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The Development of an English-Influenced, Universal, Techno-Academic Rhetoric

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Introduction

Due to a number of factors including key historical turns and the economic power of Great Britain and the United States of America, the English language has emerged as the world's language of wider communication in most fields of cross-linguistic, international communication (Fishman et al., 1975). For example, in 1981, 86% of all published material dealing with the biological sciences was in English (a gain of 11% since 1965). A similar trend can be found for physics (85% — a gain of 12% since 1965), medicine (73% — a gain of 22% since 1965) and most other modern sciences (Swales 1985:2). This means that if an individual or group wishes to gain access to, or contribute to, a huge portion of the world's current scientific knowledge, English becomes the key to unlocking information storage and retrieval systems. Thus, the English language has a significant effect on the international scientific and technological speech community. For instance, most new scientific and technological terms are created using English-based lexical and phonological features regardless of the native language of those researchers and developers who have conducted the research or initiated the development (Radd 1989). However, preliminary research indicates that the effect of the English language on the international speech community has been much deeper than lexical choices.

Commencing with Kaplan's work in 1966 (Kaplan 1966), some linguists have investigated the notion that people from different cultures prefer to develop meaning in different ways. Sufficient evidence is available to indicate that different speech act behavioral patterns exist for different languages. These specific patterns appear to be related to the cultural and sociolinguistic dimension within a particular speech community. Cultural influences on linguistic behavior are not only confined to spoken texts. For example, Kaplan (1966; 1972; 1987) has demonstrated that cross-cultural patterns are evident in written texts. Thus, while numerous forms of developing meaning are available to all languages, each language exhibits clear preferences as to the presentation of that meaning. As Kaplan (1987) states, there are important differences between languages in the way in which discourse topic is identified in a text and the way which discourse topic is developed in terms of exemplification, definition and so on (p. 10).

Or, as Clyne (1985) suggests:

it is the cultural value system that determines whether, to a particular group, directness is vulgar or indirectness is devious . . . whether a letter should come to the point immediately or gradually build up to the central speech act . . . whether linearity in discourse is seen as the only logical or comprehensible structure, or whether it is felt to curb exhaustive discussion (p. 14).

Lautamatti (1987) has examined the relationship between discourse topic and sub-topics for the English language. She explains that topic develops in terms of succession of hierarchically ordered sub-topics, each of which contributes to the discourse topic, and is treated as a sequence of ideas, expressed in the written language as sentences (1987:87).

Topical progression in English academic scientific and technological written discourse comes about generally through two types of sub-topic development:

1. parallel progression where the sub-topic in a series of sentences is the same, and

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2. sequential progression where the topic of a sentence is provided by the predicate of the preceding sentence.

It appears that essential elements in the expectations of the native reader of English scientific prose are that there is a hierarchical progression of topic and that there is a direct and uninterrupted flow of information (Kaplan 1987:10). Consequently, parallel and sequential topical progression must add to the topic within a narrow set of parameters seldom, if ever, digressing from the stated, clearly defined topic.

However, textual analysis of texts written in many languages other than English has shown that the above described narrow, linear development of topic has not been a language universal. Some academic texts in German (Clyne 1984), Brazilian Portuguese (Dantas-Whitney and Grabe 1989), Korean (Eggington 1987), Japanese (Hinds 1980, 1987), Hindi (Kachru 1988), Mandarin (Tsao 1984) and Hebrew (Zellermayer 1988) develop topic in ways other than those expected by native English readers. For example, Eggington (1987) shows how Korean cultural emphases on humility and indirectness in communication prohibits some academics from expressing their hypothesis at the commencement of their discourse for fear of appearing to be arrogant. Rather, a clear statement of topic and rhetorical intent either is absent, or is buried in the text and only briefly mentioned. In addition, many Korean academic writers develop topic not in the preferred linear style common to English academic writing, but rather in a fashion based upon classical Chinese poetry where the argument is vaguely introduced by reference to a series of tangential examples; the argument is developed in terms of what it is not rather than what it is; there is an abrupt change in topic with a focus on sub-themes to the argument; and finally a quick conclusion is reached.

However, Eggington also shows that another rhetorical style is evident when one surveys Korean academic journals of the type written in Korean and English and especially when one concentrates on articles written by those authors who publish in both Korean and English and have earned academic degrees in English-speaking countries (Eggington 1987:157).

Eggington continues this line of research by suggesting that "the academic rhetorical patterns of the world are adjusting to fit a linear style" (Eggington 1987:159). Clyne (1984, 1981) also comes to this conclusion with reference to German. He states that there appear to be some disciplines (e.g., mathematics, engineering) in which German scientists have adopted a basically linear discourse structure. This may be conditioned by the discipline or by leadership in the discipline of English speakers. In other fields of science (e.g., chemistry), the non-linear structure is quite common in German (1981:64).

Most recently, Biber (1989) and Atkinson (1991) have shown that the preferred rhetorical patterns of the English language in many written genres have "drifted" over a two hundred year period to form those styles which are presently accepted. Atkinson has shown how the rhetorical style of the oldest scientific journal still being published, the Edinburgh Medical Journal, has changed significantly since 1735. These changes are broadly attributed to the changing nature of the scientific speech community and the subject matter.

Hypothesis

Two preliminary hypotheses can be generated from the above discussion. It would appear that 1) the world scientific speech community is creating a standardized form of rhetoric regardless of the cultural influences on the languages functioning within that speech community, and 2) that the predominant cultural and linguistic influence on this rhetoric is derived from Western, English-based rhetorical preferences.

Should the above-stated hypotheses be supported, it would confirm that there is a developing international scientific rhetoric which transcends linguistic barriers. Such a finding would be significant in and of itself as a clear indication of the predominance of the English language, and of a developing "global village" comprised of individuals who can at least function in a shared discourse style. However, the educational implications of the finding would be far more significant.

Language-in-education policy planners in all nations would have a defined rhetorical style to hold as a model for instruction which would make it easier for scholars to gain access to, and contribute to, the world's scientific information storage and retrieval systems. It should be noted that this rhetorical style would not supplant the preferred culturally derived genres and registers functioning in any given language, but rather be one of the many genres and registers all individuals carry as part of their linguistic repertoire.

Evidence in Support of the Hypothesis

Evidence to support these hypotheses can be gathered from two sources: Historical precedent and contemporary studies. A brief overview of some supporting evidence follows.

Historical Evidence

The Latin influence on the development of English rhetorical patterns has been well documented. Millward (1989:241) shows that the preferred pattern of topical development during the Middle English period involved the placing of ideas in a paratactic or side by side progression. Thus:

But take heed to yourselves: for they shall deliver you up to councils; and in the synagogues ye shall
be beaten: and ye shall be brought before rulers and kings for my sake, for a testimony against them (Bible, KJV. Mark 13:9).

However, scholars during this period gained much of their knowledge through the study and translation of Latin texts. Latin was the language of wider communication for intellectual activities. Consequently, when scholars wished to write in an academic style, they preferred the Latin hypotactic tradition which involved considerable subordination of ideas. For example, the “scholars” who produced the King James Version of the Bible retained the paratactic patterns from previous translations for the actual scriptures as in the example above. However, when producing the dedication for the Bible, they felt compelled to write in the Latin hypotactic patterns. Thus:

So that if, on the one side, we shall be traduced by Popish persons at home or abroad, who therefore will malign us, because we are poor instruments to make God’s holy truth to be yet more and more known to the people, whom they desire still to keep in ignorance and darkness; or if, on the other side .... (Bible, KJV — Dedication)

This Latin rhetorical influence continues to the present time as a preferred pattern for most academic written discourse. If traditional discourse patterns for Middle English were influenced by the major academic language of the period, it is not difficult to conclude that some rhetorical patterns of contemporary languages have been influenced by today’s major academic language, the English language.

Contemporary Evidence

As mentioned above, Eggington (1987) showed that there is an English based influence on some Korean academic writing. In order to further explore this influence, Capell (1992) examined twenty-five essays and articles published by the Korean academic, intellectual journal Shin Tonga (New East Asia). He selected five text samples each year from journals published in 1965, 1972, 1982, 1985 and 1990. He analyzed each text in terms of:

1. Number of paragraphs,
2. Words per sentence,
3. T-units per text/sentence,
4. Coordinate structures,
5. Subordinate structures,
6. Superordinate structures,
7. Linear topical development,
8. Circular topical development,
9. Other forms of topical development,
10. Pronominalization,
11. Ellipses,
12. Discourse markers,
13. Loan words,
14. Profession of author,
15. Author’s experience in English-speaking countries.

Capell’s purpose for conducting this type of micro-analytic research was to determine if there were any linguistic features which had been influenced by English. He found, among many interesting results, that a “new” pattern had emerged which was not considered as “good” Korean discourse. In this “sandwich” pattern, the main topic of the text appears to be sandwiched between an introduction and a conclusion which seemed to be tangential to the topic (Capell 1992:80). He also noted the occurrences of linear development of topic. In 1965, there were 2 examples; in 1972, 1 example, in 1982, 1 example, in 1985, 3 examples and in 1990, 4 examples. This trend seems to verify the hypothesis that there is a linear influence in modern Korean writing. Capell also noted that linear discourse is preferred by Korean readers “who have been either living or studying in America, or studying English” (76).

In a similar study, Folman and Connor (1992) examined preferred patterns for topical development in research papers produced by secondary students in Israel writing in Hebrew and a similar cohort of student in the United States writing in English. Their results suggest

that while the research paper is a universal norm-based product defined by the international academy, the products of the two culture groups were situated at different points along the (mostly pedagogical) approximative systems which aim at defining the research paper by universal quality norm (Folman and Connor 1992).

My final example requires that I be anecdotal. During a recent visit to Beijing Normal University, China, I interviewed a Chinese Physics professor, Dr. Jiang Liu, concerning the influence of English in Chinese technological writing. He stated that many Chinese physics students were using adverbial modifiers following English patterns. These patterns, he said, were not acceptable in social science written discourse. He also stated that English mathematical/physics formulae had influenced Chinese expression. As an example, he drew a triangle labeled ABC. In English, he said, a geometric equation can be written thus:

1. \(AB = AC\) if, and only if, \(a = b\).

He explained that the Chinese preferred pattern is:

2. \(\text{if } a = b \text{ then } AB = AC\).

Even though the English structure (1), when translated into Chinese, is awkward, students in college preferred to use (1) more than (2). He also stated that high school teachers were “angry” at college professors for allowing their students to write Chinese following the awkward English pattern (1). But, he continued, college students will continue to use (1) because of the examples set in their English textbooks.
Conclusion

The evidence presented above is still preliminary. However, it does appear that there is a trend toward an English based rhetorical pattern in scientific/technological writing in some languages. Further research needs to be conducted with other languages to determine the extent of this trend.

Bibliography


