the five beginning non-native speaker written narratives is 658 words.

4. Determine the mean narrative length.

   I divided 658 by the number of narratives, 5:

   658/5 = 132 words = mean narrative length

5. Find the longest mean length of the eight narrative types.

   The mean length of the longest narrative type is 445 words.

6. Calculate normalization value for the narrative type.

   For the beginning non-native speaker written narrative type, the normalization value is calculated by dividing 445 words, the length of the longest narrative, by 132 words, the mean beginning non-native speaker written narrative length:

   445/132 = 3.37 = normalization value

7. Determine the normalized mean dimension value for the narrative type.

   This value is determined for the beginning non-native speaker written narrative type by multiplying the normalization value for this narrative type, 3.37, by the mean Dimension 1 value for this narrative type, 2.2:

   (3.37) x (2.2) = 7.4

8. Round the normalized mean dimension value to the nearest whole number:

   7.4 rounds down to 7 = normalized mean Dimension 1 value

The normalized mean dimension values for each narrative type were then compared to determine the results of this study.

RESULTS

Interactive versus Edited Text

Figure 1 shows the distribution of narrative types for Dimension 1, interactive versus edited text. The units in Figure 1 are the mean normalized number of features indicating interaction. Figure 1 shows that, in general, speaking is more interactive than writing for both native and non-native speakers. All spoken narrative types, except the beginning non-native spoken narratives, tend toward the interactive end of the scale, while all written narrative types tend toward the edited end of the scale.

Further, the distribution in Figure 1 suggests that subjects who are more proficient in English tend toward interactive discourse in both speaking and writing. This trend is most pronounced for the spoken narrative types; beginning non-native spoken narratives are the least interactive (at 13) of all the spoken narrative types, while intermediate non-native spoken narratives (at 20) are more interactive. Advanced non-native and native English spoken narratives (at 34 and 36, respectively) are much more interactive than both beginning and intermediate non-native narratives.

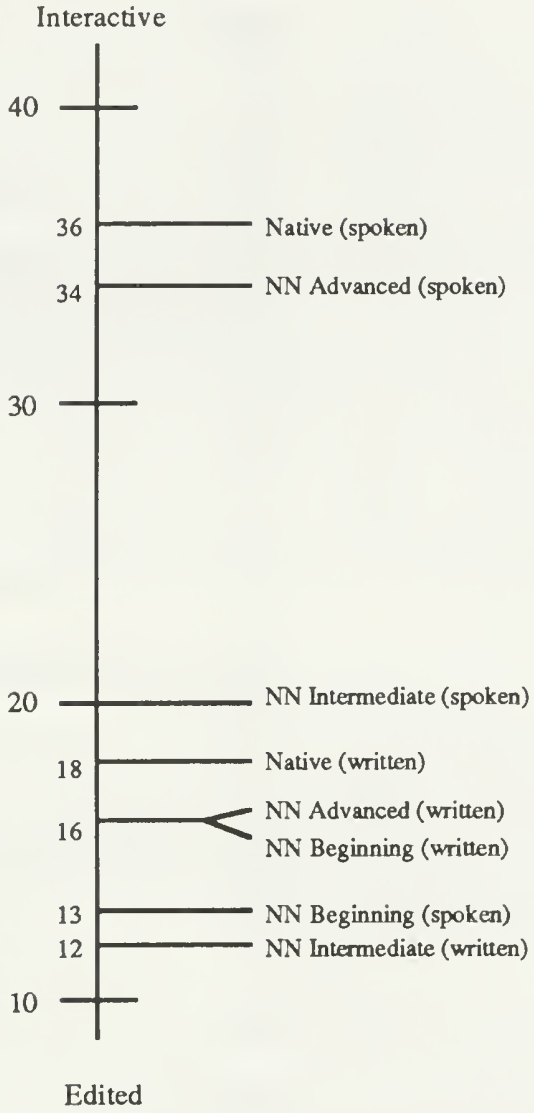

Figure 1: Dimension 1: Interactive versus edited text

The written narratives exhibit a similar interactive trend, although it is much less pronounced and more ambiguous than the trend of the spoken narratives. Clearly, the native English written narratives (at 18) are the most interactive of the written narratives. Advanced and beginning non-native written narratives (both at 16) follow the native English written narratives in interaction, while intermediate non-native written narratives (at 12) are the least interactive of all the narrative types.

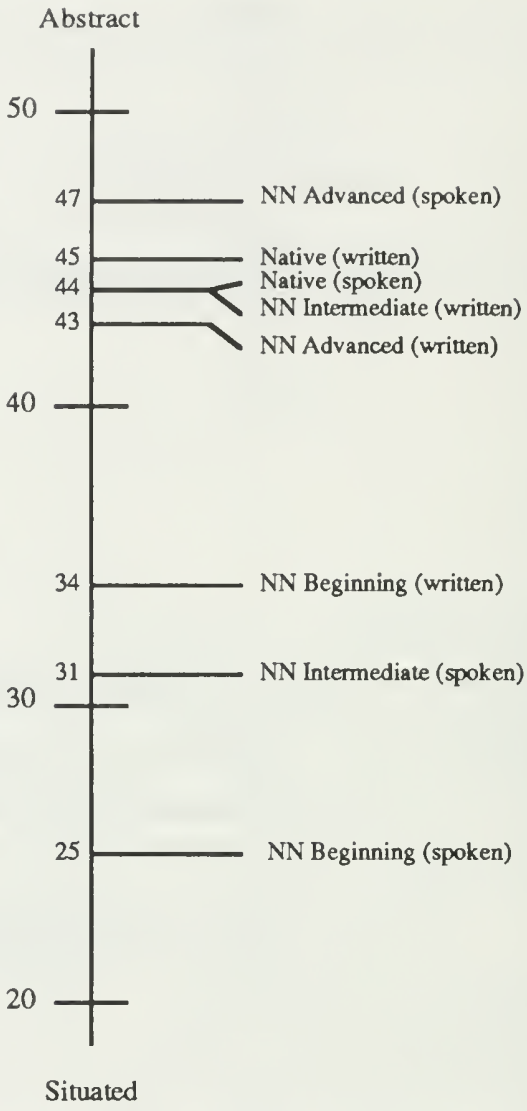

Figure 2: Dimension 2: Abstract versus situated content

Abstract versus Situated Content

Figure 2 shows the distribution of narrative types for Dimension 2, abstract versus situated content. The units in Figure 2 are the mean normalized number of features that indicate abstraction less the mean normalized number of features that indicate situation. As Figure 2 shows, the distribution of narrative types for Dimension 2 does not indicate any clear separation between speaking and writing the way the distribution for Dimension 1 does.

The Dimension 2 distribution in Figure 2 does show, however, that subjects who are more proficient in English tend toward abstract discourse in both speaking and writing. Again, this trend is most pronounced for the spoken narrative types; beginning non-native spoken narratives (at 25) are the least abstract of all the spoken narrative types, while intermediate non-native spoken narratives (at 31) are more abstract. Native English and advanced non-native spoken narratives (at 44 and 47, respectively) are the most abstract of the spoken narratives.

The written narrative types exhibit a similar trend, although this is indicated most decisively only by the large gap between beginning non-native written narratives (at 34) and the other three narrative types; advanced non-native written narratives (at 43), intermediate non-native written narratives (at 44), and native English written narratives (at 45).

Reported versus Immediate Style

Figure 3 shows the distribution of narrative types for Dimension 3, reported versus immediate style. The units in Figure 3 are the mean normalized number of features that indicate reported style less the mean normalized number of features that indicate immediate style. Figure 3, like Figure 2, shows no clear separation of spoken and written discourse as evidenced by the distribution of narrative types for Dimension 3.

Spoken narrative types, as seen in Figure 3, tend to be more reported than immediate in style as subjects advance in English proficiency; beginning and intermediate spoken narratives (at 20 and 12, respectively) are much less reported in style than are advanced non-native and native English spoken narratives (at 64 and 70, respectively).

Written narratives for this dimension are difficult to characterize. No trend or pattern is evident, as intermediate and advanced non-native written narratives (at 50 and 53, respectively) are less reported in style than are beginning non-native and native English written narratives (at 70 and 60, respectively).

The distribution range of narrative types for Dimension 3 is much broader than that for Dimensions 1 and 2; the difference between the most reported and the most immediate narrative types equals 58 factor values for Dimension 3, while the factor value ranges for Dimensions 1 and 2 are 24 and 22, respectively.

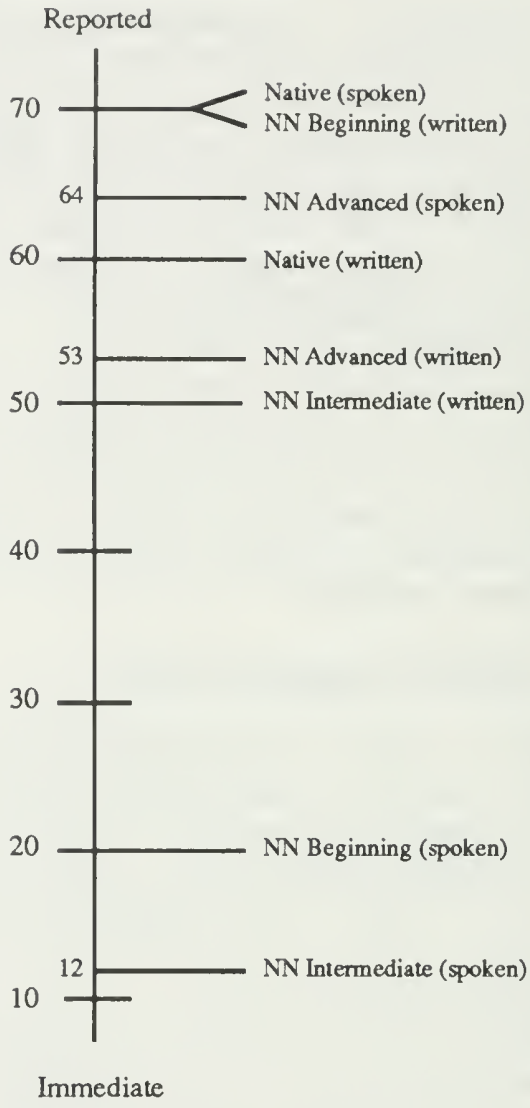

Figure 3: Dimension 3: Reported versus immediate style

Factor Value Differences between Spoken and Written Narratives

Figure 4 shows the factor value differences between spoken and written narratives for each subject group, or interlanguage system, as compared to the target language (native English) subject group. Factor value differences were calculated from the results of Figures 1-3 and are the differences between the spoken and written factor values for each interlanguage group (I subtracted the lower factor value from the higher factor value regardless of whether it was spoken or written). These factor value differences represent the *variability* between the spoken and written narratives.

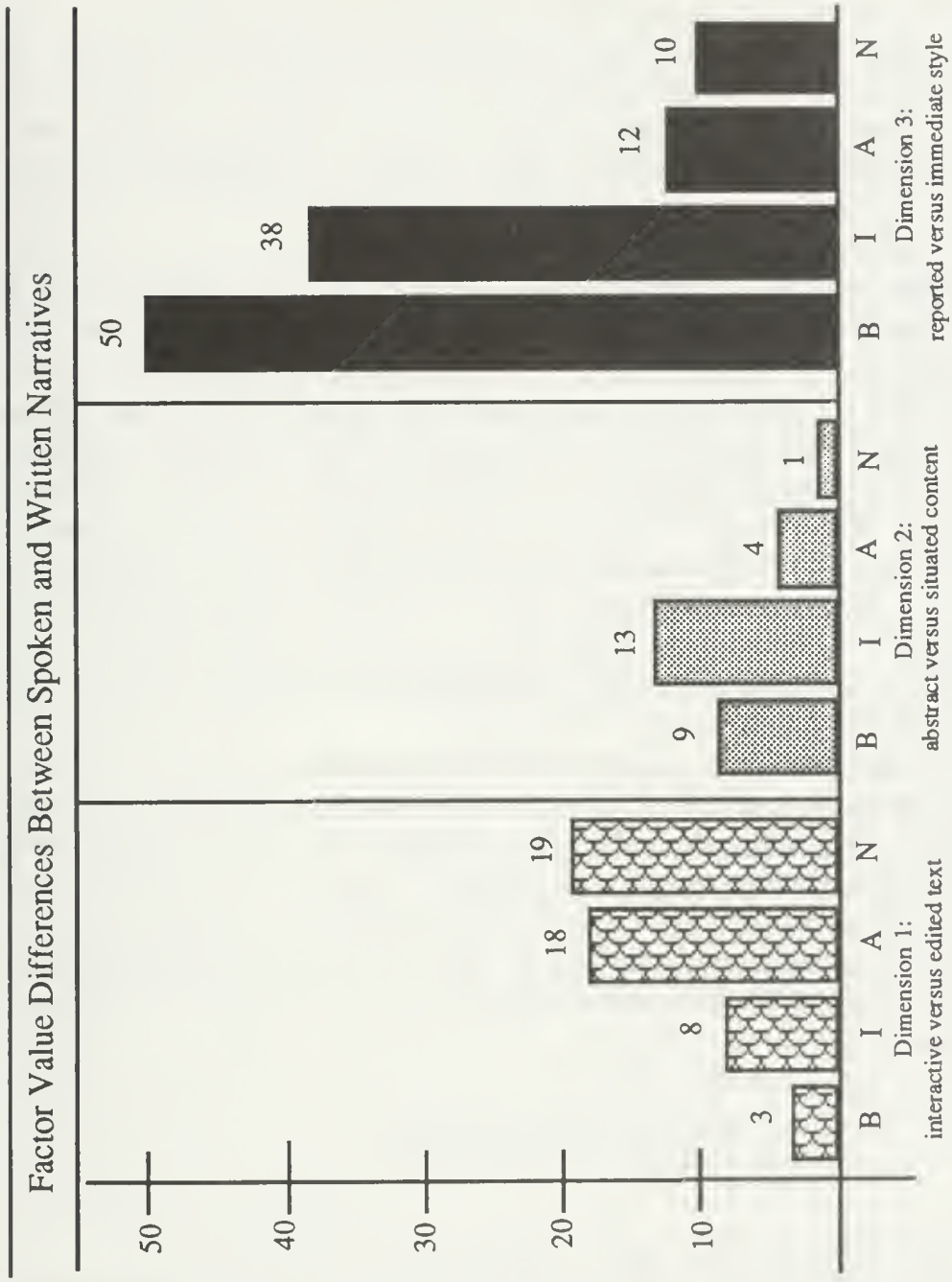

Figure 4: Factor value differences between spoken and written narratives (B=beginning NN; I=intermediate NN; A=advanced NN; N=native)

In each dimension, as shown in Figure 4, the three interlanguage systems (represented by B, I, and A) appear to progress toward the target language system (represented by N) in a systematic way. In Dimension 1, interactive versus edited text, variability between spoken and written narratives increases as English proficiency increases. Only three factor values separate beginning non-native spoken and written narratives, while eight factor values separate intermediate non-native spoken and written

narratives. Advanced non-native (at 18) and native English (at 19) spoken and written narratives show an obvious increase in variability in the beginning and intermediate groups. In Dimension 1, then, variability between speaking and writing increases with increasing English proficiency. This result was reflected in Figure 1, which showed a general separation between spoken and written narrative groups.

The pattern of factor value differences for Dimension 2, abstract versus situated content, is more ambiguous than the trend in Dimension 1; however, if we group the beginning (B) and intermediate (I) narratives, the results of Dimension 2 indicate a trend of *decreasing* variability accompanying increasing English proficiency. Beginning (at 9) and intermediate (at 13) non-native factor value differences are large compared to advanced non-native (at 4) and native (at 1) factor value differences. This grouping of beginning and intermediate narratives is consistent with the trends of Dimensions 1 and 3 in Figure 4; in these dimensions, the variabilities of beginning and intermediate narratives are distinct from the advanced and native narratives.

In Dimension 3, reported versus immediate style, variability between spoken and written narratives decreases with increasing English proficiency; this trend is similar to that of Dimension 2. Dimension 3 also shows great variability between the speaking and writing of beginning (at 50) and intermediate (at 38) non-native groups. Advanced non-native (at 11) and native English (at 10) groups show a much lower variability between spoken and written narratives.

CONCLUSIONS

Only Figure 1, representing the results for Dimension 1, interactive versus edited text, shows a clear separation between the spoken and written discourse of all language groups. Figures 2 and 3 show no clear separation between these two modes.

However, Figures 1-3 do indicate that as groups become more proficient in English, their spoken and written narrative discourse tends toward one end of each dimensional scale. Figure 1 shows a trend toward interactive discourse with increasing English proficiency, with speaking more interactive than writing. Figure 2 shows a trend toward abstract discourse with increasing English proficiency, with no clear separation between speaking and writing.

Figure 3 shows a trend toward reported spoken discourse (though no clear trend can be discerned for written discourse in this dimension).

These trends at once confirm and refute the generalizations about speaking and writing differences in recent literature. The assertion that writing is less personally involved than speech (Blankenship, 1974; Chafe, 1982; Chafe & Danielewicz, 1986) is supported by the results for Dimension 1, interactive versus edited text. Personal involvement and interaction are synonymous, so this study supports the generalization that writing is less personally involved than speaking. The assertion that writing is more abstract than speaking, however, is refuted by this study as both speaking and writing tend toward the abstract end of the scale in Dimension 2, abstract versus situated content. This result may reveal a characteristic of the narrative genre, however, and not of speaking and writing in general. Since narratives are by definition accounts of past experiences and are molded by the ideas the subject has about these experiences, narratives are unlikely to be situated and concrete in nature.

The results from Dimension 3, reported versus immediate style, also reflect a characteristic of the narrative genre, since most spoken and written discourse tended toward the reported end of the scale. Because narratives are typically reported events, this result is not surprising. An interesting aside, though, is that narratives contain present tense verbs (Labov & Waletzky, 1967), an immediate, not reported, linguistic feature in Biber's dimensions. However, when I recalculated the features for Dimension 3, reported versus immediate style, using the present tense as a feature indicating reported discourse instead of immediate, the results for Dimension 3, as well as for the overall variability shown in Figure 4, had the same patterns.

The results indicate, then, that the narrative genre is identifiable by Biber's method, further establishing the importance of Biber's quantitative work discerning speaking and writing. Perhaps the key to the differences between speaking and writing lies not so much in the differences between these contexts, but in the particular genre that is spoken or written, be that formal or casual discourse.

Figure 4 answers the primary question of this study: Do non-native English speakers learn English target language variability in a systematic way? In general, Figure 4 indicates that the answer to this question is *yes*; non-native speaker variability between speaking and writing tends toward native English speaker variability

with increasing English proficiency in each discourse dimension. The development of variability between spoken and written narratives in non-native narrators is systematic. An apparent leap in this development occurs between the intermediate and advanced non-native English interlanguage levels, as Figure 4 shows for each discourse dimension.

Overall, the results show that non-native written narratives are closer to native written narratives in text, style, and content than non-native spoken narratives are to native spoken narratives in all three dimensions. This finding suggests that the planning model to which Tarone (1985) adheres may be valid for describing how target language forms are incorporated into non-native English interlanguage systems. Non-native narrators have more time to plan written discourse and thus are not only more careful in producing written discourse, they are also able to incorporate more target language forms into written discourse than they do in spoken discourse. Spoken discourse, on the other hand, is less planned and more vernacular in style than written discourse is; therefore, non-native oral narrators cannot incorporate as many target language forms into their spoken narratives. A planning model also applies to speaking and writing in general; that is, writing is generalized to be more deliberately organized and planned than speech (Ochs, 1979; Rubin, 1980; Akinnaso, 1982; Brown & Yule, 1983; Gumperz et al., 1984).

The most basic implication of this study for overall second language acquisition theory and research is that non-native English discourse should be compared directly to native English discourse. In other words, if non-native speakers perform tasks (be they grammar tests, oral interviews, or others) to be analyzed in a study of second language acquisition, native English speakers should perform the same tasks under the same contextual conditions as the non-native speakers do. Non-native English performance may then be compared to native English performance directly, as was done in the present study. I focus on this methodological implication first because in my review of second language acquisition research, I found few studies that made direct native/non-native comparisons.

This kind of comparison is important because, while "correct" native English discourse may seem intuitively apparent, it often is not. For the present study, it would have been impossible to discuss meaningfully non-native English variability and development without some target language norms with which to compare these. It does not seem to be universally recognized that native English speakers vary their discourse for many reasons and

that many of these reasons are cultural in nature. Interlanguage systems vary, undoubtedly more than native systems do, but native variability must be recognized and accounted for so as not to misrepresent the nature of interlanguage variability. This native/non-native comparison is important, then, for both general discourse studies and specific studies of structural, grammatical, syntactic, or lexical features.

The above issue relates to the focus on target language accuracy that many second language acquisition researchers adopt when approaching data collected from non-native speakers. But accuracy should be judged according to native speaker language use and not intuitive predictions or even grammar-book-style correct and incorrect linguistic forms. With native speakers providing the target language norm for the study of interlanguage systems, interlanguages can be described with direct reference to an actual target language system. The results of the present study suggest that the intermediate interlanguage level is an especially fertile and complex area in which much further comparative study is needed. Many studies have focused on the intermediate interlanguage level (e.g., Tarone, 1985; Ellis, 1987; Tarone & Parrish, 1988), but there is a need for even more attention to specific linguistic features at this level to determine a natural order of acquisition for specific linguistic features, if such a natural order exists.

Finally, few studies of second language acquisition focus on target language variability instead of accuracy. Further study into different kinds of target language discourse variability, and not only speaking and writing variability, would be valuable. Different genres besides narratives could also be explored; since the narrative genre seems to be a "natural" one--we all tell stories--studies of "academic" genres, for example, might be informative for those interested in second language acquisition of communicative skills.

NOTES

[1]Preliminary results for a portion of this data were presented at the Third Annual Conference on Pragmatics and Language Learning, sponsored by the Division of English as an International Language at the University of Illinois, April 19-22, 1989, Urbana-Champaign. These preliminary results were subsequently published in the conference proceedings (Haynes, 1990). Many thanks to all the ESL teachers who helped me organize this study and to all the students who told me their stories. Special thanks to Barbara Johnstone for her insight and suggestions and for inspiring me to continue this study.

[2] Barbara Johnstone called my attention to the difference between these two terms.

[3] An independent factor analysis was not performed for this study.

[4] I transcribed spoken narratives by "breath groups," or utterances punctuated by breaths of the speaker. Each line of the example thus represents one breath group.

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