

AUS STUDENT WRITERS' USE OF CLAUSES: SUPPORT FOR THE
CONTRASTIVE RHETORIC HYPOTHESIS?

A THESIS IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

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ABSTRACT

Different theories exist regarding the characteristics of academic writing in English by students of other L1s. In 1966 Robert Kaplan proposed the contrastive rhetoric hypothesis, which has evolved over the years into the theory that L2 writing is culturally influenced by the learned rhetorical norms of the L1. In opposition to contrastive rhetoric stands the developmental hypothesis stating that problems with academic writing in English for students of different L1s are universal and stem from problems with mechanics such as grammar and vocabulary. After a review of the literature on the likely impact of Arabic rhetorical norms on L2 English writing, this paper compares the use of coordination and subordination in the written English of L1 Arabic speakers and L1 English speakers (NES). The data examined is a corpus of argumentative essays written in English by L1 Arabic speaking university students, a second corpus of argumentative essays written in English by L1 French university students, a third corpus of argumentative essays written by university students that are NESs from the US, and finally, a comparison with a corpus created from published academic essays. The ratio of the use of coordinate clauses to subordinate clauses by the different groups of L1 university student writers of English was chosen as a characteristic of the data that might serve as evidence to assess the contrastive rhetoric hypothesis. The results of the examination of the data indicated not only that Arabic L1 student writers use more subordinate than coordinate conjunctions in their argumentative writing in English, but also use more coordinate and subordinate conjunctions than any of the other writer groups examined, including the French L1 student writers. This finding does not support the developmental hypothesis, and lends support to the theory of contrastive rhetoric. The benefits of using corpus

linguistics in a process writing approach when teaching academic writing in English to L1 Arabic speakers are discussed.

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LIST OF ABBREVIATIONS

ACAD – Corpus of published academic writing

AL1 – Arabic L1

CC – Coordinate Conjunction

CR – Contrastive Rhetoric

FL1 – French L1

NAS – Native Arabic speaker

NES – Native English speaker

NNES – Non Native English speaker

SC – Subordinate Conjunction

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CHAPTER 1

INTRODUCTION

Rhetorical differences in writing across cultures have been looked at since Kaplan proposed his Contrastive Rhetoric (henceforth CR) hypothesis in 1966. Although a large body of work (e.g., El-Sayed, 1992; Johnstone, 1983; Ostler, 1997) exists, comparatively little corpus based analysis has been done on the evidence of CR on writing in English by L1 Arabic speakers (henceforth NAS). The purpose of this thesis was to look for evidence of an L1 influence on the argumentative writing style of NAS university students, when they write rhetorical essays in English, thus building upon the theory of CR.

Significance of the Research

As Graddol (2006) writes, our era is characterized by “two related phenomena... communications technology and globalization” (p. 21). These two forces intensify our need to communicate across economic and political boundaries, languages, and cultural borders. Today, we need language systems that will circle around the globe as far as possible. For the time being it appears that one of these systems is the English language. If we believe that English currently serves as a lingua franca, it follows that the English writing skills of ESL university students should reflect an argumentative writing style that communicates as effectively as their spoken English skills. The Gulf region, with its tremendous level of multiculturalism, has focused on developing a world class education system, often based on American or British universities. A concern about the best way to teach NAS students academic writing skills that will help them cross the same boundaries and borders is consistent with the Gulf educational vision.

We know that pragmatic differences (or the purposes for which utterances are used) are constantly at work in communication between members of different cultures, and that serious pragmatic failures are often due to differing rhetorical styles. Kamel (2000) writes that argumentative discourse has a harder time crossing language borders than other types of discourse, due to culturally based differences in the organization and structure of argument, as well as rhetorical strategies. If CR is a valid theory, then we may conclude that there is an Arab style of argumentative writing and that this mode of argumentation may differ from modes adopted by other

cultures. University-level English writing instruction must make these differences known to Arabic L1 students, to increase their ability to write in ways that are understood across cultures. The purpose of this study was to look for evidence of differences stemming from L1 influences. I hoped to then be able to propose pedagogical methods that would help close any gaps between the writing of Arabic L1 students and their target writing style.

Overview of the Chapters

In Chapter 1 the difficulties EFL university students face when writing acceptable academic papers are described. The question of whether cultural differences in the writing of Arabic L1 students exist was posed. A review of some of the literature surrounding CR and the theory of developmental hypothesis will be presented in Chapter 2, along with the some of the qualities described as inherent in the rhetoric of Arabic L1 writers. Chapter 3 presents the research question and outlines the methodology used in this thesis. The data used and the criteria for data selection are given, as well as a description of the steps taken to refine the data in order to reduce misleading results. The resulting data is presented in Chapter 4. The conclusions drawn from the data are presented in Chapter 5, including suggestions for working with Arabic L1 writers in the EAP classroom based on these findings.

CHAPTER 2

REVIEW OF THE LITERATURE

In the interest of strengthening university students' general writing abilities in the realm of what we discuss in an EAP framework, the focus of my study is on the construction of rhetorical argument in academic writing. Fulkerson (2005) discusses the current teaching of rhetorical writing as teaching composition in one of three ways: as argumentation, as a genre, and as an "introduction to an academic discourse community" (p. 671). For the purposes of this thesis, we can examine any or all of these views of rhetorical writing. What is important is that there is a set method or structure to the teaching and the focus is on writing above the sentence level, beyond basic grammar and vocabulary.

Fulkerson (2005) quotes Graff (2003) in maintaining that "all academic discourse is an argument characterized by certain preferred intellectual 'moves' that should be shared explicitly with students" (p. 672). If teaching rhetorical writing as one of the genres, Fulkerson (2005) recommends that we "discuss the task in the language of argumentation; claim, evidence, assumption, counterviews, refutation" (p. 673). Learning to write rhetorical argument enables students to enter the academic discourse community, where they will most likely be asked to "read, write, and reason... [and] thus to absorb the sorts of rhetorical moves that will help them survive in college" (p. 678). Fulkerson believes students can best learn rhetorical writing by writing and then reviewing their work together in their classes, instead of via a post modern method that requires students to learn to write by reading. For Fulkerson the post modern method is not explicit enough.

Historical Background of CR

Kaplan (1966) initiated the discussion of CR, as Bar-Lev (1986) describes, by "appl[ying] Whorf's 'linguistic relativity' (linguistic determinism) to the level of discourse structure" (p. 236). While Lee (1997) writes that Whorf's theory of linguistic relativity describes "relationships between language, mind, and experience" (p. 430), Kaplan's (1966) interest is in culturally based patterns of logic and persuasion, and how these affect rhetorical writing. Kaplan draws "graphic representation[s]" of the different types of paragraph development. Unfortunately, since Kaplan (1966) characterizes English language paragraphs as a straight line, and

represents paragraphs from “Semitic, Oriental, Romance and Russian” (p. 15) writing by various other zigzags and curlicues (see figure 1), the drawings seem to reflect a bias towards the English language which distracts readers from the article’s real theme.

Another criticism which can be leveled at Kaplan’s (1966) approach is that it is vague and difficult to operationalize. For example, it is much less sophisticated than the work of Daneš (1974), who minutely dissects paragraphs according to theme and rheme, charting the way clauses are manipulated in successive sentences to maintain ‘thematic progression’. Certainly, as Scollon (1997) complains, one cannot apply something like a doodle “across the board from internal cognitive schema to paragraph structure” (p. 353).

Once the drawings in his article stopped overshadowing what Kaplan (1966) wrote, which was not meant to be a “criticism of other existing paragraph developments,” but instead was “intended only to demonstrate that paragraph developments other than those normally regarded as desirable in English do exist” (p. 14), linguists were able to find more to agree with in a milder version of CR. Scollon (1997) writes that there are “situationally, generically, or stylistically preferred compositional forms...that...are not the same from language to language, or from culturally defined situation to culturally defined situation” (p. 353). But even Kaplan’s (1966) original article describes the different methods of paragraph development he attributes to writers of differing L1s as not “mutually exclusive,” and points out that while “patterns may be derived for *typical* English paragraphs,” paragraphs like those described as the Semitic, Oriental, Romance, or Russian “do exist in English” (p. 14). What is important is the agreement between Kaplan (1966), Fulkerson (2005) and Yorkey (1977): that the writing teacher must describe and explicitly teach these elements to the ESL or EFL students.

Leki (1991) calls Robert Kaplan’s work in 1966 “more intuitive than scientific” (p. 123). But Leki backs Kaplan’s argument that there are differences in rhetorical writing styles among writers from different L1s, and also points out that while many children read before starting school and may already be reading independently for pleasure, “Writing, for most school children, is nearly always school sponsored and inevitably, therefore, reflects the culture of the school system

and reproduces culturally preferred discourse styles” (p. 124). Leibman (1992) in her study agrees, writing that children acquire grammar at home as they learn to speak, but L1 rhetoric is learned at school.

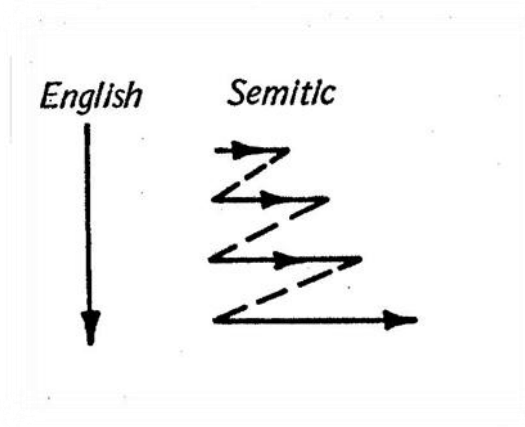


Figure 1. Graphic Depictions of Paragraph Development (Kaplan, 1966)

CR and Arabic

We cannot discuss the impact of Arabic on second language acquisition for long without considering which Arabic the influence is coming from. Due to the Arabic language’s integral status in Islam, it has evolved as a diglossic language. Kaye (1987) defines the situation of diglossia as when “two varieties of the same language live side by side, each performing a different function” (p. 675). Classical Arabic is the formal version of Arabic and the language of the holy Qur’an. Kaye notes that “all colloquial Arabic dialects are acquired systems”; in other words, colloquial Arabic (non standard Arabic, or NSA) is what children learn at home, and “the classical language is always formally learned,” i.e., taught and learned at school (p. 667). Educated Arabs learn classical Arabic in schools, while those with less education have only their area’s version of colloquial Arabic. If we are considering some feature transferring from Arabic L1, under these circumstances we must ask if the transfer is from Classical Arabic, from Modern Standard Arabic (MSA), or from one of the many colloquial versions of Arabic. Farghaly (2004) may help us answer this question reasoning that “there is a core grammar of Arabic...shared by all varieties of Arabic” (p. 31). He makes his case by pointing to common elements of

phonology, morphology, and syntax found in MSA and colloquial varieties. In his study of interlingual transfer errors made by NAS students, Mahmoud (2000) found that many transfer errors came from both MSA and NSA. Mahmoud writes “Both varieties can lead to the same error in English simply because the two varieties are linguistically similar” (p. 134).

Ostler (1987) outlines a short history of the evolution of the Arabic written language that helps to explain the diglossic situation. She describes worried scholars in the eighth century who wished to keep Arabic pure during a period when the rapid expansion of Islam into new geographic areas exposed Arabic to transformation from contact with other languages. To counter these outside influences and prevent changes to the language, the scholars “devised an elaborate science of Arabic grammar and lexicography, and linked instruction in language to the study of the Qur’an in the schools. Eleven centuries later ... this [is virtually] the same grammar taught in Arabic schools” (p. 173). Ostler attributes the “foreignness” of the rhetorical writing by L1 Arabic speakers in English to the influence of Classical Arabic (p. 170). Since Classical Arabic is the root of all colloquial versions of Arabic, and is taught, as writing is taught, in a school environment, for the purposes of this paper, I propose that its influence on written rhetoric can be assumed to be the same, and is a unifying element across all versions of Arabic. I have been advised that “While there might be dialectal variation at the lower levels of linguistic description (phonology, morphology etc) there is none at the syntax-discourse level on which your research is focusing” (Hatim, personal communication).

Fakhri (1995) tries to build upon the research in support of CR. He looks for differences between the “Arabic texts, English texts, English writing by Arab ESL learners, and English writing by non-Arab ESL learners” (p. 156) in a quantitative study. His examination of these texts looks for differences between the Arabic and English use of topical structure and the use of parallel, sequential and extended parallel topical structure by the different writer groups. In including data from ESL writers who are not NAS students Fakhri theorizes that if the groups of ESL writers use altogether different topical structures than found in their L1 or in the English texts, this will be an argument for differences due to developmental issues, rather than

transfer from their L1. Fakhri is reminding us of the need to consider the source of errors in L1 Arabic English language, questioning whether

the potential deviances [are]...developmental in nature and thus indicative of their inexperience as writers? If indeed their L2 writing topical structure is at variance with the norms of both Arabic and English, this will constitute strong evidence that the writing problems they encounter are developmental rather than transfer-related. (p. 157)

Fakhri (1995) is unable to reject his null hypothesis that there are “no differences between the topical structure of Arabic, English, and the English writing of the Arab subjects” (p. 162). While I wished to find a quantifiable feature of writing for study as Fakhri did, and I included ESL writers who were not NASs, Fakhri analyzed professionally written essays from the *New York Times*, and from *Assarq al awSAT*, an Arabic newspaper similar to the *New York Times*. He contrasted these published articles with student essays for the ESL data. It may be difficult to separate transfer problems from developmental problems when a study is set up in this fashion.

Mohan and Lo (1985) argue that differences in ESL/EFL university students’ argumentative writing are not solely due to transfer errors from L1, but due instead to the developmental problems of inexperienced writers who mistakenly focus on writing correctly at the sentence level. Among several reasons they give in their study of the differences in the structure of Chinese university students’ writings, Mohan and Lo offer that “a student may not be familiar with the conventions of expository writing in the native language” (p. 521). Leki (1991) refutes this, writing that these are university level students whose age and educational level suggest a certain amount of experience writing in their L1. The developmental error versus transfer error is one of the more significant arguments against the theory of CR, and it is the argument I wish to investigate in this study.

Characteristics of Arabic and Arabic/English Texts

When one examines the literature on the production of English texts by NAS writers several commonalities stand out. The first thing noted in various articles is the oral quality of the texts. These particular texts remind some NES readers more of oral presentations than writing (Johnstone 1983; Mohamed & Omer 1999; Ostler 1987; Sa’adeddin 1989). The rhetoric of oral cultures is characterized by features such as

rhythmic balanced structure, repetition, and mnemonic patterns that enable speakers to remember long pieces. Characteristics of oral development in texts Sa'adeddin (1989) highlights are “repetition...overemphasis ...exaggeration; abundance of floor and attention-holding expressions; a lack of apparent coherence, [and] development by addition and accumulation” (p. 38). These features are in opposition to what Sa'adeddin believes a NES reader expects in a text, but he notes that the very same features will be acceptable to that reader if they are found in an oral presentation. Having different standards for the different channels of communication, Sa'adeddin writes, “is a conventionalized separation of the norms for different mediums” (p. 39).

The prevalence of coordination in sentence structure, in comparison with subordination, is another frequently mentioned aspect of Arabic rhetoric (Ostler 1987; Thompson-Panos & Thomas-Ruzic 1983; Yorkey 1977). Mohamed and Omer (1999) compare Arabic texts, their English translations, and separately, two Arabic and two English short stories of similar length. They find differences in sentence length; that the Arabic sentences are far longer, and contain many more coordinating conjunctions (henceforth, CCs). They describe the sentences in the English texts as shorter, and “contain[ing] a complete proposition or a set of related propositions forming one unit” (p. 300). Mohamed and Omer point to differences in the use of coordinate and subordinate conjunctions (henceforth, SCs), specifically that Arabic texts contain many more CCs, whereas English texts reflect a heavier use of SCs. Mohamed and Omer (1999) attribute some of the differences to the strong influence that is still held by the oral tradition on Arabic written texts, an influence which Ostler (1987) writes has not been present in the English language since the late sixteenth century. Our modern English ear hears the elaboration as archaic, similar to what NESs experience today when reading the King James Version of the Old Testament. Yorkey (1977, p. 80) provides the following example;

Give unto the Lord, O ye sons of the mighty,
Give unto the Lord Glory and strength

Mohamed and Omer (1999) direct our attention to the coordinated clauses that create the kind of additive development they find characteristic of texts produced by oral cultures. Mohamed and Omer write that “thoughts in oral cultures are expressed in heavily rhythmic, balanced structural patterns as a means of facilitating the

retention and retrieval of semantic information” (p. 302). We know this technique as mnemonics. Note that Mohamed and Omer describe these coordinated clauses as sounding very similar to one another, in opposition to coordinated clauses in English texts which they write, “tend to be characterized by a noticeable degree of syntactic and phonological variation” (p. 302).

Sa’adeddin (1989) presents two examples of Arabic persuasive writing. The first piece reflects an extemporaneous quality, a style of text development he asserts is often found in oral languages. The second example in his article comes from a medieval Arabic text. Far from being an obtuse, antique, difficult to understand passage, Sa’adeddin accurately describes the piece as “a coherent, cohesive, concise whole” (p. 45). His argument is meant to refute Kaplan (1966), but when Sa’adeddin goes on to write that “all literate language communities have a number of possible modes of text development, including aural and visual as two main modes” (p. 49), he is restating Kaplan’s statement; that although we have some typical patterns for writing in English, other patterns are available to writers.

El-Sayed (1992) is one of many who discuss the repetitive nature of NAS communications. In his article on “the impact of Arab rhetoric on the writing of Arab university students” (p. 44), he agrees with Mohamed and Omer (1999) in writing that the “repetition is not inclusive of single words, but complete phrases and clauses” (p. 50). This is what Yorkey (1977) describes as the “wa-wa” method of writing (p. 68). El-Sayed warns that Arabic texts can easily be mistranslated since Classical Arabic has little punctuation and doesn’t capitalize at the beginning of each new sentence. Arabs persuade and argue in speech and writing by repetition, he writes, because their style is one of “argumentation by presentation” (p. 58).

Johnstone-Koch (1983) also discusses repetition as an element of argumentation by presentation, explaining,

Presentation is the dominant mode of argumentation in hierarchical societies, where truths are not matters for individual decision. In a democracy there is room for doubt about the truth, and thus for proof, in a more autocratic society there is not. (p. 55)

And again at a later point she writes,

Argument by presentation has its roots in the history of Arab society, in the ultimate, universal truths of the Qur'an and in hierarchical societies autocratically ruled by caliphs who were not only secular rulers but also the leaders of the faith. (p. 55)

This style of argumentation is what Sa'adeddin (1989) calls "development by addition and accumulation" (p. 38). However, we must bear in mind that although NAS writers are able to employ the topic sentence/supporting evidence/conclusion style that Westerners believe they inherited directly from the Greek rhetoricians, it is not the main Arab rhetorical model. The Arab model is one of sentences constructed of appositive portions equally balanced between subject and predicate. Sa'adeddin is of the opinion that text analysis of Arabic writing up until recently was based on "limited and inadequate samples" (p. 37). While Sa'adeddin agrees with the descriptions of the repetition, coordination and oral nature of the Arab texts, he writes that these are devices "utilize[d] to establish a relationship of informality and solidarity with the receivers of the text" (p. 39). Sa'adeddin sees this writer/audience relationship as one of the fundamental differences between NAS rhetorical writing in English and that of NESs. The NES creates belief by arguing from a formal position, as though an authority, while the NAS writer creates belief by taking a more lateral position. He is befriending the reader.

Johnstone (1989) reaches right into the heart of contrastive analysis of rhetoric in her description of three episodes of discourse between Western and Islamic Eastern participants. She believes that the mismatches "involve cross-cultural differences in styles of persuasion or in how language is used rhetorically" (p. 142). In her opinion, the difference that we may sense between the L1 Arabic and NES academic writing is due to the use of different persuasive strategies, which become the interlocutors' style, and are part of their culture. Johnstone enumerates a list of possible rhetorical strategies: using logic, telling stories to illustrate our point, and using "displays of emotion, threats, or bribes...sometimes repeat[ing] what we want" until the other person gives in (p. 143). According to Johnstone, although all writers have access to these strategies, our choice of which to use is based on our cultural inheritance. She writes that Westerners often reach first for the logical argument, which she terms *quasilogical*. Based on the use of "logical connectives" like *thus*, *hence*, and

therefore” (p. 146, italics are the author’s), the sentences employing these persuasive strategies naturally create subordinate clauses. Johnstone contrasts the quasilogical argument with argument by presentation, which is “characterized by its rhythmic, paratactic flow. Rather than having to jump from level to subordinate level, readers or hearers are swept along by parallel clauses, connected in coordinate series” (p. 149). Johnstone points to the structure of sentences framing this argumentative strategy which are parallel coordinate clauses.

Research Problem

The common thread describing the way in which NAS written arguments are constructed is mirrored in the architecture of their sentences. The rhythmic, balanced creations built using the mnemonics which the dependence upon recall that an orally based language necessitates is created by CCs. Modern western rhetoric leads the reader along by using discourse strategies whose economy depends on the use of SCs. Rather than the quality of addition brought about by the use of CCs, a characteristic of western rhetoric is deletion, even at the sentence level, when subject or object pronouns are removed. Western writers expect readers to value conciseness, or, as Kamel (2000) quotes Levin (1990, p. 447), “Do not tell everything; it is boring.”

Crystal (2003) distinguishes between simple sentences of clauses strung together with CCs, and complex sentences that contain main clauses with attached subordinate clauses, which may even be further embedded within other clauses. Crystal calls these “multiple sentences” (p. 226). According to Crystal, compound sentences contain clauses linked by CCs. Each CC in a compound sentence can stand on its own as a sentence, and each clause has an equal weight. Clauses in complex sentences are instead linked by subordinate conjunctions; these clauses cannot stand on their own, and one or more of this type of clause has less significance in the sentence than the main clause. Subordinate clauses do not *feel* like main clauses. They can seem like an afterthought, an aside, something surprising, or even something the audience is presumed to know. It is this difference in the weights created by the use of the two different clauses that I theorize is central to the difference in the written argumentation of L1 Arabic writers in English. As Greenbaum (1996) succinctly puts it, “the coordinated clause puts the clauses on the same grammatical level [while] subordination downgrades the subordinate clause grammatically in relation to the host

clause” (p. 325). Quirk, Greenbaum, Leech, and Svartvik (1985) are even more specific, stating that SCs can put information into a background of sorts, “present[ing] information as if it is presupposed as given rather than asserted as new” (p. 919).

CHAPTER 3
METHODOLOGY
Research Hypothesis

Based on the literature, a writer's use of CCs and SCs could be seen as a measurable element of sentence construction in argumentative writing that might be influenced by the writer's culture. In particular, the literature would lead us to expect higher levels of coordination in the English of NASs. Therefore, I decided to research the following hypothesis:

L1 Arabic university students will use a higher ratio of CCs to SCs in argumentative writing than university student writers of other L1s

My null hypothesis was therefore as follows:

L1 Arabic university students will not use a higher ratio of CCs to SCs in argumentative writing than university student writers of other L1s

Data

Connor's (2004) advice that "in contrastive analyses, it has been important to compare items that are comparable" (p. 298), guided my choice of data. The basis for my comparison was a new corpus collected at the American University of Sharjah (henceforth AUS) of Arabic L1 student argumentative essays written in English (Crompton, forthcoming). This new corpus (henceforth AL1) was collected in such a way as to fit the criteria for the International Corpus of Learner English (henceforth ICLE, Granger, Dagneaux, & Meunier, 2002), and thus enabled me to use the other similarly configured English language argumentative student essays found in the ICLE and the LOCNESS (Granger, 2008).

Since 1990, Granger and her colleagues at the Center for English Corpus Linguistics at the University of Louvain in Belgium have worked to develop corpora of university student writing. The ICLE is composed of 11 sub corpora of essays in learner English by students who share one of 11 mother tongues. The corpora were collected according to specifications enabling them to be analyzed using corpus linguistics software. The essays are over 90% argumentative, are written in English, and average about 700 words in length. Although the essays cover many topics, there is a list of ten topics most frequently used by the university student writers (see Appendix 2). The same topics were used as writing prompts for the AL1 corpus.

Granger and her colleagues have also assembled a corpus of essays written by NES university students, both British and American, using the same criteria, so that the essays of ESL writers can be compared to those of NES writers. From this corpus, known as LOCNESS (Granger, 2008), I used the US corpus. Following Fakhri (1995), who brought data from other ESL writers into his study, I used the French sub corpus of the ICLE, which contains argumentative essays written in English by university students whose L1 is French (Granger, Dagneaux, & Meunier, 2002). Use of the French sub corpus provided a means of comparing the writing of students from a western but NNES background with that of NAS students. The French students' cultural background in terms of religion, politics, and the arts was closer to that of the US students, yet they were writing their essays in English as a second language, as were the AUS students.

My own interest is in developing the academic writing skills of ESL/EFL students. While I was analyzing the argumentative writing of university students, I also wished to compare their texts to those of fully developed writers. The MicroConcord Corpus B (Murison-Bowie, 1993) is a corpus of the works of published academic writers. I used this as a standard for comparing the work of university student writers to each other in relation to that of writers working at the professional level.

Table 1 below provides the details of the data sets I examined. The student texts were all argumentative and were approximately 500 words in length. The published academic texts, having been taken from articles and book chapters published by Oxford University, were from 19,000 to 47,000 words in length. I used the following corpora in my study:

- A new corpus of argumentative essays (74,678 words) written in English by AUS student L1 Arabic speakers (Crompton, forthcoming) which will be designated AL1
- A corpus of argumentative essays (228,081 words) written in English by French speaking ESL university students from the International Corpus of Learner English (ICLE) (Granger, Dagneaux, & Meunier, 2002) which will be designated FL1

- A corpus of argumentative essays (149,574 words) written in English by NES students at US universities, from the Louvain Corpus of Native English Essays (LOCNESS) (Granger, 2008), which will be designated NES
- A corpus of published academic essays (1,005,933 words) from the Cambridge University Press (MicroConcord Corpus B: Academic Texts, Murison-Bowie, 1993) which will be designated ACAD

Table 1
Corpora Descriptions Showing Number of Texts and Word Counts

	AL1	FL1	NES	ACAD
Texts	150	459	175	33
Words	74,447	287,217	149,577	1,005,933

There was another purpose for examining the FL1 corpus. Analyzing a second corpus of argumentative writing by ESL university students who are not Arabic speakers could help reduce the possible objection, sometimes raised by critics of the CR hypothesis (e.g., Mohan & Lo, 1985), that problems such as the more frequent use of coordinate clauses when writing in a second language are due to a developmental writing issue, and are not due to cultural influence. This could be one possibility inferred from a comparably higher ratio of use of CCs to SCs by NAS *and* French writers in English. If the L1 French speakers and the NASs use substantially different ratios of coordinate to subordinate clauses in their writing when they are constructing their written arguments in English, we may be able to infer that the differences in usage of the two types of clauses are due to interlanguage influence. If, however, there are no significant differences between the ratio of coordinate to subordinate clauses used by L1 French speakers and the ratio of those used by the NES university writers, yet significant differences in that same ratio exist in the L1 Arabic speakers' texts, then our results may enable us to deduce that these differences are due to something other than just a developmental stage of the writers' English.

The corpus of published academic writing yields a further point of comparison beyond the texts of the student writers. Hunt's (1965) study of writer maturity based on the T-unit method of evaluation found significant differences between the writing of twelfth-grade students and adult published writers. This was not surprising, but provided the idea of comparing quantifiable difference between the developing student writers' and fully developed, published writers' styles.

Choosing Conjunction Tokens

Crystal (2003) lists the main CCs in English used to link clauses of equal importance in a sentence as *and*, *or*, and *but*. In comparison, there are many more SCs, but choices were made to keep the data manageable and the conjunction tokens to be examined as similar as possible. Since the CCs being examined were all one word conjunctions, only simple subordinators were selected, and the complex subordinators (e.g., *as long as*, *even though*, *in spite of*, and *now that*) were eliminated from consideration. Biber, Johansson, Leech, Conrad, and Finegan (1999) provide a corpus-based list of the "most common subordinators across registers" (p. 841), amongst which the most common simple subordinators in the register of academic writing are *when*, *as*, *because*, *although*, and *if*. As I wished to compare the writing of the AL1 university students with that of the other groups, I examined my corpora to find which of the subordinating conjunctions were used most often there. My initial results are found in Appendix 1. After ranking them in the frequency of their use (see Table 2), I chose *that*, *as*, *which*, *if*, and *so* for study. Although my preference was choosing subordinators used most frequently by the students to compare the use among the student groups, I gave some consideration to the clausal conjunctions used most often by professional academic writers. Publishable articles are a goal for students and teachers, and can be used as a model when teaching student writers who wish to develop an English academic writing voice.

Before we can compare the frequency of use of particular words in different corpora, an initial process called normalizing is necessary. The normalized frequency is the number of times the token appears per one thousand words in the corpus, and yields a figure similar to an average of the use of the token in each corpus. Table 2 lists the ten SCs used most often, and shows their normalized frequency in each corpus. Note that while the ten most often used SCs are not the same for each writer

group, there are some similarities. The top two SCs for all four groups were *that* and *as*. The SCs *which*, *if*, and *so* occupied the third through fifth place in two of the corpora, fourth through sixth place in the third corpus, and third, sixth, and seventh place in the last corpus. The fact that the five SCs previously mentioned in this paragraph were ranked as the top five used by the ACAD group, which I was using as a standard for the university student writers, weighted my decision to choose them as the SCs to use for my study.

Table 2

Ten Most Frequently Used SCs by Corpus

	AL1		FL1		NES		ACAD
	Normf		Normf		Normf		Normf
that	19.29	that	9.44	that	17.47	that	13.54
as	6.21	as	5.54	as	7.51	as	8.42
because	3.80	which	2.83	if	3.80	which	6.07
if	3.40	if	2.07	because	3.38	if	2.73
so	2.78	so	1.81	when	2.77	so	2.14
which	2.78	because	1.66	so	1.98	than	1.88
than	2.50	when	1.30	which	1.91	when	1.88
when	2.31	like	1.00	than	1.62	because	1.14
like	1.72	than	1.00	like	1.25	like	1.07
however	1.32	where	0.71	however	1.17	however	1.02

Establishing the frequency of the conjunctions in the corpora was conducted with the help of Wordsmith software (Scott, 2008), which was used to gather most of the preliminary data. This software can conduct rapid searches through a corpus locating lines of text in which the specific token is used. These lines can be downloaded to spreadsheets, enabling one to examine how the word is used in context.

Table 3 shows the initial raw data reflecting the use of CCs and SCs across the four corpora. For example, looking at the use of the CC *and* in the AL1 corpus, we see that it was used 2,320 times. In the FL1 corpus, the word *and* was used 4,538 times. But if we normalize the frequency by using these numbers in a ratio with the word count in the corpus, we come up with the figures of 31 and 16, respectively, for the normalized frequencies of the token word *and* in the AL1 and FL1 corpora. Table

3 also shows the results of all of the clausal conjunctions under study, after having undergone this same manipulation.

Table 3

Raw Counts and Normalized Frequency Counts for CCs and SCs across Corpora

# of Essays Tokens	AL1		FL1		NES		ACAD	
	Count	Normf	Count	Normf	Count	Normf	Count	Normf
	150		459		175		33	
	74,447		287,217		149,577		1,005,933	
and	2320	31	4538	16	3613	24	27,457	27
or	405	5	813	3	723	5	5,116	5
but	344	5	1294	5	535	4	4,692	5
Total CCs	3069	41	6645	23	4871	33	37,265	37
that	1436	19	2712	9	2613	17	13,625	14
as	462	6	1591	6	1123	8	8,467	8
which	207	3	814	3	285	2	6,111	6
if	253	3	595	2	568	4	2,750	3
so	207	3	521	2	296	2	2,154	2
Total SCs	2565	34	6233	22	4885	33	33,107	33

Data Preparation

Although Wordsmith (Scott, 2008) can locate and count all of the instances where the conjunction token is used, even after normalizing we still do not have an accurate picture of clausal conjunction use. Many conjunction tokens are members of more than one word class; that is, they have more than one function. Conjunction tokens do not always introduce clauses. For example, the word *and* was the most frequently used of all of the eight words studied. However, *and* is not only a conjunction between clauses, as in “she pinched the girls and they started to cry,” but can also be used as a conjunction between other syntactic units, e. g. noun phrases, as in “she was unkind to Susan and Anne.” Many of the conjunctions in the study had a similar ability to be more than just clausal conjunctions. The focus of my study was only on conjunctions that joined clauses creating compound or complex sentences. This made it necessary to conduct a manual analysis as a second step to distinguish which of the conjunction tokens were clausal conjunction tokens.

At this point there were eight conjunction tokens in four corpora under investigation. Conducting a manual analysis of each of the tens of thousands of instances where one of the tokens was used was impractical. I decided to analyze samples of 100 sentences containing one of the token conjunctions from each of the corpora to obtain a percentage of how often the token word was used to join clauses within a sentence. The randomizing feature of Wordsmith (Scott, 2008) was used to assemble 32 groups of 100 sentences using each of the token words from each corpus. The sentences were downloaded onto spreadsheets, creating a total of 3,200 randomly generated sentences for examination. Each group of 100 sentences was examined, and the number of times the token word was analyzed as a clausal conjunction was noted. For example, as shown in Table 3, my data indicated that the word *and* was used at a normalized frequency of 31 times per 1000 in the AL1 corpus. An analysis of the 100 randomly generated sentences using the word *and* from the AL1 corpus showed that it was used as a clausal conjunction in only 54 of the 100 sentences (54%). Multiplying the normalized frequency of 31 by that proportion (54%) gave me a figure of 16.83. This procedure was carried out for each of the eight conjunction tokens in the four corpora.

Data Analysis Procedures

For the manual data examination it was necessary to create a set of rules to standardize decisions regarding whether or not a conjunction token was being used as a clausal conjunction in a particular sentence. An important test was that since I was counting conjunctions that either joined two parts of a sentence together that could each stand on their own (CC), or that attached a subordinate clause to a main clause (SC), the parts of the sentences connected must be clauses, not just phrases. Each part being joined must contain a subject and a verb. The rule worked successfully when the conjunctions were used to link nouns to nouns, pronouns to pronouns, adverbs to adverbs, none of which create clauses, and so did not count for my purpose. Another rule was that the token conjunction would not be counted as a clausal conjunction if it was part of an idiom or collocation. Here is a sample from my data which shows a token conjunction used in an idiom:

<... Many acts of trespass, breaches of contract, violations of copyright, *and so on*, regrettable as some of them may be on other grounds...> (bmorfbel.txt)

In this instance, the token word *so* is actually part of an idiom, and does not introduce a clause, in the way it does in the following sample:

< ...the event should be openly discussed with patients on the ward *so that* they can air their anxieties and be given support... > (bsuicmed.txt)

Data from the analysis of the randomly generated sentences was gathered and tabulated. Table 4 shows the large range in the number of times the token conjunctions were used as clausal conjunctions in each sample. The token conjunctions *which* and *if* are both used as SCs in over 90 out of the 100 randomly generated sentences from each of the corpora. By contrast, the token conjunction *and* was a CC in only around half of the cases that were manually examined.

Table 4

Clausal Conjunction Percentages- Number of times per 100 each conjunction token was a clausal conjunction

	AL1	FL1	NES	ACAD
and	54	48	45	38
or	29	16	6	8
but	85	79	83	74
that	84	86	91	89
as	57	54	55	46
which	98	96	99	100
if	97	96	95	97
so	70	54	51	51

CHAPTER 4

RESULTS AND DISCUSSION

Once the manual analysis of the randomly generated sentences containing the conjunction tokens was completed, it was possible to determine the likely proportions of conjunction token use that represented actual use as a clausal conjunction. Table 5 shows the results of the final calculations, after the normalized frequencies were multiplied by the proportion of the times the conjunction tokens in my manual sample analysis were used as clausal conjunctions.

Table 5
Comparison of Usage of CCs and SCs by Corpus

	AL1	FL1	NES	ACAD
# of Essays	150	459	175	33
Tokens	74,447	287,217	149,577	1,005,933
CCs				
and	16.83	7.58	10.87	10.37
or	1.58	0.45	0.29	0.41
but	3.93	3.56	2.97	3.45
Total	22.33	11.60	14.13	14.23
SCs				
that	16.20	8.12	15.90	12.05
as	3.54	2.99	4.13	3.87
which	2.72	2.72	1.89	6.07
if	3.30	1.99	3.61	2.65
so	1.95	0.98	1.01	1.09
Total	27.71	16.80	27	25.75
Grand Total	50.04	28.40	41	39.98

The graphs in Figures 2 and 3 were created using the data in Table 5. In Figure 2 the use of the CC *and* in the AL1 corpus stands out. It is possible to describe this as overuse when compared to that found in the NES and the ACAD corpora, but an important comparison can be made between the FL1 corpus and the NES and ACAD

corpora. The FL1 corpus employs this particular CC less, not only less than found in the AL1 corpus, but also less than in the NES and the ACAD corpora. The use of the CC *and* in the NES and the ACAD corpora is roughly equivalent to each other. Comparing the total use of CCs across the four corpora in Table 5 we see a similar pattern. The AL1 writers use more total CCs than the NES and ACAD writers, whose use of total CCs is comparable to each other, and again, the FL1 writers use less. These results argue against the idea that developing writers tend to overuse CCs, as the FL1 and AL1 patterns of CC use are not similar to each other. The overuse of CCs by AL1 writers could be evidence of a culturally based influence. Sa'adeddin (1989) described the rhetoric of oral cultures such as NAS writers as being characterized by “repetition of specific syntactic structures [and] development by addition and accumulation” (p. 38). This is reflected by the data from the AL1 corpus.

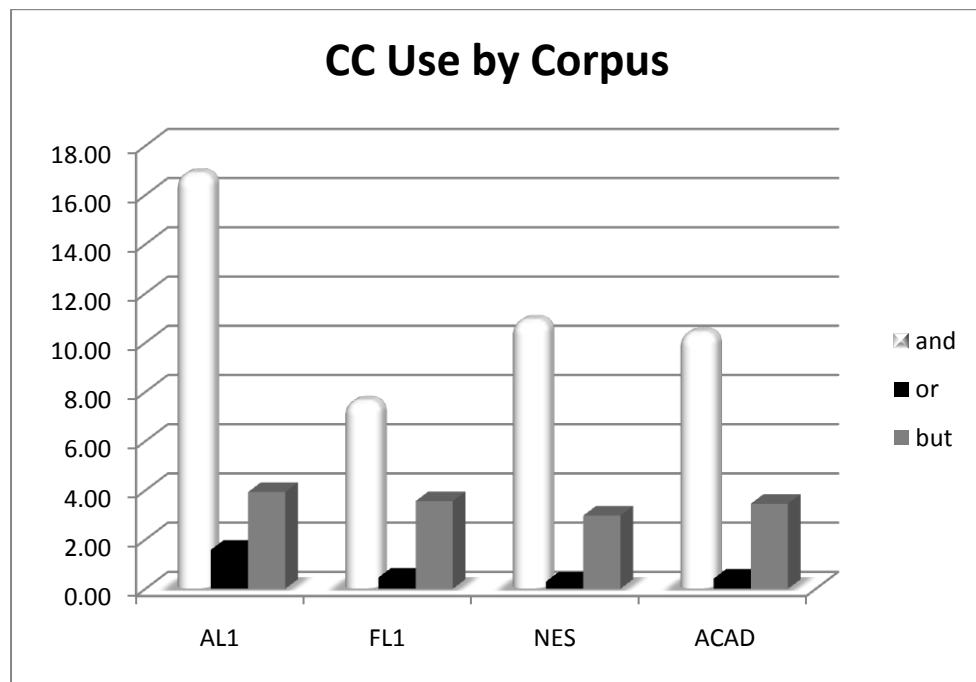


Figure 2. CC Use by Corpus

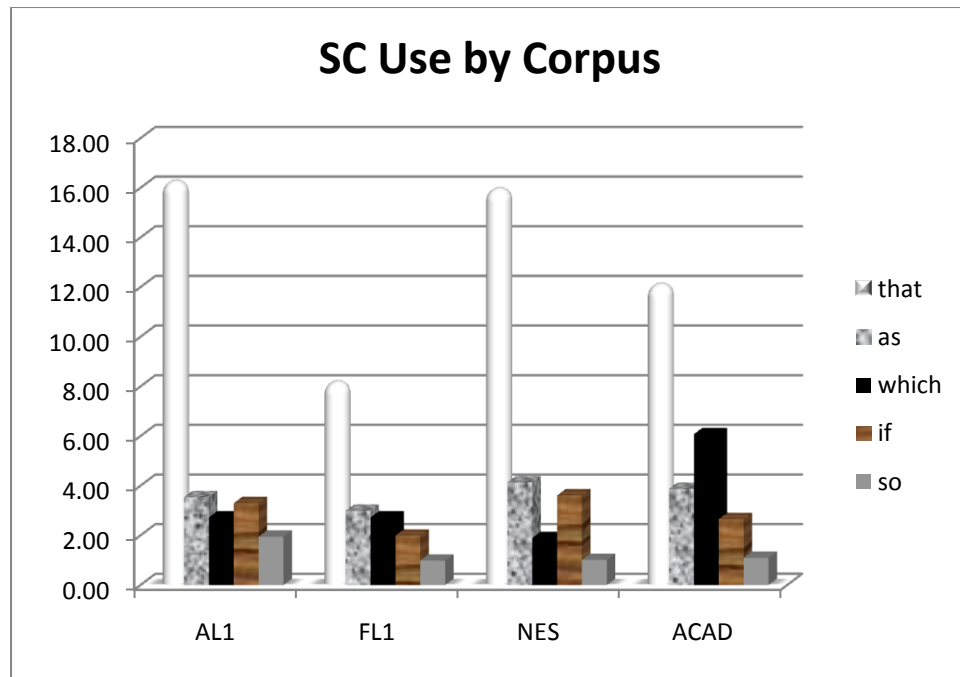


Figure 3- SC Use by Corpus

While the literature review prepared us to expect the AL1 writers to use more CCs than the other writer groups to connect the clauses in their sentences, we also expected a relative underuse of SCs. However, the data in Table 5 indicates the AL1 writers used more SCs than CCs, and more than all of the other writer groups. The AL1 writers used a similar number of SCs to that of the NES and ACAD writer groups. Had corpus linguistics software been available and been used by Yorkey in 1977, we could have compared his NAS students' CC and SC use. We have only his comments that the NAS' CC use outweighed their SC use, and his opinion that NAS SC use was less than that of NESs. My data does not seem to agree with Yorkey's (1977) observations. Although it shows that the AL1 writers are using more total CCs than others, they also use more SCs, and in fact use more SCs and CCs combined than any of the other writer groups.

Data from Table 5, the totals of CC and SC use, were used to create the graph in Figure 4. We see similarity in the relationship between CC and SC use across all writer groups as CC use is less than SC use in every corpus. The furthest right bar in each trio, representing the total use of clausal conjunctions, shows that the AL1

writers use more total clausal conjunctions than all of the other writers in the study. The use of CCs, SCs, and total clausal conjunctions by the two groups NES and ACAD were more similar to each other than they were to the other writer groups.

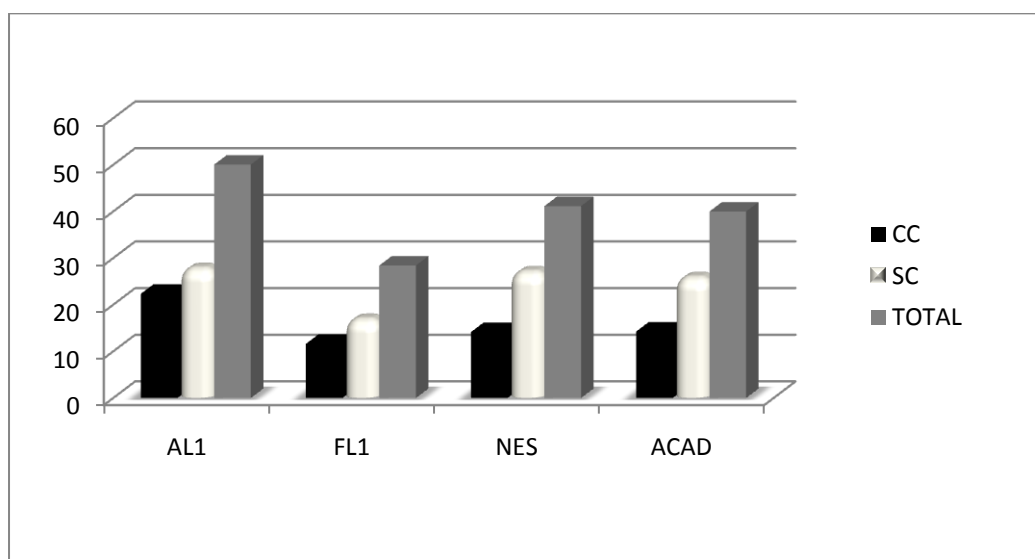


Figure 4. Comparison of CC to SC Use by Subcorpus

Figure 4 shows the use of clausal conjunctions in the FL1 corpus is about half of that of the AL1 writers, and that the FL1 writers seemed to use the fewest CCs and SCs. The FL1 writers used CCs and SCs less than the NES and the ACAD writers, while the AL1 writers used them more. This is not the consistent pattern of clausal conjunction use that would argue its existence as a problem of developing writers.

These observations do not support the finding of other studies that AL1 writers use fewer SCs and more CCs than the NES writers (Mohamed & Omer 1999; Ostler 1987; Thompson-Panos & Thomas-Ruzic 1983; Yorkey 1977). My data shows that AL1 writers use more CCs than the other writers, and they also use more SCs. They use very slightly more SCs than the NES or the ACAD writers. The low level of SC use by the FL1 writers in comparison with the other student writers does not support the theory that underuse of SCs is symptomatic of the developmental process in writing. The data does not support the idea that all learners go through a common stage of under using SCs and overusing CCs.

The literature discussed in Chapter 2 offers a plausible explanation of differences between the conjunction use in the AL1 corpus and the other corpora in

terms of Arabic literary-linguistic traditions. The difference between the two ESL/EFL groups use of CCs and SCs may support the CR theory that types of paragraph development are based on learned cultural norms. The totals shown in Figure 4 indicate that AL1 writers are not using CCs instead of SCs, but rather, are using more CCs and SCs over all. It is not that the AL1 writers don't use very many SCs, as Yorkey (1977) complained; they do use them, but they continue to use more CCs.

Table 6

Ratios of CC to SC Use by Subcorpus

	AL1	FL1	NES	ACAD
Total CC	22.33	11.6	14.13	14.23
Total SC	27.71	16.8	27	25.75
Ratio CC/SC	0.81	0.69	0.52	0.55

I had hypothesized that there would be substantial difference in the frequency of use of coordinate to subordinate conjunctions, and that this could signal a difference in the construction of rhetorical arguments by NES and NAS writers. Table 6 was constructed from the data in Table 5. This table compares ratios of the use of SCs to CCs within each corpus. Table 6 shows that the AL1 group has the highest ratio of CC to SC use of all of the writer groups. At .81, their ratio is the closest to one-to-one. The FL1 writers have the next highest proportion of CC to SC use, followed by the ACAD writers. The NES writers have the lowest ratio of CC to SC use.

The hypothesis that a comparably lower ratio of use of SCs to CCs by AL1 and FL1 could be due to a developmental writing issue, and not to cultural influence, could enable one to interpret the results of my data differently. Considering Tables 4 and 5 together though, demonstrates there is a difference in the AL1 writers' use of the clausal conjunctions. The AL1 writers use the most clausal conjunctions, the most CCs, and the most SCs, and their ratio of CC to SC use is the highest of all of the writer groups. This can partly be explained by the preference AL1 writers show for long sentences. The oral quality of Arabic makes it permissible for the text producer

to go on and on, adding thoughts and clauses, repairing as one does in speech. The following is one sentence from an AL1 essay:

In conclusion, Money is a bless we should use it for the good stuff and try our best to not use it in evil and try to make those who use it for evil to stop because they're not only destroying their selves they are destroying the people beside them, close to them, their family, this all effects bad guys because in the evil world everything is taken from you even though you try your best to protect them but you wont be able to because the most important thing In this game is how to destroy the enemy without any petty on the other guy or even thinking that this is his family.

Other than a momentary pause to decipher “without any petty” (pity), there are no large problems in understanding the writer’s meaning. To the typical NES reader, the oddness of the sentence comes from its endlessness; it runs on and on. The writer has stitched together several different thoughts that should have been in separate sentences with *ands*, *ors* and *buts*. This sentence fits Sa’adeddin’s (1989) description of the “development by addition and accumulation” (p. 38), characteristic of texts from cultures whose rhetoric retains oral qualities. NESs would find the passage quoted above more acceptable if it was a transcript of an oral presentation, or if they listened to this passage rather than read it. Listeners are not usually surprised when speakers add to their speech as new thoughts come, and pause or repair their previous remarks. The lengthy sentence also exemplifies what can happen if texts in your L1, as El Sayed (1992) advises us about Arabic, lack the capitalization and punctuation that the NES reader expects. It is conceivable that AL1 writers lacking confidence in their handling of capitalization and punctuation avoid these two elements and let the sentence run on.

Effects of CC versus SC Use on Information Management

Professional academic writers use coordination and subordination to control the way they structure and present information to the reader. Thill and Bovee’s (1999) advice to writers is the following:

The placement of the dependent clause should be geared to the relationship between the ideas expressed. If you want to emphasize the idea, put the dependent clause at the end of the sentence (the most emphatic position) or at

the beginning (the second most emphatic position). If you want to downplay the idea, bury the dependent clause within the sentence. (p. 132)

When Swan (2005) discusses the choices open to the writer, he characterizes normal order as putting important new information at the end of the sentence. “We often choose as the subject a person...that is already being talked about [and] the important new information ...comes at the end” (Swan, 2005, p. 512).

Coordination as used by Arabic L1 writers can keep a reader on the surface of an argument as it rephrases what is already known. Subordination can lead a reader deeper into the argument introducing new or slightly different information. Readers following what Johnstone calls a “quasilogical” argument (1989, p. 145) can be misled, or even forget pieces of the argument. The difference in the use of subordination from coordination according to Quirk, Greenbaum, Leech, and Svartnik (1985) is that

information in the subordinate clause is often placed in the background.... [The] syntactic inequality of subordination tends to bring with it a semantic inequality which is realized by syntactic hierarchization....This is particularly noticeable in the case of certain adverbial clauses which present information as if it is presupposed as given rather than asserted as new. (p. 919)

Quirk et al. (1985) provide an example of this. Contrast the sentence “He has quarreled with the chairman and has resigned” with “Since he quarreled with the chairman, he has resigned” (p. 919). The first sentence using the CC gives equal weight to the quarrel and the resignation. The second, using the SC, gives the reader the impression that the quarrel with the chairman is already a known fact, and the new information concerns the resignation. We can teach writers and readers to recognize this kind of manipulation of information.

In their advice to writers, Axelrod and Cooper (1998) counsel writers to use “coordination and subordination to indicate the relationships among sentence elements. Use coordination to join sentence elements that are equally important, [and use] subordination to indicate that one sentence element is more important than the other elements” (p. 295). When using a subordinate clause, the most important information belongs in the independent clause, and the less important information in the dependent clause. When we teach our students paragraph structure using topic

sentence, evidence, and so on, we can explicitly teach them how to use CCs and SCs as well.

There are many problems for NAS writers wishing to make their academic writing in English more acceptable to their professors. Since as El-Sayed (1992) pointed out, there are no capital letters and little punctuation in Arabic, it does not come naturally to a NAS writer to learn how to combine the clauses that structure English sentences. An example of the clausal problems for Arabic L1 writers in English is that of tense in temporal clauses, which can be mixed in Arabic. Thompson-Panos and Thomas-Ruzic (1983) give the example of a translation from Arabic “The minister arrived while he carries an important letter from the president” rather than “The minister arrived carrying an important letter from the president” (p. 616). In Arabic the imperfect tense following the perfect tense indicates that the actions are taking place concurrently. The Arabic L1 writer would need to be taught how to construct temporal clauses in English and under what circumstances tenses might be mixed.

Relative pronouns, relative clauses, and their construction present additional opportunities for transfer errors by NASs learning to write in English. In Arabic, the head clause and the relative clause (which would be a SC in English) are each separate sentences. This makes the relative clause and its antecedent more like CCs in English, where two clauses joined by a CC can be broken into two complete sentences. Due to the two sentence structure required by relative clause use in Arabic, the second sentence contains something called a relator, which according to Thompson-Panos and Thomas-Ruzic (1983) “serves as the subject or object of the clause and refers to the antecedent” (p. 618). The presence of the relator may be what causes NAS writers to repeat the subject or object of a clause when writing in English, creating what Thompson-Panos and Thomas-Ruzic term “the Middle Eastern clause” (p. 618). An example given by Thompson-Panos and Thomas-Ruzic is “This is the record which I bought it” (p. 618). In the AL1 corpus I found similar examples, such as “All of these were some of my dreams that I was able to make them come true” and “Stealing is a crime, in which all participants should be punished for committing it.” These additional difficulties for NAS students attempting to master clause formation create opportunities for transfer error from their L1. They are not the

typical problems of developing writers: I did not find the frequent examples of this particular error in the other student corpora.

In her study of rhetorical instruction, Liebman (1992) noted that those studying contrastive rhetoric have not spent much time considering the effect of education systems on university students' writing. She noted that although NAS students spoke of being taught to use the "Introduction/Development with Support/Conclusion pattern" (p. 148), and were taught to use logic in their persuasive writing, their instruction was product oriented. There was little time spent on prewriting or revising. In the opinion of the students Liebman interviewed, the most important feature of their writing in the eyes of their instructors was the beauty of the language they used. Khuwaileh and Al Shoumali (2000) described their students at a Jordanian university as being poor academic writers in Arabic, lacking "logical connectors of sequence, contrast, addition, [and] illustration" (p. 177). While university students need to learn academic writing skills in order to structure their thinking, what may be transferring from the rhetorical background of NAS student writers is a tendency to literally *hear* what they write, as they write, but what they hear may be in the wrong register. If the NAS writers have not developed an academic writing voice, they may be writing in that informal, friendly voice Sa'adeddin (1989) noted. It is as if no other form of communication besides oral exists. The AL1 students seem to be missing what Sa'adeddin, as quoted earlier, describes as a "conventionalized separation of the norms for different mediums" (p. 39). Pedagogically speaking, it would be advantageous for instructors to establish as explicitly as possible and maintain the difference between written and oral rhetoric for their NAS students.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

The reason for differences between my results and those of Yorkey (1977), who described the overuse of CCs and underuse of SCs by NAS student writers, could be that in the more than thirty years that have elapsed, educational methods have changed greatly. We should consider Liebman's (1992) advice on the impact the teaching of writing, especially in English language courses, has on what the students produce. Changes and reforms in teaching many of the disciplines in the Emirates since Yorkey wrote his article in 1977 have been numerous, and some of the biggest changes have taken place in teaching EFL/ESL. However, the difference in the amount of use of clausal conjunctions by the AL1 writers remains a signal that these are important areas on which to focus academic writing instruction for NAS university students. Specifically, instructors must help the NAS writers reduce their overuse of CCs. Teaching them to break long sentences containing many CCs into smaller units would be an initial step in the correct direction. Using the growing body of literature on CR, I have identified other appropriate pedagogic responses to the differences I found in my study.

Pedagogical Implications

While certain elements of academic writing vary across the disciplines, some forms of writing tasks are frequently mentioned. Paltridge (2004) tells us university students need to know how to write "documented essays, summaries, plans/proposals and book reviews [as well as] exposition and argument type texts, ...cause and effect, problem-solution, classification/enumeration, compare/contrast, and analysis type texts" (p. 87). In these texts university professors expect to find appropriate use of clausal conjunctions. Therefore, these are the genres academic writing teachers should focus on with their NAS student writers. Even though recent discussions of Global and World Englishes have introduced ideas of tolerance of rhetorical norms outside of Western conventions, in the academic world, little has changed since Yorkey (1977) wrote that professors expect to see more subordination than coordination employed in paragraph development, as characteristic of a mature writing style.

My study of the literature along with the results of my analysis of the comparatively more recently collected data leads me to believe that there is still a

need for explicit teaching of these rhetorical elements for NAS university students. My data does indicate progress may have been made by the AL1 writers, signified both by their greater use of SCs in comparison to their CC use, as well as by the fact that AL1 SC use was greater than that of the NES and ACAD writers. This could suggest that writing instruction has brought about some changes in the years since Kaplan (1966) and Yorkey (1977) complained of the paucity of NAS writers' SC use. However, the ratios in Table 5 showing that AL1 writers used the highest proportion of CCs to SCs when compared to the other writer groups leads me to believe that there are still differences. The AL1 writers are still using more CCs than the other writers, and there are still changes to be made in their writing should they wish to align their rhetorical writing more closely to that of the NES or even the ACAD writers. I believe a combination of traditional and technologically based methods would be of benefit.

Yorkey (1977) suggested NAS ESL beginning writers practice combining sentences in such a way as to use subordinators, in particular focusing on leaving out the extra object pronouns (the relator) Thompson-Panos and Thomas-Ruzic (1983) wrote of. Similarly, Horowitz (1986) also suggested these student writers should practice using subordinators by combining sentences taken from different sources. Perhaps a class might work in groups that reflect their varied interests, gathering and assembling information into essays. Peer critiquing and revision could take place. Students should read each other's essays, and then read short professionally written pieces to develop an ear for differences. Because AL1 students need to create and preserve clear definitions between written and oral registers, I would recommend that nothing be read aloud, to preserve the separation between writing and speech.

Student writers could be divided to work on different sides of an issue, to create arguments. Explicit instruction on building linear arguments using paragraphs employing topic sentences followed by supporting sentences, all the while using CCs and SCs would be an effective way to strengthen the academic writing skills of NAS writers. As noted earlier, correct capitalization and punctuation should not be glossed over because problems using them contribute to difficulties in handling clauses. Capitalization and punctuation are important pieces in the instruction.

In his article containing many practical suggestions for teaching English to NAS students, Yorkey (1977) writes that using subordination is important because “emphasis on coordination rather than on subordination causes students to underestimate the importance in English of the distinctions between cause and effect, real and unreal conditions, and the main idea and supporting details” (p. 68).

Corpus linguistics software could be used to give students a visual demonstration of how they employ CCs and SCs in their sentences. This software is available as freeware and shareware, so even teachers who lack the resources to purchase proprietary versions can access some program. Building something similar to the AL1 corpus (Crompton, forthcoming) and using it as part of a process approach would make it easy to show students the differences between their own writing and their target mode. Gilquin, Granger, and Paquot (2007) discussed the benefits of corpus based instruction using NNES corpora: “By showing in context the types of errors learners make, as well as the items they tend to underuse or overuse, learner corpora make such an approach possible” (p. 324). Classes could create a corpus from their own compositions, which would yield authentic sentences for them to work with. A study of their own use of CCs and SCs could help students advance their use of clausal conjunctions. While Yorkey (1977) wrote that “the rhetoric of a tightly organized logical presentation of ideas is as foreign to Arabic-speaking students as the language of English itself” (p. 68), I believe that joining contrastive rhetoric and corpus based instruction would make what Yorkey called “foreign” far more familiar to NAS writers.

Limitations and Suggestions for Further Research

My study was linguistically based, and as such, examined only a portion of the difficulties of academic writing for NAS students. The issue of CR of course goes far deeper than a tendency to rely on coordination and parallelism in rhetoric. I chose to look at the use of coordination and subordination because they offer a quantifiable, measurable sign of a culturally based rhetorical difference. Although the study looked at an aspect of writing that is just above the level of the sentence, nevertheless, the findings are evidence of a phenomenon which some scholars regard as suspect and unprovable. One may go deeper still into culturally different ways of thinking and reasoning by exploring types and frequencies of use of certain logical arguments; i.e.,

could there be a type of argument more frequently used by NAS writers? Hatim (1991) thinks so, and has written articles on the Arab preference for through-argument as opposed to NES writers' preference for the balanced counter-argument. This is another avenue for researching the validity of contrastive rhetoric, although outside the arena of corpus linguistics, and certainly of this study.

Given that my study seems to show more SC use by NAS writers than the literature led me to anticipate, further research is needed. For example while the AL1 writers employed more SCs than CCs, are they using the SCs correctly, or do they use them in a non standard way as Thompson-Panos and Thomas-Ruzics' (1983) discussion of the difficulty NAS writers' experience using temporal and relative clauses would lead us to expect? Finally, it would be fruitful to measure any changes that might take place in NAS ESL/EFL writers after using a corpus-enhanced rhetorical awareness approach similar to that endorsed by Gilquin, Granger, and Paquot (2007).

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Appendix A

Normalized Frequencies of Subordinating Conjunctions by Sub corpus

	AL1	FL1	NES	ACAD
Tokens	74,447.000	287,217.000	149,577.000	1,005,933.000
Subordinating Conjunctions	Normf	Normf	Normf	Normf
after	1.155	0.515	0.842	0.922
as	6.206	5.539	7.508	8.417
because	3.801	1.661	3.376	1.140
before	0.578	0.456	0.816	0.617
however	1.316	0.467	1.170	1.024
if	3.398	2.072	3.797	2.734
like	1.719	0.999	1.250	1.074
once	0.443	0.279	0.481	0.339
since	0.981	0.404	0.675	0.708
so	2.781	1.814	1.979	2.141
than	2.498	0.999	1.625	1.885
that	19.289	9.442	17.469	13.545
therefore	0.900	0.397	0.542	0.498
though	0.309	0.174	0.441	0.570
till	0.027	0.031	0.007	0.036
until	0.107	0.049	0.314	0.343
when	2.310	1.299	2.768	1.878
where	1.276	0.710	0.769	0.994
whereas	0.000	0.132	0.040	0.135
whereby	0.013	0.000	0.007	0.041
whereupon	0.000	0.000	0.000	0.005
whether	0.376	0.195	0.575	0.542
which	2.781	2.834	1.905	6.075
while	0.927	0.261	0.762	0.496

Appendix B

Essay Topics

- Crime does not pay.
- Money is the root of all evil.
- Feminists have done more harm than good to the cause of women.
- The prison system is outdated. No civilized society should punish its criminals: it should rehabilitate them.
 - Most university degrees are theoretical and do not prepare students for the real world. They are therefore of very little value.
 - A person's financial reward should be commensurate with their contribution to the society they live in.
 - Marx once said that religion was the opium of the masses. If he was alive at the start of the 21st century, he would have said 'television' instead of 'religion'.
 - In our modern world, dominated by science, technology, and industrialization, there is no longer a place for dreaming or imagination.
 - George Orwell wrote "All men are equal; but some are more equal than others". Is this true today?
 - All armies should consist entirely of professional soldiers; there is no value in a system of military service

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