AN ABSTRACT OF THE THESIS OF

Ed Rehwinkle   for the   Master of Arts

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Title: SOME EFFECTS OF SENTENCE-COMBINING PRACTICE IN

AN ESL PROGRAM

Abstract approved: _____

The purpose of this study was to determine the
effectiveness of an experimental method of teaching English
as a second language. The investigation was designed to
discover whether sentence-combining practice would effect-
ively enhance the subordinating ability of intermediate and
advanced level college ESL students.

An intermediate level group and an advanced level
group, each with nine students, participated in an eight
week experiment consisting of regular sentence-combining
practice. The pre- and post-test instrument used to measure
gains was the Test of Ability to Subordinate developed by
David M. Davidson. The intermediate group studied six
structures of subordination: prenominal adjectives;
prepositional and participial phrases; and noun, adverb, and
relative clauses. The advanced level group studied, in
addition to the above six structures, infinitive phrases.

Gains achieved by these groups were compared to those achieved by control groups of eleven advanced students and five intermediate students. Neither of these control groups had studied sentence combining. The gains of the advanced experimental and control groups were compared. In the same manner, the results of the intermediate experimental and control groups were compared. Additionally, the results of the combined experimental groups were compared with those of the combined control groups.

The findings demonstrated that both experimental groups made significant gains. The advanced experimental group significantly gained over the advanced control group on six of seven indices of subordinating ability, while the intermediate experimental group also significantly gained over the intermediate control group on five of six indices of subordinating ability. Furthermore, the gains achieved by the combined experimental group significantly exceeded those achieved by the combined control group on six of seven indices of subordinating ability.

The study confirms results of earlier studies with native and non-native speakers which found that sentence-combining practice effectively enhances student syntactic maturity. The findings further indicate that sentence-combining activity beneficially affects intermediate and advanced ESL college students' subordinating ability.

SOME EFFECTS OF SENTENCE-COMBINING PRACTICE
IN AN ESL PROGRAM

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A Thesis

Presented to

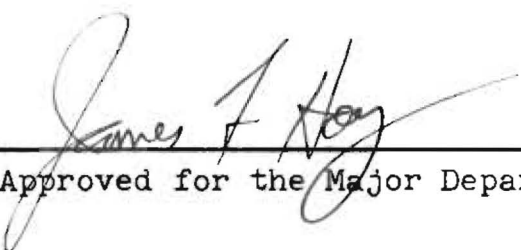the Faculty of the Department of English

Emporia State University

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In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

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by

Ed Rehwinkle

December 1980

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Approved for the Major Department

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Approved for the Graduate Council

DEDICATION

This thesis is dedicated to my grandparents, John and Ann Dwornicki, who wore themselves out in a new country so their children and children's children could enjoy the American Dream.

PREFACE

I became interested in the value that sentence-combining practice could have in an ESL structure program during my first semester as a teaching assistant in this university's Intensive English Program. This was during the Fall of 1979. The enthusiasm with which my students attacked sentence-combining exercises came as a refreshing surprise in contrast to their usual bored reactions to grammar exercises. That sentence-combining exercises could also help those students to achieve the syntactic maturity, the grasp of English structure, for which they were in that class seemed too much to expect. Consequently, when Ravi Sheorey, the director of the IEP, suggested that I do a study on the efficacy of sentence-combining for my thesis project, I became enthusiastic. I determined to discover if it were indeed true that these new exercises (new to me at any rate) were as beneficial as they seemed. From this determination, the present study developed.

My fellow TA's and the IEP secretaries with whom I have worked over the past sixteen months deserve my thanks for their constant encouragement during this long project. Thanks are also due to Dr. Faye Vowell for her many

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Chapter 1

BACKGROUND OF RESEARCH

In recent years sentence combining has generated much interest and study among teachers of English. A great deal of investigation has been made in the area beginning, practically speaking, with Mellon in 1967 and continuing with O'Hare, Combs, Ney, Morenberg et al., and many more. This research has tended to demonstrate that sentence combining has a very beneficial effect upon the development of syntactic maturity and overall writing quality at many levels. It is no wonder, therefore, that many teachers of ESL have turned to sentence-combining exercises in the hopes that these exercises will aid their students to more quickly grasp and internalize English syntax. Unfortunately, however, most of the research done to date has been done with native English speakers from the point of view of teaching writing.[1] Nevertheless, in order to fully understand sentence combining and its implications for the teaching of English syntax to non-native speakers, one must be thoroughly

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[1] That research which has specifically concerned ESL will more fully be discussed in the next chapter.

familiar with previous research in sentence combining and the body of criticism which has sprung from the research.

An Explanation of Sentence Combining

"Sentence combining" is the term given to a wide variety of exercises, both controlled and uncontrolled, which have one thing in common: the joining of smaller, "kernel" or "base" sentences into larger, more complex sentences. For instance, when one synthesizes sentence (3) from sentences (1) and (2) below by means of a relative clause, one is sentence combining.

    (1) I saw a man.

    (2) The man had a hat on.

    (3) I saw a man who had a hat on.

Of course, there are a number of syntactic devices besides the relative clause employed in sentence-combining exercises. One could, instead of using a relative clause, combine sentences (1) and (2) by means of a prepositional phrase, as in sentence (4), or a participial phrase, as in sentence (5):

    (4) I saw a man with a hat on.

    (5) I saw a man wearing a hat.

The choice among sentences (3), (4), or (5) is a stylistic one determined by rhetorical need. The point is that all three resulting sentences syntactically join the first two sentences without substantially altering the meaning, thereby producing more syntactically concise sentences.

The object of sentence-combining practice is to provide external practice in the manipulation of sentences in order to facilitate the internal process by which human beings learn how to construct more mature sentences as they acquire facility in a language. According to Kellogg Hunt, a child uses coordination more than any other device to join sentences together. In fact, it is the only device or transformation used less frequently by adults than children.[2] Christensen, supporting this observation, comments that "as children mature, the sentences they use tend to be longer" and "a larger proportion of their clauses tend to be subordinate clauses."[3] Subordination, then, can be said to be one mark of mature language, and sentence-combining practice is a means to increase one's ability to subordinate, i.e. syntactic maturity, by giving the student practice in actual sentence manipulation.

[2] Kellogg W. Hunt, "How Little Sentences Grow into Big Ones," in Readings in Applied Transformational Grammar, ed. Mark Lester (New York: Holt, Rinehart, and Winston, 1970), p. 179. Further citations from this work will appear in parentheses within the text.

[3] Kellogg W. Hunt, "Recent Measures in Syntactic Development," Elementary English, 43 (1966), 732-39. Further citations from this work will appear in parentheses within the text.

The History of Sentence Combining Research

Until recently, most of the research conducted on sentence combining has been done with native-English speakers as a technique used in the teaching of writing. Sentence combining had its beginnings in 1966. James Ney and Donna Raub were the first to do studies testing the efficacy of sentence-combining practice.[4] Ney states that he got the idea of using sentence-combining techniques while teaching at an NDEA institute headed by William Griffin at George Peabody College in Nashville during the summer of 1965.[5] The importance of these two early studies lies in the fact that they provided the impetus for a later study by Mellon which received considerable attention. This study was published in 1969 by the National Council of Teachers of English.[6]

[4] James W. Ney, "Applied Linguistics in the Seventh Grade," English Journal, 55 (1966), 895-97, 902. And Donna K. Raug, "The Audio-Lingual Drill Technique: An Approach to Teaching Composition," Master's thesis George Peabody College for Teachers 1966.

[5] James W. Ney, A Short History of Sentence Combining: Its Limitations and Use (Tempe: Arizona State Univ., 1977), p. 2 (ERIC ED 161 079).

[6] John C. Mellon, Transformational Sentence-Combining: A Method for Enhancing the Development of Syntactic Fluency in English Composition, NCTE Research Report No. 10 (Champaign, Ill.: National Council of Teachers of English, 1969). Further citations from this work will appear in parentheses within the text.

The hypothesis that Mellon tested in his 1969 study was that practice in transformational sentence combining would enhance the normal growth in syntactic maturity, thereby causing the appearance of more mature sentences in student compositions. The study involved 247 seventh grade students from the Boston area. These students were placed in three separate classes. One class received sentence-combining practice based on a specially constructed transformational grammar text which was also used in class; another class received instruction in traditional grammar along with traditional parsing exercises; the third class, acting as a "placebo" group, received no grammar instruction with extra instruction in literature and composition to make up the time. Nine compositions were written by each of the three classes during the first four and last four weeks of the school year. Three different rhetorical modes were used: narration, description, and exposition. This was done in order to insure the results were not colored by one mode lending itself particularly to certain sentence types or syntactic devices.

In order to analyze the results, Mellon made use of the T-unit. The term "T-unit" refers to "minimal terminable unit," a term derived from a study by Kellogg

Hunt on syntactic maturity.[7] The T-unit is the smallest
segment of language which can be punctuated correctly with
a period and capital letter (Hunt, GSWTGL, p. 21). Later
Hunt defines it as "one main clause plus whatever subordi-
nate clauses are attached to it or embedded within" (Hunt,
RMSD, 732-39). Thus sentence (6) below contains two T-units
but sentence (7) contains only one.

(6) I was happy and she was happy, too.

(7) I was happy because she was happy.

Sentence (6) contains 3.5 words per T-unit (W/T) while
sentence (7) contains 7 W/T. This ratio of words per T-unit
along with two other measures, clauses per T-unit (C/T) and
words per clause (W/C), were found by Hunt to be better
descriptors of syntactic maturity than a words-per-sentence
measurement (Hunt, RMSD). Therefore, Mellon also used these
measures in determining the results of his study, but some-
what modified the concept of the T-unit. Mellon counted
subordinate clauses joined to the main clause by logical
conjunctions as separate T-units, reasoning that logical
conjunctions, such as "although" and "since," function in
much the same way as coordinate conjunctions (Mellon, p. 43).

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[7] Kellogg W. Hunt, Grammatical Structures Written at
Three Grade Levels (Urbana, Ill.: National Council of
Teachers of English, 1965). Further citations from this
work will appear in parentheses within the text.

Mellon also discarded clauses with repeating predicate phrases, such as "and so did John."

In the study, Mellon used the first ten T-units of each one of the nine compositions of each student to determine the results. This gave a sample of ninety T-units for each student. The analysis found that the experimental group, the group which had sentence-combining practice, had achieved important growth in every one of twelve areas analysed for syntactic maturity. The experimental group achieved a gain of 1.27 W/T as compared with a gain of 0.26 achieved by the control group. Mellon found, using Hunt's normative growth findings (Hunt, GSWTGL, pp. 146-147), that the experimental group showed more than twice the rate of normal growth in syntactic maturity. In every analysed area, the control group was surpassed in development of maturity by the experimental group. What is more, the control group did not achieve any more development than the placebo group despite formal grammar study (Mellon, pp. 60-61).

Although Mellon attributed his very successful results to the sentence-combining practice, there remained one notable problem in his study: his experimental group, in addition to the sentence-combining practice, was required to study the accompanying generative-transformational grammar that he had developed for the experiment. This

entailed the students learning a complicated vocabulary and
becoming familiar with a set of grammatical rules. The
problem, of course, lay in determining how this study of
grammar itself influenced the growth achieved by the experi-
mental group. Another problem was the fact that a number of
variables were not adequately controlled or taken into
account--such variables as the out-of-class language experi-
ence of the students or the teacher variable.[8] That is, no
determination was made of how the students' out-of-class
language experience or their having different teachers
affected the results. Despite these problems, the Mellon
study created an aura of excitement around sentence combin-
ing and had a powerful, positive impact on the English
teaching community.

Mellon's study was followed by one done by Frank
O'Hare. This study was first published in 1971 and later
republished in 1973, and did much to validate the claims
Mellon had made for the efficacy of sentence-combining
practice.[9] His study sought to determine if sentence-

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[8] Richard F. Abrahamson, "The Effects of Formal
Grammar Instruction vs. the Effects of Sentence Combining
Instruction on Student Writing: A Collection of Evaluative
Abstracts of Pertinent Research" (ERIC ED 145 450), p. 13.

[9] Frank O'Hare, Sentence Combining, (Urbana, Ill.:
National Council of Teachers of English, 1973). Further
citations from this work will appear in parentheses within
the text.

combining practice alone, divorced from all formal study of
either traditional or transformational grammar, would
significantly increase the students' abilities to write
syntactically mature sentences. Furthermore, the study also
sought to determine if the sentence-combining practice
would also effect an overall gain in the quality of the
students' writing (O'Hare, p. 35). The study used eighty-
three seventh grade students at Florida State University
High School, divided into four classes, two experimental
classes and two control classes. The researcher, Frank
O'Hare, as well as the English Department head each taught
one of the experimental groups and one of the control
groups. The control group was exposed to a language arts
curriculum which included reading skills, free reading, two
units in literature, composition, dramatics, library skills,
and language study. The experimental group was exposed to
the same curriculum but for shorter lengths of time. The
extra time was used to teach the experimental groups nine-
teen units of sentence combining. The experimental group
spent an average of one and one-fourth hours per week on
sentence combining in class with an average of one-half hour
per week spent on sentence-combining homework. The students
did workbook-type exercises as well as taking part in choral
readings of correct sentences, small group discussions, and
discussions led by the students themselves.

To analyse the results, O'Hare used the first ten
T-units of each of the five pre-test and five post-test
compositions of each student. This gave a student sample
of fifty T-units per student per test. The samples were
studied for the level of six indices of maturity listed
below:

    a. Words per T-unit

    b. Clauses per T-unit

    c. Words per clause

    d. Noun clauses per 100 T-units

    e. Adjective clauses per 100 T-units

    f. Adverb clauses per 100 T-units

In addition to analysing the syntactic maturity of the
students, O'Hare also had the students' compositions judged
for overall quality gains. Because of the time consuming
process of grading compositions, not all of the compositions
could be evaluated. O'Hare, therefore, employed a system of
matched pairs for the purpose of quality evaluation. Thirty
students from the control group were matched according to IQ
and sex to thirty students from the experimental group. One
composition for each student was evaluated by eight experi-
enced English teachers. This gave a total of sixty
compositions divided into thirty pairs. The judges were
asked simply to check the composition in each pair which
they felt to be the better one.

The results of the experiment were very successful. The experimental group showed significant gains in syntactic maturity over the control group as measured by the six indices of maturity. For instance, the experimental group went from an average of 9.63 W/T to 15.75 W/T as compared to the control group's progress from 9.69 to 9.96 W/T. Using Hunt's normative data, the experimental group scored at or above the twelfth grade level of syntactic maturity. Students with low IQ's achieved significant gains and students with high IQ's did even better. As far as quality of writing is concerned, the eight judges picked the compositions of the experimental students as better in a ratio of .70 to .29, thus demonstrating the overall superiority of quality of the compositions written by the experimental students.

These results led O'Hare to further the claims of sentence combining. Whereas Mellon had specifically denied that sentence combining could be used to teach writing, O'Hare, referring to this denial, asserted that sentence combining was indeed one way of teaching writing:

> . . . students exposed to sentence-building exercises, even in an "a-rhetorical" setting, are in a very real sense being taught writing . . . . Indeed, sentence combining has both theoretical and practical attractiveness when considered as part of a composition program. Rhetoric and sentence-combining practice

should be viewed not as mutually exclusive or even discrete but rather as complementary.[10]

O'Hare's reasoning was that whenever a student acquires more facility in manipulating sentences, that student's range of available stylistic choices is widened. This is highly desirable and constitutes one objective of the teaching of writing. O'Hare offers as proof the superior judged quality of the compositions by the experimental student population.

One further conclusion O'Hare came to is that "sentence-combining practice that is in no way dependent on formal knowledge of grammar has a favorable effect on the writing of seventh graders" (O'Hare, p. 68). By implication, this completely divorces the formal study of grammar from the teaching of writing, and one could even say that the study of grammar is actually harmful to a writing program since it wastes valuable time which could be spent actually practicing writing. As Moffet says, "to hope, by means of grammatical formulations, to shortcut through the deep, cumulative learning that comes from speaking is to indulge in wishful dreaming."[11]

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[10] The remark made by Mellon referred to above is found in Mellon, p. 79. The quotation by O'Hare is found in O'Hare, pp. 68-69.

[11] James Moffet, Teaching the Universe of Discourse (Boston: Houghton Mifflin, 1968), p. 168. Further citations from this work will appear in parentheses within the text.

The studies by Mellon and O'Hare seemed to have established that actual sentence manipulation by means of transformational sentence-combining exercises does, in fact, increase the syntactic maturity of at least young students. In order to confirm the validity of O'Hare's two further claims, that this should be done without formal grammar study of any kind and that this also improves the quality of writing, Warren Combs performed yet one more study. In his study, Combs also tested to see if the gains made by students through sentence-combining practice could be retained after the cessation of the practice.[12]

For his study, Combs used one hundred seventh grade students divided into four classes, two control classes and two experimental classes. A pre-test and post-test were given, and in addition to these, eight weeks after the end of the experimental treatment, a delayed post-test was given. At each test 300-word samples of free writing were obtained from each student. The samples were analysed for W/T and W/C. A forced-choice method, the method employed by O'Hare, was also used to judge the quality of the compositions. The study confirmed the findings of Mellon and O'Hare, showing that the experimental group achieved

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[12] Warren Combs, "Further Effects of Sentence-Combining Practice on Writing Ability," Research in the Teaching of English, 10 (1976), 137-149. Further citations from this work will appear in parentheses within the text.

significant gains over the control group. Interestingly, Combs' findings were closer to Mellon's than to O'Hare's more spectacular ones. The delayed post-test showed that the gains made by the experimental group had shrunk by almost half eight weeks after the end of treatment. Table 1 shows the results of the three tests for W/T and W/C, and Table 2 shows the pre-test and post-test results of W/T compared with those of Mellon and O'Hare.[13]

It is obvious from Combs' results that, despite attrition, Combs' experimental group made significant gains in syntactic maturity. Furthermore, the compositions of the experimental group were consistently chosen over those of the control group when judged for writing quality. In addition, Combs' experiment also covered a much briefer time span than the two previous studies (four months from pre-test to delayed post-test), which could partially account for the attrition rate. Nevertheless, Combs' study did confirm three important findings: (1) sentence combining can enhance the syntactic maturity of the students sub-stantially; (2) these gains can be made without the formal study of grammar; (3) sentence combining positively influences the quality of writing.

[13] Information for the above summary and the tables below was taken from Combs, FE.

TABLE 1

COMBS' PRE-, POST-, AND DELAYED

POST-TEST RESULTS

		Control Group	Experimental Group
W/T	Pre-test	9.14	9.48
	Post-test	9.67	11.65
	Delayed Post-test	9.81	10.99
W/C	Pre-test	7.00	7.03
	Post-test	7.18	7.74
	Delayed Post-test	7.19	7.57

TABLE 2

COMPARATIVE RESULTS OF MELLON,

O'HARE, AND COMBS

W/T:	Pre-Test	Post-Test	Gain
Mellon	9.98	11.25	1.27
O'Hare	9.63	15.75	6.12
Combs	9.48	11.65	2.17

These three studies by Mellon, O'Hare, and Combs form
the foundation, the backbone, of research on sentence com-
bining. Many other studies made also strengthen the
correlationship between sentence-combining and syntactic
maturity (Vitale et al. 1971, Perron 1974, Burruel 1974,
Klassen 1977, Morenberg et al. 1978). Many of these studies
employed older or younger subjects demonstrating the versa-
tility of sentence combining. They also advanced other
claims for the usefulness of sentence combining. For
instance, Elray Pedersen, in a study involving 113 seventh
graders, concludes that there is

    . . . a strong relationship between one's linguistic
    ability to express ideas, feelings and experiences
    (syntactic fluency) and one's mental ability to

conceptualize and express integrated, meaningful
content (semantic fluency).[14]

Francis Christensen, however, questioned whether the
type of growth recorded in Mellon's study (and by implica-
tion, the other studies) is the type of growth English
teachers really desire. Christensen, elaborating, says,

> Has the fourth-grader really grown toward maturity in
> style if after four years he measures up to the present
> eighth-grader or after eight years up to the present
> twelfth-grader--or even doubles that rate? Maybe the
> kids are headed in the wrong direction. Maybe the lines
> of their growth, projected upward, would never meet the
> lines projected downward from the writing of skilled
> adults. Maybe, unless the direction is changed, unless
> the twig is bent, they will never write like skilled
> adults, but write, like most adults, the lumpy, soggy
> pedestrian prose that we justly deride as jargon or
> gobbledegook.[15]

Christensen then charges sentence combining with the fault
of teaching students to write overlong, needlessly compli-
cated, obscure sentences characterized by ". . . the long
noun phrase as subject and the long noun phrase as comple-
ment, the two coupled by a minimal verb" (Christensen, PDMS,
p. 575). Therefore, instead of using Mellon's standard of
maturity, Christensen proposes as a standard sentences

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[14] Elray Pederson, Sentence-Combining Practice:
Training that Improves Student Writing (ERIC ED 169 567),
p. 7.

[15] Francis Christensen, "The Problem of Defining a
Mature Style," English Journal, 57 (1968), 577. Further
citations from this work will appear in parentheses within
the text.

characterized by free modifiers which are "loose or additive or nonessential or non-restrictive" (Christensen, PDMS, p. 577). In order to teach students how to compose sentences like this, Christensen proposes a type of exercise called "generative rhetoric" which supplies the student with a kernel sentence and requires him or her to compose a free modifier for it.[16]

Robert Marzano, supporting Christensen, also criticized sentence-combining techniques saying that in Mellon's study, the experimental group produced qualitatively inferior compositions and that the forced choice method of evaluating composition quality used in the other studies was inadequate.[17] Marzano suggested a nine-point scale would be better for judging quality. In summarizing his criticism Marzana makes two points:

> 1) practice in sentence combining probably does improve overall composition quality but to a limited extent; 2) sentence composing [generative rhetoric] based on a Christensen model could probably improve composition quality to the same extent that sentence combining does but with greater efficiency. (Marzano, p. 59)

[16] Francis Christensen, "A Generative Rhetoric of the Sentence," College Composition and Communication, 14 (1963), 155-161; rpt. in Francis Christensen and Bonniejean Christensen, Notes Toward a New Rhetoric, 2nd ed. (1967; rpt. New York: Harper & Row, 1978), pp. 23-44.

[17] Robert Marzano, "The Sentence Combining Myth," English Journal, 65, no. 2 (1976), 57.

Warren Combs, however, defending the forced choice method of
judging quality, successfully counters Marzano's objections
to that method:

> . . . O'Hare appropriately measured a trait that exists
> on a continuum in a valid fashion. His raters judged
> which of two papers was higher on the continuum. On
> the other hand, Marzano's alternative scale implies
> that qualitative judgments can be precisely quantified.
> There are not discrete degrees of quality that parse
> out neatly on a scale from one to nine. The only
> quantitative value possible in qualitative judgments is
> the agreement of raters, the assumption implicit in
> O'Hare's matched-pairs design.[18]

Recently Lester Faigley has published the results of
a study along the same lines as Mellon's or O'Hare's, only
testing the efficacy of Christensen's "generative rhetoric."
His experimental population, like those of Mellon and O'Hare,
also achieved significant gains over the control group.
Faigley suggests that both sentence combining and generative
rhetoric work for the same reasons: they require students
to manipulate syntactic devices rather than intuit or
analyse such devices from the writing of professionals in
essays or anthologies. This leads students to the realiza-
tion that writing well is a skill which can be learned and
not a magical gift.[19]

[18] Warren Combs, "Sentence Combining Mythinforma-
tion," English Journal, 65, no. 9 (1976), 21.

[19] Lester Faigley, "Generative Rhetoric as a Way of
Increasing Syntactic Fluency," College Composition and
Communication, 30 (1979), 176-181.

Besides Christensen's and Marzano's criticisms of sentence combining, there has also been done a study by a proponent of sentence combining which comes to some negative conclusions. It is a study done by Ney at the college Freshman level. Although Ney supports the use of sentence combining at the primary and secondary levels, he nevertheless concludes on the basis of a study he did at Arizona State University during the Spring semester of 1974 that: (1) the nature of sentence combining exercises itself possibly bores college Freshmen creating a negative attitude and negligible results and that (2) perhaps college Freshmen have reached the age at which sentence combining ceases to be useful.[20]

Later, the results of this study and Ney's conclusions were attacked by Donald Daiker et al. in an article which appeared in College Composition and Communication.[21] Daiker made a number of points showing the inadequacy of Ney's study. Ney failed to provide an adequate amount of instruction in sentence combining--a "maximum" of ten minutes

[20] James Ney, "The Hazards of the Course: Sentence Combining in Freshman English," The English Record, 27 (1976), 70-77.

[21] Donald Daiker et al., "Sentence Combining and Syntactic Maturity in Freshman English," College Composition and Communication, 29 (1978), 36-41. Further citations from this work will appear in parentheses within the text.

during 27 classes over eleven weeks. This hardly compares with Mellon's approximately 2 hours per week over a nine month semester, O'Hare's twenty-four hours of practice, or Combs' twenty hours of practice. Daiker further cites that the teacher variable was not controlled and that one group of students actually received more practice in reducing good sentences to immature ones than in synthesizing good sentences from base sentences. Daiker therefore asserts that ". . . the results of Ney's study are both misleading and irrelevant as a meaningful assessment of sentence-combining in Freshman English courses" (Daiker et al., SCSMFE, p. 36).

Daiker et al. then propose that sentence combining can be very successful at the college level and back it up with their own study. In this study done at Miami University, college Freshmen made both qualitative and quantitative (syntactic) gains after practicing sentence combining exercises.[22] The study effectively establishes that sentence combining is every bit as useful in enhancing the syntactic maturity of college students as it is in the lower grades and that the qualitative gain is correspondingly significant.

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[22] Max Morenberg et al., "Sentence Combining at the College Level: An Experimental Study," Research in the Teaching of English, 12 (1978), 245-56. Further citations from this work will appear in parentheses within the text.

Finally, sentence combining, on the basis of these and other like studies, has generally met with the approval of scholars and has been found to be a pedagogically useful strategy.

Summary

This then is the broad outline of the research and criticism which has been expended upon sentence combining. Study after study has confirmed that sentence combining is indeed a useful tool for increasing the capacity of students to create syntactically advanced sentences. Sentence combining not only enhances syntactic maturity, but also enhances the overall quality of the students' writing, and this applies at every level. The theory most widely adhered to as an explanation of this is that put forth by Sandra Stotsky, among others. She suggests that sentence-combining practice aids students to acquire a fluency of syntax that frees them to expend more energy upon what they are saying rather than how they are saying it.[23] She further posits that the studies indicate that sentence combining may also enhance students' reading ability and that it may even help develop linguistic ability (Stotsky, p. 32). This last

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[23] Sandra Stotsky, "Sentence-Combining as a Curricular Activity: Its Effect on Written Language Development and Reading Comprehension," Research in the Teaching of English, 9 (1975), 55.

Chapter 2

THE PROBLEM: ASSUMPTION AND HYPOTHESIS

To reiterate a point made in Chapter 1, the ability
to subordinate is a prime characteristic of mature speakers
of a language. Many ESL students can write a rhetorically
well formed and grammatically error-free essay, using a wide
vocabulary and accurately handling the connotative and
denotative meanings of words, and at the same time, this
essay fails to achieve any effectiveness whatsoever. The
failure of the essay is due to its being written only in
simple sentences, the subject always beginning the sentence,
with only a few introductory adverb clauses providing what
little variety there is. All ideas are given equal emphasis
since all are expressed in main clauses, regardless of their
actual importance to the thesis of the composition. As
Tomlinson and Strachley point out,

> . . . students may achieve marked improvement in vocabu-
> lary, and in organizational and rhetorical techniques,
> but still employ only an elementary level of syntax.
> The consequence of this is the impediment of fluidity
> and complexity of students' expression.[1]

[1] Barbara Tomlinson and Marcia Strachley, Developing
and Measuring Mature Syntax (ERIC ED 158 244, 19), p. 2.

These essays stand in desperate need of structures of sub-ordination. As Mellon says,

> . . . the hallmark of mature syntactic fluency is the
> ability to "say more," on average, with every statement.
> Increased use of relative transforms means in effect
> that the student more often makes secondary statements,
> either fully formed or elliptical, about the nouns in
> his main sentences. Greater use of nominalized senten-
> ces means that he more often predicates upon statements,
> as it were, rather than upon simple nouns. (Mellon, p.
> 19)

Enhancing the student's ability to subordinate is then clearly a desirable goal for any teacher, whether of native or non-native speaking students, and sentence combining could prove to be a very effective way to achieve this enhancement. Most of the research, however, which demonstrates the effectiveness of sentence-combining techniques has been done with native-speakers of English. Can the ESL teacher apply their results?

Before answering this question, it is important first to recognize that a basic assumption behind sentence combining used with native speakers is not applicable to a sentence-combining program used with non-native speakers. Citing Hunt again, Mellon asserts that all the transformations needed or used in sentence-combining practice have already been acquired (i.e., internalized) by native speakers by the very early grades (Mellon, p. 17). Therefore, sentence combining teaches nothing new per se to native speakers. It only enables them to perform with more ease than that of which they are already capable. In

developing a psycholinguistic model of the writing process,
Ney states that sentence combining "develops skills which
enable the student to draw on his innate linguistic re-
sources."[2] Hence comes the divorce of formal grammar study
from sentence combining. In sentence-combining practice
with native speakers, the students carry already within them
all the grammar they require to perform any sentence-
combining transformation. This is not so with ESL students.

Vivian Zamel, recognizing this, wisely cautions the
ESL teacher from expecting too much of sentence combining.
She concludes, "Sentence-combining practice, thus, cannot
and should not be expected to improve the syntactic writing
skills of students if the linguistic ability does not
already exist."[3] After giving this warning, she then
proposes that sentence combining does have a place in the
ESL program if, in addition to being given practice in
sentence manipulation, students are also,

> . . . introduced to key concepts relating to the grammar
> of the sentence which they can use as references in
> building sentences or analyzing the sentences they have

[2] James W. Ney, "Notes Toward a Psycholinguistic
Model of the Writing Process," Research in the Teaching of
English, 8 (1974), 164. Further citations from this work
will appear in parentheses within the text.

[3] Vivian Zamel, "Re-evaluating Sentence-Combining
Practice," TESOL Quarterly, 12 (1980), 83. Further cita-
tions from this work will appear in parentheses within the
text.

built. These grammatical concepts provide students not only a conceptual frame within which to view the different patterns and forms sentences may take, but also the difficulties they may be experiencing in combining these patterns [sic]. (Zamel, p. 84)

Thus, sentence combining becomes both a tool to give non-native learners of English facility in that part of the language system they have already absorbed and a tool to acquaint students with and help them learn new structures of subordination in English--structures with which they might not yet be familiar but which they must nevertheless master in order to become mature speakers of English. David Davidson identifies these structures as "prenominal adjectives; adverbs; prepositional, participial, gerund, and infinitive phrases; and noun, adverb, and relative clauses."[4]

Following this line of reasoning then, one may expect that sentence combining--supplying, as it does, intense experience of the second language--can effectively be used to increase an ESL learner's ability to handle the subordination-heavy syntactic system of the English language. Sentence combining does this by (1) reinforcing and giving practice in the manipulation of that part of English the student has already acquired, and (2) providing a vehicle through which he or she can learn that which has not yet

[4] David M. Davidson, "Sentence Combining in an ESL Program," Journal of Basic Writing, 1, no. 3 (1977), 51. Further citations from this work will appear in parentheses within the text.

been acquired. If sentence combining has been helpful to the native speaker of English, it has the potential for being much more helpful to the non-native speaker. It can provide essential experience in the second language, thereby helping to develop in the non-native speaker an intuition of English which is like that of the native. As Thomas Cooper says,

> A good [native] writer intuitively knows when to use a certain word or phrase and how to vary expression. He possesses a Sprachgefuehl, a "feeling" for his native language. A second language learner, on the other hand, has to consciously develop such an awareness, for his intuitive knowledge of his foreign language is not as great as that of his native language.[5]

Few studies have been conducted to determine if it is indeed the case that sentence combining can enhance the development of mature second-language syntactic capabilities. One such study was conducted by Bernard Klassen at an intensive English center at a Canadian secondary school. The subjects were enrolled at the intermediate level in their English learning program. The study employed pre-, post-, and delayed post-tests to determine if sentence-combining practice had enhanced these students' syntactic development. It was found after examining matched T-unit

[5] Thomas Cooper, Developing Syntactic Fluency of College Foreign Language Students through Sentence-Combining Practice, Final Report to the Exxon Education Foundation (Athens: Univ. of Georgia, 1978), p. 3 (ERIC ED 166 991). Further citations from this work will appear in parentheses within the text.

samples that not only had the sentence-combining practice increased the syntactic ability of the experimental students over that of the control students but also that this increase was retained. It is significant that the experimental students made more sentence-combining transformations per T-unit than their control group counterparts and that they also made more transformations in the grammatical categories (listed above) which are indicative of syntactic maturity in native speakers, such categories as adjective and adverb clauses and prepositional phrases.

The most noticeable difference between the experimental and control groups lay in the error-free T-unit count. The experimental group showed very significant gains over the control group in the number of error-free T-units.[6] This is especially important in the light of Vann's work showing that, though the length of mean T-units do not correlate with TOEFFL, the length of error-free T-units does as also does the ratio of error-free T-units to T-units.[7]

Another study done with ESL students and sentence combining is not as encouraging as the one by Klassen. This

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[6] Bernard Klassen, Sentence-Combining Exercises as an Aid to Expediting Syntactic Fluency in Learning English as a Second Language, Diss. University of Minn. 1976.

[7] Stephen J. Gaies, T-unit Analysis in Second Language Research: Applications, Problems, and Limitations (ERIC ED 169 790), p. 4.

study was conducted by Greg Larkin and Ron Shook with Cantonese-speaking learners of English. The study sought to determine if sentence combining could help these Chinese students to write longer relative clauses, such as are typical in English, rather than the short relative clauses which are typical of Cantonese. The study found that although the control group wrote the same number and length of clauses at the end as they did at the beginning, the experimental group wrote fewer relatives and shorter clauses at the end of the treatment. The researchers suggested that this result was attributable to the increased use of other syntactic devices to take the place of the relatives.[8]

The results of the above study, however, in view of the fact that the combined number of control and experimental subjects was only twenty-four, were not conclusive. Of the twelve experimental students, only five were left at the end of the treatment. Also, no control was kept of the many variables such as time, teacher, etc. These problems render the study of practically no value in determining the worth of sentence combining in an ESL program, although it does raise some interesting questions. At the very least, the study points out some errors to be avoided, so that sentence-combining researchers can learn from their mistakes.

[8] Greg Larkin and Ron Shook, Interlanguage, the Monitor, and Sentence Combining (ERIC ED 169 779).

A more conclusive study was that done by Thomas Cooper with over three hundred college level, native speakers of English in the third quarter of study of German, Spanish, and French (Cooper, 1978). (Although this study was not done with English per se, but with German, French, and Spanish, the students nevertheless were in a parallel position to the learner of English whose native language is other than English.) His study showed the expected results, finding that in all three languages those students who underwent a course of study which included sentence-combining practice showed significant gains over the control students in the area of writing as measured by pre- and post-test correlations of W/T, W/C, and C/T. What is especially significant is that Cooper found these gains to carry over into the students' oral language performance, as measured by a test especially designed by the researcher.

The students were shown a picture of some activity such as a dance. They were also given a vocabulary list to study for five minutes. After studying the picture and list, they were asked to turn on a tape recorder and describe what they saw in the picture. The experimental students scored significantly better than the control students on both the three indices mentioned above and three additional indices not used in the writing tests. These three additional indices were words per sample, number of mazes per sample (a maze is an incoherent word or phrase), and words per maze.

The results showed that the sentence-combining practice improved the students' writing ability and this improvement carried over into their speaking ability. As Cooper says after summing up the effect of the sentence-combining practice upon the students' writing performance,

> Furthermore, it does seem that as intermediate foreign language students acquire facility in using more complex syntactic patterns in writing, they are able to speak in a more complex fashion. (Cooper, p. 93)

When this finding, that sentence-combining practice can enhance a student's oral performance, is coupled together with Sandra Stotsky's suggestion mentioned in Chapter 1, that sentence-combining can enhance a student's reading ability, one is faced with the tremendous potential that exercises of this type can have in the ESL program.

This leads to a very important assumption. It is common knowledge among ESL teachers that that same student who can produce an essay like the one mentioned at the beginning of this chapter, couched in such very immature English, is often the student who scores well on objective tests of English, such as the Michigan or TOEFL. These tests require only recognition, not production, of correct language. Too often, it is also the same student who speaks, or rather mumbles, in fragments. Obviously, there often can be grave discrepancies between a student's receptive and productive abilities in English. Part of the reason for the discrepancy is that very often the majority

of practice a student gets when learning English, especially at the beginning and intermediate levels, is practice not in using English correctly but in picking out the correct English to be used. This is reinforced by the types of tests most often used to determine proficiency in English. In the interests of saving time, these tests usually only require the student to identify correct forms of English instead of generate correct English. Thus an ESL learner is subtly informed that it is not important to be able to use English well, rather it is important to be able to identify good English which is used well by someone else. The assumption arising from this situation is that sentence combining can give the student that much needed practice in actually producing correct English for him- or herself, while at the same time it effectively stays within the time strictures of an ESL program.

In order to partially substantiate this assumption and look further into the effectiveness of sentence combining in teaching subordination, a study was done at Emporia State University during the last half of the Spring semester of 1980. During the previous semester, Fall 1979, I had used several sentence-combining exercises in two ESL structure classes offered through the Intensive English Program at Emporia State. Both classes consisted of intermediate/ advanced level learners of English representing several countries and native languages. The sentence-combining

exercises met with surprising success. The students found them much more interesting than the regular workbook-type exercises, and student interaction also increased. The positive response of the students to the sentence-combining practice resulted in my deciding to perform a study on the effects of sentence combining in an ESL program as my master's thesis the following semester. This study sought to prove the following hypothesis: that sentence-combining practice, accompanied by grammatical instruction, would significantly enhance the ability to subordinate of students of English as a second language. The rationale behind this hypothesis is that grammatical instruction provides the student with knowledge about English while sentence-combining practice provides the student with an effective means to internalize that knowledge.

Chapter 3

EXPERIMENTAL POPULATION, INSTRUMENT

OF MEASUREMENT, AND PROCEDURES

Although it was impossible to impose a strictly
scientific design upon it, the present study on the effect-
iveness of sentence combining in an ESL program was planned
as thoroughly as possible. The needs of the intensive
English Program and of the students involved prevented a
strict control over such variables as the curriculum studied
by the control students, and in some cases the experimental
students. However, whenever possible, effort was made to
adjust for these problems. The following is a description
of the experiment detailing the student population, instru-
ment of measurement, and the procedures used to present the
sentence-combining material to the experimental students.

The Experimental Population

The experimental population used in the present study
consisted of 34 foreign students enrolled at Emporia State
University during the Spring 1980 semester and concurrently
attending the university's Intensive English Program. These
students were divided into four groups, two experimental
groups which received sentence-combining practice and two

control groups which did not. One experimental group (nine students) consisted of those students who were enrolled in EN005: Advanced English Structure. Most of these students were also enrolled in one or more of the other advanced-level Intensive English courses, and all of them were also taking six or more hours of regular academic courses at the university. The other experimental group (also nine students) consisted of those students who were enrolled in EN001: Intermediate English Structure. The majority of these students were enrolled full time (25 hours per week) in the Intensive English Program. This meant that the courses they were enrolled in were Reading, Writing, Speaking/Understanding, and five hours of individualized lab work which was related to their reading and speaking/ understanding classes. Those few who were not full-time intensive English students had been exempted from one of the above courses because they had demonstrated proficiency in the corresponding area. They were taking instead three to five hours of regular academic work in a course which required minimal English proficiency.

The larger control group (eleven students) consisted of those students enrolled part-time in the Intensive English Program who were advanced-level learners of English, but who were not enrolled in EN005: Advanced English Struc-ture. They were also taking six or more hours of regular

academic work. The smaller control group (five students) consisted of those students enrolled in the Intensive English Program at the intermediate level but not taking EN001: Intermediate English Structure. These students were taking three to five hours of regular academic work in lieu of EN001. The fact that most intermediate level speakers of English at Emporia State require full-time intensive English accounts for the small number in the second control group.

Both experimental and control students had had their placement in the English program determined at the beginning of the semester according to their performance on the ESU English Proficiency Examination for Speakers of Other Languages. This test was especially designed by Dr. Ravi Sheorey, coordinator of Intensive English, for use at Emporia State in order to fill the needs of the university's incoming international student population. The test has been found to correlate significantly with the TOEFL at the level of .01 significancy. In addition, each of the three largest groups represented several native languages and countries. The smaller control group represented only two different native languages and countries.

The Instrument of Measurement

As discussed in Chapter 1, the general method of evaluation employed in previous studies involving sentence combining was the analysis of T-unit samples. T-unit

analysis is an effective method; however, it does have draw-
backs. One serious drawback with the method is that it
requires an inordinate amount of time to analyse the
samples. It is time consuming to divide a writing sample up
into T-units and then count the number and types of embed-
dings incorporated in each T-unit, the number of words in
each T-unit, and the length of each subordinate clause.

Another drawback to the T-unit method of analysis is
the uncontrolled nature of the writing sample. If a student
does not wish to use a certain syntactic structure, he or
she need not. The student can choose to use only those
structures with which he or she is comfortable. This is
especially true with foreign students who only feel comfort-
able with those structures with which they are thoroughly
familiar.

Yet one more serious drawback to T-unit analysis
prevented its use as the measuring instrument in the present
study. T-unit analysis depends upon the student's writing
original compositions, albeit on a topic already chosen.
Consequently the students must be given extra time to com-
pensate for the difficulty of having to generate their own
ideas. Since the measuring instrument had to be administered
in conjunction with a battery of other mid-term and final
examinations, this extra time could not be allowed. (These
other tests were required of all students in the Intensive
English Program.) As Davidson points out,

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Not only is the free composition examination inadequate
for native speakers, it is particularly unfair to non-
native speakers, who often lack the fluency to write
adequately under time pressure. Having to marshal ideas
about a given topic and establish the organization and
structure necessary to convey them requires considerably
more time in this type of test.[1]

Consequently, T-unit analysis, depending as it does upon

free composition, could not be employed in this study.

Fortunately, a more than adequate alternative to

T-unit analysis is now available to ESL researchers in a

test developed by David Davidson, the Test of Ability to

Subordinate (TAS). In developing this test, Davidson

surveyed

recent issues of journals devoted to the teaching or
study of the English language, books and manuals on the
theory and practice of English language instruction,
instructional materials designed for native as well as
non-native students, and relevant unpublished disserta-
tions. (Davidson, AWA, p. 5)

From this survey, Davidson was able to identify eleven

different structures indicative of writing maturity. These

structures follow:

(1) prenominal adjectives

(2) prepositional phrases

(3) adverbs

(4) adverb clauses

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[1] David M. Davidson, Assessing Writing Ability of ESL
College Freshmen (ERIC ED 135 247, 1976), p. 4. Further
citations from this work will appear in parentheses within
the text.

    (5)   relative clauses

    (6)   noun clauses

    (7)   participial phrases

    (8)   gerund phrases

    (9)   infinitive phrases

   (10)   absolute phrases

   (11)   appositive constructions

Davidson continued by examining forty recently published
college textbooks on the writing process and one hundred
randomly selected compositions written by freshman native-
speakers at Bronx Community College. He found that, of the
eleven structures cited above, two of them--absolute and
appositive phrases--"were the least cited in the texts and
were hardly used by the native-born freshmen sampled"
(Davidson, AWA, p. 7). Consequently, he eliminated these
two structures from the list of eleven and designed the TAS
to test the remaining nine.

      Davidson's TAS contains forty-five items, five items
for each one of the nine tested structures. The test employs
a sentence-combining format. That is, for each item the
student is given two or three core sentences and asked to
combine them into a single sentence on the answer sheet
which contains a "frame" for each answer. The frame is con-
structed in such a way as to require the student to produce
an answer sentence containing an embedding of the same type

as that being tested by that particular item (Davidson, AWA,
p. 11) (for the test and answer sheet, see Appendix A). The
students are given thirty-five minutes to complete the test.
The test was correlated with the Michigan Test and has a
Pearson product correlation coefficient of .86. This can be
compared to the correlation computed between the Michigan
Test and TOEFL reported at .89 (Davidson, AWA, p. 21).

This test, Davidson's Test of Ability to Subordinate,
was adopted as the instrument for measuring the results of
the present study. It was administered at the beginning of
the eight-week experimental treatment, and again at the end.
In order to compensate for the unfamiliarity to the students
of the TAS format, the students were given copies of the
test's directions several days before its first administra-
tion. At the time of the test, the students were fully
instructed, by example, on how to answer the test questions.

The Experimental Procedures

The experiment itself took place during the last
eight weeks of the Spring semester, 1980, i.e. the second
block of the semester. During this time, both experimental
groups performed sentence-combining exercises three days per
week in class. In addition, sentence-combining exercises
were often assigned for homework.

The intermediate experimental group devoted a fifty
minute period in class on each of the three days a week to

sentence-combining practice. On Tuesdays and Thursdays the
class worked on other grammatical areas, e.g. the sequence
of tenses used in conditional sentences. Some weeks two
days in a row were given to sentence combining but the class
was always limited to three class periods per week of
sentence combining. Whenever this situation occurred the
following sentence-combining period was devoted to non-
sentence-combining work in English structure instead.

The advanced experimental group did not meet on Tues-
days or Thursdays. As a consequence, only approximately
half of their class time on Mondays, Wednesdays, and Fridays
was devoted to sentence-combining practice, an average of
twenty-five minutes a day. The remainder of the time was
devoted to grammatical work not using sentence-combining
methods. The majority of this group was students who came
from either Taiwan or Thailand; therefore, most of the non-
sentence-combining work was on tenses and articles. A great
deal of time was also spent on two-word verbs and the proper
choice of prepositions. This advanced class was also given
sentence-combining homework regularly.

Altogether, the intermediate class spent about four
hours per week on sentence combining and the advanced class
about three hours. This large amount of time devoted to
sentence-combining practice was intended to compensate for
the short duration of the experiment--only eight weeks.
However, this researcher found that by the end of the

experiment, both groups were beginning to develop poor
attitudes toward sentence combining. This is in contrast
to the attitudes toward sentence-combining shown by the
experimental populations in previous studies such as Combs,
Mellon, O'Hare, and Daiker et al. I attribute the poor
attitude of the students in the present study to the
large amount of time spent on sentence combining each
week. At the beginning of the experiment, both classes
had shown an enthusiastically favorable attitude toward
the exercises.

The sentence-combining exercises used in the experi-
ment were drawn from several sources and consisted of both
semi-controlled and uncontrolled exercises. Semi-controlled
exercises direct the students to use only designated
transformations such as the relative clause. Uncontrolled
exercises consist of series of kernel sentences which can
be synthesized into single complex sentences using a variety
of subordination transformations. The solution sentences
in these uncontrolled exercises then form a coherent para-
graph on a single topic. The semi-controlled exercises
were either composed by the researcher or drawn from The
Writer's Options: College Sentence Combining by Daiker et
al. and Modern English: Exercises for Non-Native Speakers,
Part II, by Marcella Frank. The uncontrolled exercises were

drawn from The Writer's Options and Sentence Combining: A Composing Book by William Strong.[2]

The students received grades on all their work. Items in the semi-controlled exercises were counted correct only if the answers were grammatically correct and only if the designated subordination technique was used. Thus, if an answer was grammatically correct but the sentence contained a relative clause instead of the desired participial phrase, for instance, the answer was counted incorrect. In the case of an uncontrolled exercise, every answer that was grammatically correct was accepted no matter which subordination techniques the student chose to use.

Since the experiment was undertaken to see if sentence combining could be effective in enhancing the student's ability to subordinate and since the classes were structure classes and not writing classes, very little attention was paid to the stylistic appropriateness of the students' choices of subordination transformations when working on the uncontrolled exercises. However, during the first experimental class period for each group, the students were introduced to the effect their choices could have upon

[2] Donald A. Daiker et al., The Writer's Options: College Sentence Combining (New York: Harper & Row, 1979). Speakers, Part II (Englewood Cliffs, New Jersey: Prentice-Hall, 1972). William Strong, Sentence Combining: A Composing Book (New York: Random House, 1973).

their style, and they were shown how one device might be more rhetorically apt than another in certain situations.

The first two experimental class periods for each group were used to introduce the students to the concept of sentence combining in general. To do this, use was made of an uncontrolled exercise titled "Hypnotism."[3] After working through the exercise together in class, each student proposing his or her own solution for each group of sentences, the class examined four sample solutions created from the same exercise and discussed the relative merits of each. In this manner, the effects of various subordination techniques were shown together with their influence upon the style and rhetoric of the solution paragraphs.

After this general introduction, in each class the duration of the experiment was spent on individual subordination devices. During the rest of the eight week period the intermediate experimental group studied the noun clause, relative clause, prenominal adjective, participial phrase, adverb clause, and prepositional phrase. The advanced experimental group studied all these, and in addition, the infinitive phrase. The procedure used to treat each of these syntactic devices is as follows: First the device was introduced in a short lecture with examples illustrating its

[3] This exercise appears in Daiker et al., The Writers Options, p. 5.

use written on the blackboard. During this introduction,
students were encouraged to answer each other's questions,
thus using whatever previous knowledge of the device they
might have. This technique was especially successful in the
intermediate class. Then the students were required to do a
semi-controlled exercise individually which focused on the
particular device. Before the end of class, selected items
from the exercise would be put on the board. Students were
then asked to share with the rest of the class the solutions
to the items on the exercise which they had worked out. The
remainder of the exercise along with another semi-controlled
exercise was assigned for homework. The first exercise was
to be handed in at the beginning of the next class. If,
however, the exercise had proved to be difficult for the
class, as was frequently true with the intermediate class,
problem items would be worked through on the board before
the exercise would be handed in. The remaining exercise
assigned for homework would be used as a springboard for
discussion during the next class period devoted to sentence
combining, with individual students writing their solutions
to particular items on the board and the rest of the class
passing judgment on the acceptability of the solution and
offering alternative solutions. The researcher served as
the moderator of these discussions and the source of
"correct" answers whenever the students required assistance.

After that class period the class was assigned an uncontrolled exercise for homework. The students were encouraged to use any subordination devices they could to solve the exercise, but care was taken to assign exercises which would emphasize or lend themselves to the particular device being studied at that time. The next sentence-combining period was devoted to solving problems encountered by the students while doing this exercise and discussing the relative merits of alternative solutions. The students would work on the problem orally together solving the problem for themselves, the teacher acting as class secretary by writing their solutions and attempted solutions on the board. During this period, the teacher (the researcher) intruded his own opinions or solutions only when he was asked or when the class arrived at a grammatically incorrect solution. The students were then assigned for homework the task of writing out a final "clean copy in good paragraph form" to be turned in and graded.

It is interesting to note that on one occasion, when a native-speaking friend of one of the intermediate students was visiting class, the class would constantly turn to her as the final arbiter of their disputes. In doing this they would always begin their appeal with "does that sound okay to you" or "how does that sound to you?" In this way the students graphically demonstrated their lack of intuitive knowledge of English which they recognized in native

speakers. It is this lack that requires sentence-combining practice to be accompanied by grammatical instruction when used in an ESL program.

Each class was allowed to work at its own pace. Often an extra period would be devoted to a particular device which seemed to one or the other group especially difficult. After thoroughly practicing one device, the class would move on to the next device. In this way each class was constantly adding sentence-combining transformations to their repertoire of transformations used to solve uncontrolled exercises. The fact that the classes moved at their own pace also explains why the advanced class was able to cover one more device than the intermediate class.

At the end of the semester, the TAS was again given to measure the results of the experimental treatment. The test was administered at the same time as the end-of-the-term proficiency examination required of all students in the Intensive English Program. The results of the experiment described above are reported in the next chapter.

Chapter 4

RESULTS

In order to examine the hypothesis proposed in Chapter 2, it was necessary to determine if the gains made by the experimental students in subordinating ability exceeded those made by the control students. The results do indeed demonstrate that sentence-combining practice effectively enhanced the experimental students' ability to subordinate. These gains appeared in the students' performance on the entire post-test, as well as in their performance on individual structures tested. Furthermore, these gains were apparent whether the experimental students were compared as a whole with the control students or whether advanced experimental students were compared with advanced control group, and intermediate experimental students with intermediate control group. Thus, the hypothesis tested by the study was confirmed.

Table 3 gives the percentage scores achieved by the students on the pre- and post-tests and the gain in percentage between the two tests. This information is given for the combined control and experimental groups separately.

TABLE 3

PRE- AND POST-TEST PERCENTAGE SCORES

Group	Pre-test Percentage Score	Post-test Percentage Score	Percentage of Gain
Combined Groups			
Experimental	49.51	60.74	11.23
Control	48.19	54.31	6.12
Advanced Groups			
Experimental	62.72	72.59	9.87
Control	48.08	53.13	5.05
Intermediate Groups			
Experimental	36.30	48.89	12.59
Control	48.44	56.89	8.45

As can be seen, the two control groups scored within .36 percent of each other on the pre-test, the intermediate control group actually out-performing the advanced. The difference, however, is minimal and not significant. This surprising result of the two groups scoring equally well can be explained by the method used to classify the students in their respective groups. Of course, this was done by their placement at the beginning of the semester in the Intensive English Program.

As previously stated, those students enrolled in intermediate English classes, but not enrolled in Structure, became the intermediate control group. The fact that these students were especially weak in the English performance skills of reading, writing, and listening/speaking does not necessarily mean that they also had a weaker grasp of the more fundamental English structure patterns. Their ability is confirmed by their exemption, at the beginning of the semester, from English structure classes. Consequently, on a test of this nature which does not require of the student much ability in reading, writing, or listening/speaking skills the intermediate control group was able to perform as well as or better than the advanced.

The pre-test scores of the experimental students, on the other hand, accurately reflect the real difference in their grasp of English structure which resulted, at the semester's beginning, in some of them being placed in the intermediate English structure class and some of them being placed in the advanced English structure class. The difference between the high score of the advanced experimental group and the two control groups, however, remains inexplicable. Perhaps it can be partially attributed to the fact that the advanced experimental group had had a half-semester of instruction in English structure while the control groups had not. Consequently, the mind-set of the advanced experimental students may have been more directed toward

dealing with an English structure test. This researcher
does not think, however, that this was the case. If it had
been, then the intermediate experimental students, having
had the same advantage, surely would have performed better
when compared to the control groups.

Nevertheless, the average scores of both combined
groups were very similar with a difference of only 1.32
percent. On the post-test this difference was increased to
6.43 percent to the experimental groups' advantage. The
combined experimental group made an average gain of 11.23
percent compared to the combined control group's gain of
6.12 percent. Thus the combined experimental group made a
gain which was almost double that of the other group. This
significant gain is just as emphatic when examined at the
intermediate and advanced levels. At the advanced level,
the experimental group gained 9.87 percent compared to the
control group's gain of 5.05 percent. At the intermediate
level, the experimental group gained 12.59 percent to the
control group's gain of 8.45 percent.

When the results for the individual structures
studied during the experimental treatment are examined, one
finds again that the experimental students showed signifi-
cant gains beyond the control students. Table 4 shows the
average gains achieved on the seven individual syntactic
devices treated during the experiment, and tables 5, 6, and 7
show these results graphically. The figures in Table 4 show

TABLE 4

POST-TEST GAINS IN QUESTIONS

PER CATEGORY (Q/C)

Syntactic Structure	Experimental			Control		
	Adv.	Int.	Ave.	Adv.	Int.	Ave.
Prenominal adjectives	0.333	0.444	0.389	0.182	0.200	0.188
Prepositional phrases	0.333	0.889	0.611	0.091	0.600	0.250
Infinitive phrases[a]	0.889	0.444	0.667	0.273	0.200	0.125
Participial phrases	1.111	0.556	0.833	0.091	1.000	0.250
Adverb clauses	0.556	1.111	0.833	0.272	0.800	0.438
Relative clauses	0.556	0.889	0.722	0.091	0.000	0.063
Noun clauses	0.444	0.444	0.444	0.889	0.400	0.625
Average	0.603	0.722	0.643	0.218	0.500	0.259

[a] The infinitive phrase was not studied by the intermediate experimental group and is not figured in the average of their or the intermediate control group's gains.

TABLE 5

AVERAGE GAINS FOR THE COMBINED EXPERIMENTAL GROUPS (BLACK) AND COMBINED CONTROL (SHADED) FOR SEVEN SYNTACTIC STRUCTURES

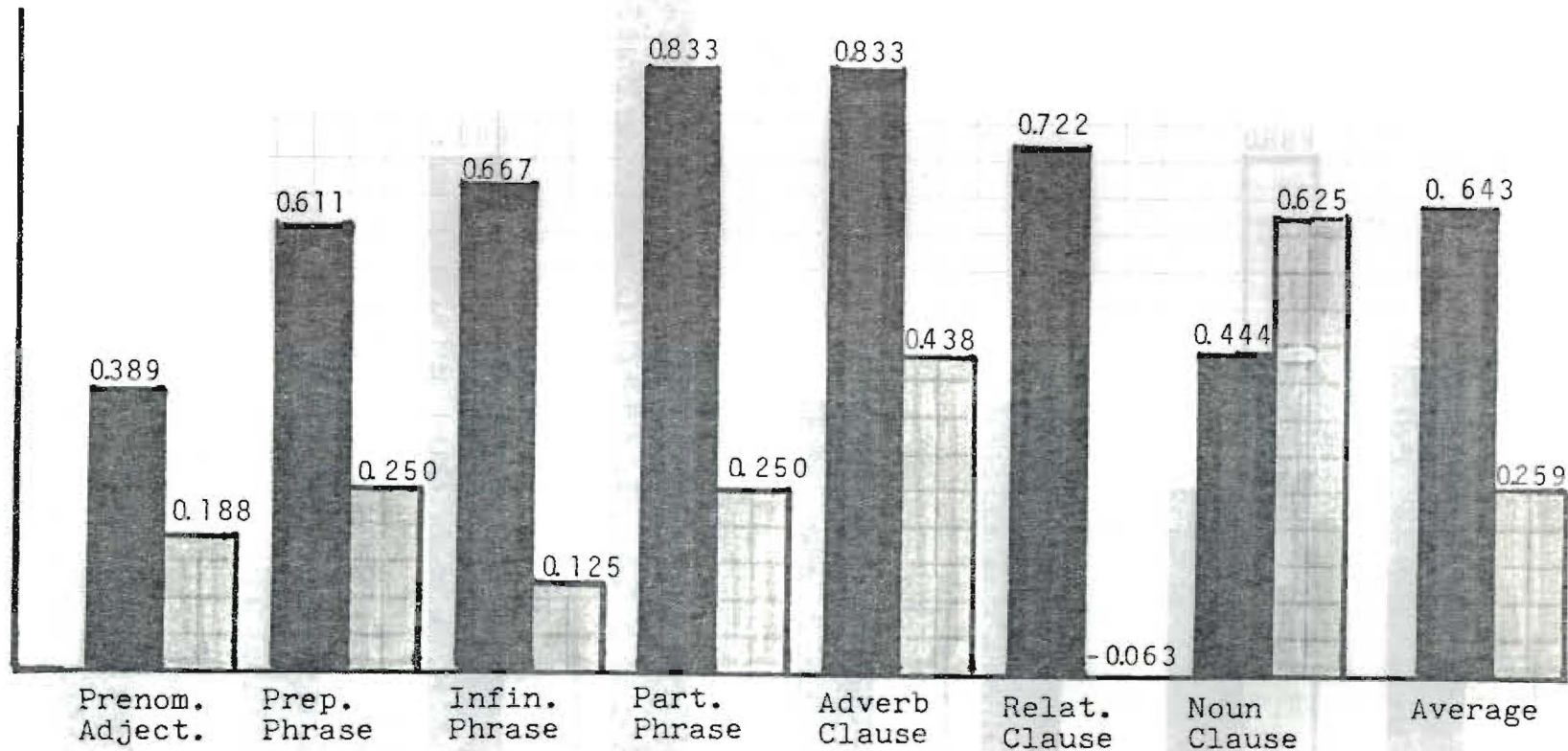|	Prenom. Adject.	Prep. Phrase	Infin. Phrase	Part. Phrase	Adverb Clause	Relat. Clause	Noun Clause	Average
Experimental (Black)	0.389	0.611	0.667	0.833	0.833	0.722	0.444	0.643
Control (Shaded)	0.188	0.250	0.125	0.250	0.438	-0.063	0.625	0.259

TABLE 6

AVERAGE GAINS FOR THE EXPERIMENTAL (BLACK) AND CONTROL (SHADED) ADVANCED GROUPS FOR SEVEN SYNTACTIC STRUCTURES

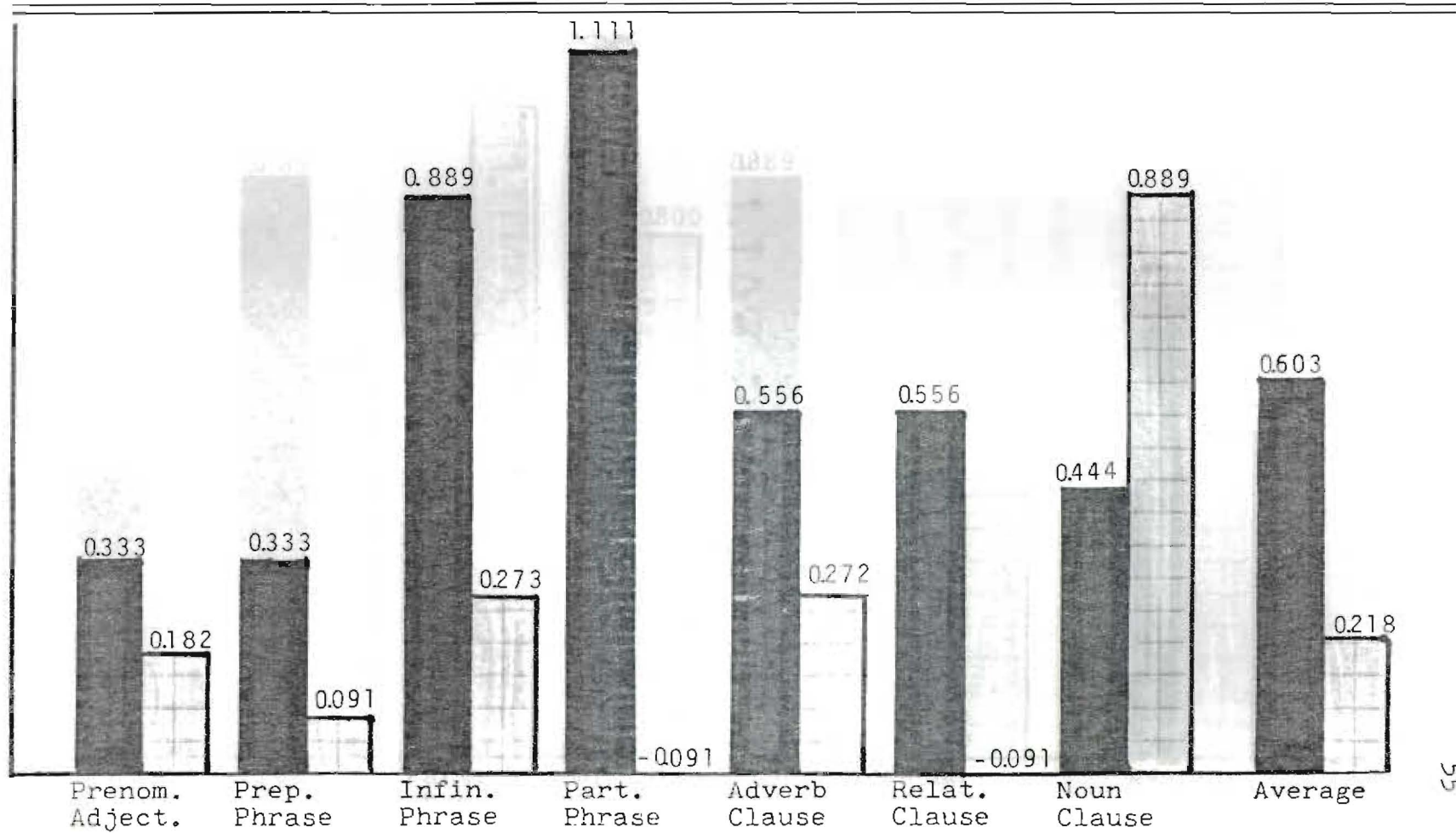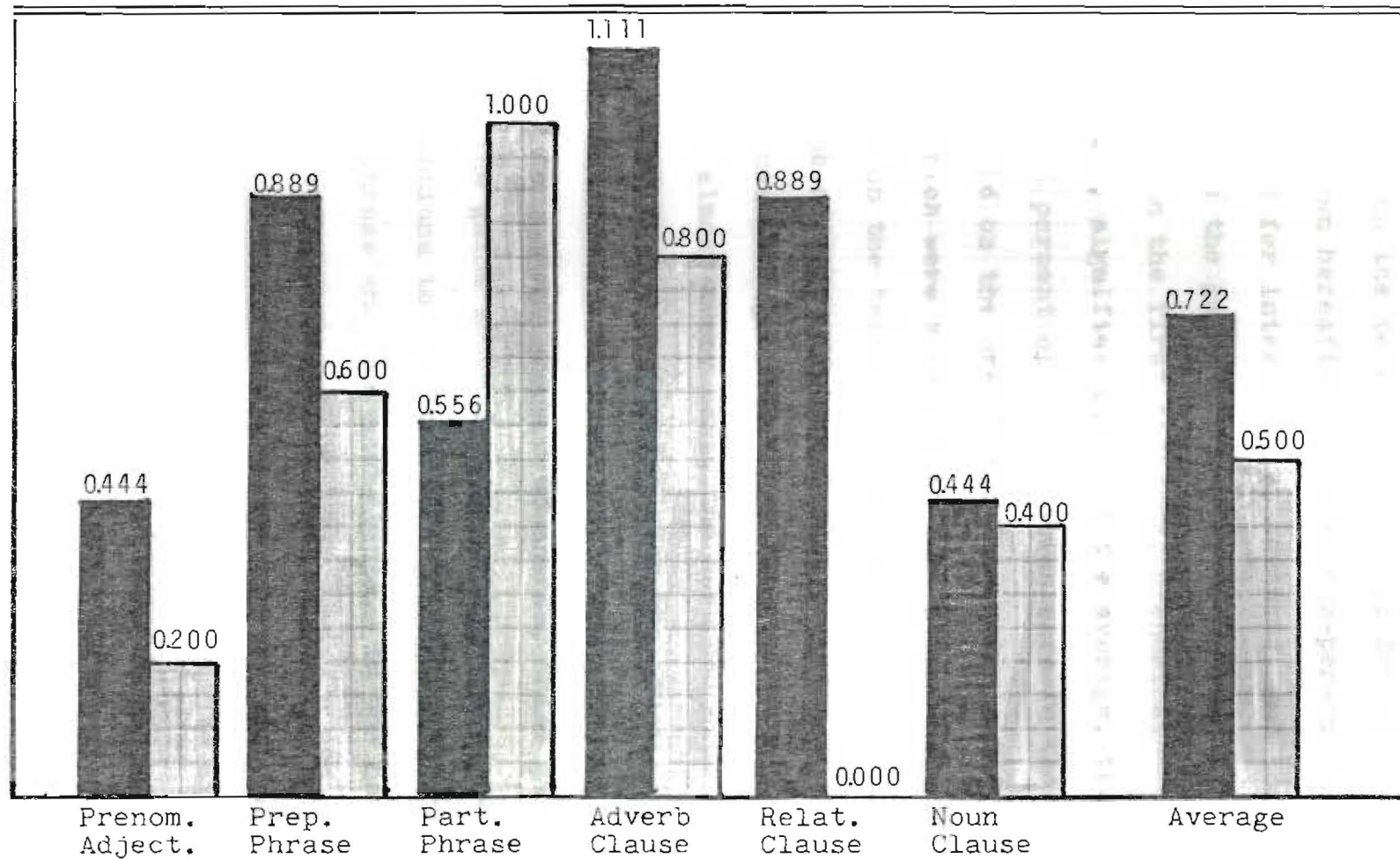|	Prenom. Adject.	Prep. Phrase	Infin. Phrase	Part. Phrase	Adverb Clause	Relat. Clause	Noun Clause	Average
Experimental (Black)	0.333	0.333	0.889	1.111	0.556	0.556	0.444	0.603
Control (Shaded)	0.182	0.091	0.273	-0.091	0.272	-0.091	0.889	0.218

TABLE 7

AVERAGE GAINS FOR THE EXPERIMENTAL (BLACK) AND CONTROL (SHADED)

INTERMEDIATE GROUPS FOR SIX SYNTACTIC STRUCTURES

Structure	Experimental (Black)	Control (Shaded)
Prenom. Adject.	0.444	0.200
Prep. Phrase	0.889	0.600
Part. Phrase	0.556	1.000
Adverb Clause	1.111	0.800
Relat. Clause	0.889	0.000
Noun Clause	0.444	0.400
Average	0.722	0.500

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the gains made in number of questions answered correctly out
of the five questions on the test per syntactic device
(these figures are given hereafter in questions-per-category
or Q/C), and are given for intermediate, advanced, and com-
bined groupings. Thus the gain achieved by the advanced
experimental student in the first category, prenominal
adjectives, 0.333 Q/C, signifies that, on the average, those
students scored 0.333 percent of one question more in that
category than they did on the pre-test. This gain in Q/C is
out of five items which were designed to test prenominal
adjectives included on the test. The gain is nearly twice
that achieved by the corresponding control group, and the
same pattern continues throughout the seven items with only
two exceptions. In almost every case, the advanced experi-
mental group achieved significant gains over the advanced
control group, as did the intermediate experimental group
over the intermediate control group. Of course, these gains
were reflected in the gains shown for the combined groups.

The two exceptions to the above are in the categories
of the participial phrase and the noun clause. In the noun
clause category, the advanced control group gained 0.889 Q/C
compared to the gain of 0.444 Q/C made by the corresponding
experimental group. In this category the intermediate exper-
imental group gained 0.444 also, and the intermediate
control group almost equaled this with a 0.400 Q/C. In the
participial phrase category, the very high gain of 1.000 was

made by the intermediate control group, but the advanced
group actually lost ground with a -0.091 loss. In this same
category the advanced and intermediate experimental groups
scored 1.111 and 0.556 Q/C respectively.

No explanation can be given to the gain made by the
advanced control group in the noun clause category; however,
a single student was responsible for half of the gain shown
by the intermediate control group in the category of the
participial phrase. Thus the small number of students in
that group adversely affected the results of the experiment
here. Nevertheless, this researcher would like to emphasize
that in the two above categories both experimental groups
also achieved significant growth.

Looking at the combined experimental and control
groups, in six out of seven categories, the experimental
group achieved significant gains over the control group.
The average gain per category for the experimental group
was 0.643 Q/C compared to 0.259 Q/C made by the control
group. This is a difference of 0.384 Q/C. The gain of the
experimental group was far more than twice that of the
control group. Table 5 graphically compares the gains made
by the combined groups. Tables 5 and 6 compare the gains
made by the advanced and intermediate groups respectively.

Finally, there can be no doubt about the results of
the experiment as a whole. The intermediate experimental

group consistently surpassed in gains the intermediate
control group achieving an average gain of 0.722 Q/C in six
categories representing six different syntactic devices.
This is compared with the intermediate control group's gain
of 0.500 Q/C, making a difference of 0.222 Q/C. The gains
made at the advanced level are even more striking. In seven
categories testing seven syntactic devices studied during
the sentence-combining treatment, the advanced experimental
group achieved a gain of 0.603 Q/C nearly tripling the gain
of 0.218 Q/C achieved by the advanced control group.

These significant gains achieved by the experimental
students after having received only eight weeks of practice
in transformational sentence combining clearly substantiate
the hypothesis of the study that sentence-combining practice,
accompanied by grammatical instruction, would significantly
enhance the ability to subordinate of students of English as
a second language.

Chapter 5

CONCLUDING REMARKS

"For years English teachers have been paying attention to learning about skills rather than how to use skills."[1] This is a conclusion that James Brozick has come to about the teaching of English, specifically composition, to native speakers. Unfortunately, it very often can be made in the case of teaching English to non-native speakers as well, especially at the intermediate and advanced levels. This is not, however, because of a misconception held by ESL teachers about the usefulness of formal grammar instruction. To the contrary, that formal grammar instruction has little impact on the successful learning of language seems to be a fact well recognized by ESL teachers (Zamel, p. 82). The problem lies not in the theory of teaching ESL, but in the availability of effective teaching strategies.

Many useful strategies exist for giving students the practice and experience they need in English, yet the need for more strategies as well as more effective strategies is

[1] James R. Brozick, "New Perspectives on Composition: A Review of Literature," Journal of Aesthetic Education, 12, no. 3 (1978), 86.

readily apparent. Speaking of this need and applying it to
the teaching of writing, Elray Pedersen gives this analysis:

> Briefly, the justification for developing many different
> kinds of language experience for many kinds of students
> hinges upon the fact that there is little value in using
> formal language study to improve student writing other
> than to be able to identify and talk about elements of
> compositions . . . . If these conclusions are correct,
> then traditional teachers of writing are in some ways
> analagous to driver education teachers who teach effect-
> ive freeway driving skills mostly by naming and analy-
> zing the parts and functions of the parts of cars, but
> who fail all the while to accompany the students through
> actual driving situations demanding appropriate and
> effective guidance responses.[2]

The analogy holds true for the teaching of ESL, too.
Based on the results of the present study, as well as on
those of previous studies, one can conclude that sentence-
combining practice, used in an ESL program, can be a very
effective way for the teacher to "accompany the students
through actual" experience in their target language--English.

The present study leaves no doubt about the usefulness
of sentence combining in building syntactic maturity; how-
ever, the usefulness of sentence-combining practice is
limited by the availability of teaching materials. Several
very useful textbooks are now available based on sentence-
combining techniques which are directed toward use with
native speakers. In addition, a few textbooks for non-native

[2] Elray L. Pedersen, "Prospects for Sentence Combin-
ing," in Sentence Combining and the Teaching of Writing, ed.
Donald A. Daiker et al. (Akron, Ohio: L & S Books, Univ. of
Akron, 1979), p. 57.

speakers have recently been developed (textbooks for use by both groups are included in the bibliography). Neverthe-less, a substantial need for the development of more sentence-combining materials yet remains, especially mater-ial for use with ESL learners.

Before such materials can be developed, however, further research must be done exploring the relationship sentence-combining practice has to proficiency improvement in reading or speaking/understanding. Although some research has been conducted with sentence combining and reading, almost none has been done on the effectiveness sentence combining has on oral proficiency. Thomas and Ellen Fitz-gerald suggest that sentence building exercises encourage students to become actively involved in reading thus increas-ing their comprehension.[3] Stotsky supports this supposition (Stotsky, pp. 32-33). Research is needed to determine if this is the case with ESL learners. Furthermore, the results of Cooper's study (Cooper, 1978), mentioned earlier, indicate that sentence-combining practice beneficially affects the oral competence of second language learners. These conclusions concerning the effect of sentence combining on reading and oral proficiency, however, are mostly inferred

[3] Thomas P. Fitzgerald and Ellen F. Fitzgerald, "Sentence Building in Reading and Composition," Reading Horizons, 20 (1979), 43-46.

from studies exploring the effect of sentence combining on writing skill. Consequently, research is still needed to explore the relationship of sentence combining to reading and oral proficiency and the usefulness of sentence combining in reading and speaking/understanding programs.

An area which needs further exploration is that found in sentence-combining studies done with native speakers. These studies generally assume that sentence-combining practice enables the student to improve performance abilities but does not result in the student's developing new competency (Ney, NTPMWP, pp. 157-159). The present study suggests, however, that this is not so with regard to ESL students. Many of the experimental students, at the end of the treatment, proved themselves able to competently handle structures in English which they could not eight weeks earlier. This researcher is of the opinion that this new competency was not the result of the formal grammar instruction, which was minimal, but the result of the sentence-combining practice itself. Perhaps further research is needed to clarify this ambiguous area.

In addition, the present study clearly demonstrates that sentence combining can enhance an ESL student's ability to subordinate it; it does not show, however, that sentence combining is more effective than any other method--more effective than, for example, Christensen's "generative rhetoric" mentioned in the first chapter. If, as Faigley

suggests, the ingredient that works in sentence combining is that it compels students to manipulate language rather than pass judgment upon it (see Chapter 1), then perhaps there are still more effective means of providing students with this experience. In other words, further research is needed to discover what it is about sentence combining that makes it effective. Of course, in order to do this, more must be known about the internal process of language learning and development.

James Ney has put forth one model of how sentence-combining exercises affect the psycholinguistic abilities of students (Ney, NTPMWP, pp. 157-169). He posits that part of the language acquisition device is an ability to "encode semantic units and decode them in given syntactic form" (Ney, NTPMWP, p. 164). Thus in order to understand an utterance, he continues, one observes the same process in reverse. Ney suggests that sentence-combining exercises provide practice in this internal operation. Despite Ney's work, however, further research is needed both to substantiate his model and to continue to explore the linguistic process.

Finally, there can be little doubt remaining that sentence-combining practice is an effective method for enhancing the syntactic fluency, the ability to subordinate, of both native and non-native speakers of English. In an ESL program, especially at the advanced and intermediate levels,

it can play an important role in providing the students the practice they need to acquire a mastery of English syntax. In undertaking the present study, this researcher was motivated by a desire to investigate the potential usefulness of sentence-combining practice. The results of this study confirm its usefulness, but further research on sentence combining is needed--research which will answer the questions, "How can sentence combining be used in an ESL reading or speaking/understanding program?" and "What makes sentence combining so successful?"

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APPENDICES

Appendix A

MEASURING INSTRUMENT:

SAMPLE ITEMS

The following are sample items and answer frames from
Davidson's <u>Test of Ability to Subordinate</u>.[1] There is a
representative item for each one of the seven syntactic
structures treated during the experiment.

Prenominal adjective:

1. a. Mary has an idea. b. I like the idea.

    I like <u>(Mary's)</u> idea.

Prepositional phrase:

3. a. He has children. b. He gives them a lot of
    money.

    He gives a lot of money <u>(to his children)</u> .

Infinitive phrase:

4. a. We understand English. b. It is easy for us.

    It is easy for us <u>(to understand English)</u> .

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[1] David M. Davidson, <u>Test of Ability to Subordinate</u>
(New York: Language Innovations, Inc., 1978).

Participial phrase:

    5. a. Some parents do not love their children.

        b. Have you ever heard of this?

    Have you ever heard of parents not <u>(loving their children)</u> ?

Adverb clause:

    7. a. The telephone rang. b. They were watching television.

    The telephone rang <u>(when/while they were watching television)</u> .

Relative clause:

    8. a. The man is coming today. b. The man painted the house last month.

    The man <u>(who painted the house)</u> last month is coming today.

Noun clause:

    9. a. They have a feeling. b. He will get better.

    They feel <u>(that he will get better)</u> .

Appendix B

TREATMENT: SAMPLE EXERCISES

Basic Pattern Exercise[1]

Combine each sequence of sentences below into a single sentence with at least one relative clause.

Example: 1. Walden Pond is now the site of many tourist stands.

2. Walden Pond was once praised by Thoreau for its natural beauty.

Walden Pond, WHICH WAS ONCE PRAISED BY THOREAU FOR ITS NATURAL BEAUTY, is now the site of many tourist stands.

OR

Walden Pond, WHICH IS NOW THE SITE OF MANY TOURIST STANDS, was once praised by Thoreau for its natural beauty.

A. 1. The Chinese character hau combines the symbol for "woman" with the symbol for "boy."

2. The Chinese character hau means "good."

B. 1. The Autobahn was built by Hitler to transport tanks and troops to Germany's border in World War II.

2. The autobahn is still one of the world's finest highway systems.

C. 1. Paul Newman is a vegetarian.

2. Paul Newman drinks a case of Coors beer a day.

---

[1] Taken from Kerek, The Writer's Options.

D. 1. Kwanza has taken root as Afro-American alternative to Christmas.

2. Kwanza originated as an African harvest festival.

E. 1. Ralph Nader claims the American consumer needs a voice in the decisions of government.

2. Ralph Nader attacked General Motors in Unsafe at Any Speed.

F. 1. The tests do not measure genuine intellectual ability.

2. Colleges use the tests to screen applicants for admission.

G. 1. The Gypsies are really a nomadic people from India.

2. The Gypsies migrated into Europe.

3. The Gypsies were once thought to be Egyptian.

H. 1. Human blood is red, white nautilus blood is blue.

2. Human blood has an iron base.

3. Nautilus blood has a copper base.

I. 1. The Sundance Kid's girl friend was actually a prostitute in Fanny Porter's Sporting House.

2. Hollywood portrayed the Sundance Kid's girl friend as a schoolteacher.

J. 1. Alcohol, a drying agent, is frequently used in cosmetics.

2. The drying agent evaporates rapidly.

3. The drying agent therefore has a cooling effect.

Hamburgers[2]

1. The patties are grayish pink.
2. They are grainy like oatmeal.

3. They have already been laid out.
4. They are on the griddle.
5. The griddle is black.
6. The griddle is old.

7. They begin to sizzle in a puddle.
8. The puddle is greasy.

9. Blood sputters.
10. Blood pops.
11. Blood bubbles away.
12. The bubbling is into oatmeal grease.

13. Their size shrinks.
14. The shrinking is steady.

[2] Taken from Strong, Sentence Combining: A Composing Book.

Hypnotism[3]

1. Franz Mesmer was a physician.
2. Franz Mesmer was from Germany.
3. Franz Mesmer invented hypnotism.
4. Hypnotism was invented in the eighteenth century.

5. Hypnotism remained an amusing gimmick.
6. It remained a gimmick for over a century.
7. The gimmick was for nightclub acts.
8. The gimmick was for parlor games.

9. Physicians now use hypnotism.
10. Dentists now use hypnotism.
11. Psychiatrists now use hypnotism.
12. Hypnotism is used to treat various ailments.
13. Hypnotism is used to control chronic pain.
14. Hypnotism is used as a replacement for anesthesia.

[3] Taken from Kerek et al., The Writer's Options, p. 5.