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## The Hartford Sentence-Combining Laboratory: From Theory to Program

*William L. Stull*

For several years now, the English Department at the University of Hartford has enrolled freshmen in a three-part writing program: a triad, trivium, or—for basic writing students—triage. One side of the triangle is the year-long writing course, Composition 1 and 2. The second side is the Learning Skills Center, which offers individualized tutorials to students with difficulties in reading, writing, and study skills. The third side is new and experimental: a weekly two-hour sentence-combining laboratory required of all students in basic writing sections of Composition 1.

While the two-hour laboratory period had become something of an institution at Hartford, the sentence-combining curriculum was new to students and teachers alike. Until the fall of 1979, the lab period had been, as Leo Rockas described it in his 1977 essay “Teaching Literacy,” a “singing class” where students deficient in grammar, spelling, punctuation, and coherence drilled aloud on these skills. Faced with semi-literacy, Professor Rockas heroically set up a laboratory “so old-fashioned it may seem radically new.”<sup>1</sup> This was back to basics with a vengeance, and it got respectable results: students averaged a ten-percent gain in spotting errors on a mastery test.

But while there is a place for error-centered instruction in a comprehensive writing program, the question was whether a laboratory with about fifty students per section (later subdivided into discussion groups of twelve to fifteen students who regularly worked with a single lab leader) was indeed that place. Since the 1930s, study after study has shown that group drills on lists of common errors are far more costly and less efficient than individualized instruction on individual difficulties—tutorials.<sup>2</sup> Since the Learning Skills Center already offered just such tutorials to almost eight hundred clients each semester (six hundred freshmen visited the LSC an average of five times each in the fall of

1979), and since the students' regular composition classes already included analytical work on pre-writing, organization, and style, the laboratory period was put to a new use, as "a skill-building adjunct to regular composition work," to borrow a phrase from William Strong.<sup>3</sup> In no way did the sentence-combining lab replace classes or tutorials; in no way did it compete with traditional remediation which teachers undertook in their classrooms. Research has shown that by the time students reach grade four they have mastered all the basic "grammar" of English—what linguists call the phrase-structure and simple transformational rules of the language. But what basic writing students have not mastered is how to bring this internalized *competence* to the level of written *performance*.<sup>4</sup> The laboratory was redirected toward this goal.

Sentence combining, a teaching technique first developed for increasing the syntactic fluency of seventh graders and since then successfully tested in college composition courses, offers students a way to translate their hitherto buried competence into writing. It asks them to combine simple sentences—primer prose—into more mature ones that show closer relationships between ideas. Unlike traditional grammar drills, sentence combining stresses language production over linguistic description, accomplishments over errors, and options over rules. Its apparatus is simple, and its exercises can be more play than work. Most importantly, however, at the college level, sentence combining naturally leads students toward rhetoric—the composition teacher's real concern. Specifically, sentence combining connects neatly with what the late Francis Christensen called "A Generative Rhetoric of the Sentence," where syntax flows into style, and where "the very structure of the sentence can help to *generate* the content."<sup>5</sup>

The interconnection between sentence combining and such a rhetoric is a subtle knot, one that researchers have only just begun to unravel.<sup>6</sup> Fortunately, sentence combining's practical effects have been well documented. As Charles R. Cooper concluded in his 1975 "Research Roundup," sentence combining has repeatedly proved itself our single best tool for improving students' writing.<sup>7</sup> The Hartford program therefore attempted to put twenty years of sentence-combining theory into day-to-day practice for some 225 students.

Working at Florida State University during the 1960s, Kellogg W. Hunt sought to prove something that teachers had long known but never described scientifically: older students and skilled adults write sentences that are both quantitatively and qualitatively different from those produced by youngsters. Self-evident as this observation seems, it eluded strict proof until the advent of Noam Chomsky's transformational-generative grammar.<sup>8</sup> This allowed researchers to distinguish between surface structures (the infinite variety of sentences we process and produce—however ineptly) and deep structure (the fundamental rules of

language generation). Deep structure has two components: phrase structure rules for the formation of elementary or “kernel” sentences, and transformational rules governing the addition, deletion, rearrangement, and modification of elements in such sentences, as well as—significantly—the combining or embedding of sentences within sentences.

Because it pointed a way around the misleading description of sentences as simple, compound, complex, and compound-complex, the transformational theory allowed Hunt to measure syntactic maturity with accuracy. Studying grammatical structures written by schoolchildren and adults, Hunt developed three now well-known measures of syntactic development: words-per-T-unit (not sentence), clauses-per-T-unit, and words-per-clause. Sentence length proved an inadequate index of maturity because youngsters write more compound sentences than adults do. To avoid this pitfall, Hunt invented a new unit of measurement, the “minimal terminable unit” or simply “T-unit,” defined as “one main clause plus any subordinate clause or nonclausal structure that is attached to or embedded in it.” T-unit length proved to be a good index of maturity through grade twelve, after which words-per-clause becomes the most reliable index. Bluntly stated, maturity consists in combining sentences, either by subordinating them and embedding them whole (thus lengthening the T-unit) or by reducing clauses to phrases and then adding these to the main clause (thus increasing words-per-clause). Table 1 represents the “normative” data that Hunt compiled, supplemented by figures from Roy O’Donnell’s companion study, *Syntax of Kindergarten and Elementary School Children*.<sup>10</sup> But the table also represents some experimental data. Naturally, once the norms of syntactic maturation were established, researchers questioned whether normal growth might not be enhanced through treatment. Two seemingly complementary strategies presented themselves: instruction in transformational grammar, and sentence-combining practice.

During 1965-66, John Mellon undertook an experiment with seventh graders in which he sought to increase the students’ “syntactic fluency” through both formal grammar instruction and sentence-combining practice. His textbook (later published as *Our Sentences and Their Grammar*) included some detailed lessons in transformational grammar and many “signaled” sentence-combining problems with cues like “T:inf-T:exp” to indicate which transformations the students should apply. Mellon got good results: after a year’s treatment, his experimental classes moved from 9.98 to 11.25 words per T-unit—double growth by Hunt’s norms—while the control group, following Warriner’s curriculum, lagged behind, moving from 9.94 to 10.20 words per T-unit. But when Mellon published *Transformational Sentence Combining: A Method for*

Table 1  
Experimental Results in Syntactic Maturity Compared to “Normative” Data on Developmental Levels

	Grade level					College	Freshmen	Superior
	3	4	5	7	8	12	Post	adults
<b>Words/Clauses</b>								
O'Donnell	6.50		7.40	7.70				
Hunt		6.60			8.10	8.60		11.50
Miami control						8.80	8.67	
Miami exp.						8.75	9.64	
Faigley control						7.96	8.01	
Faigley exp.						7.75	8.90	
<b>Clauses/T-Unit</b>								
O'Donnell	1.18		1.27	1.30				
Hunt		1.29			1.42	1.68		1.74
Miami control						1.72	1.73	
Miami exp.						1.76	1.68	
Faigley control						1.76	1.71	
Faigley exp.						1.84	1.77	
<b>Words/T-Unit</b>								
O'Donnell	7.67		9.34	9.77				
Hunt		8.51			11.34	14.40		20.30
Miami control						15.00	14.95	
Miami exp.						15.31	16.05	
Faigley control						13.99	13.52	
Faigley exp.						14.22	15.65	

Source: Adapted from Donald A. Daiker, Andrew Kerek, and Max Morenberg [Miami University], “Sentence Combining at the College Level: An Experimental Study,” *Research in the Teaching of English*, 12 (October 1978), 254; and from Lester Faigley, “The Influence of Generative Rhetoric on the Syntactic Maturity and Writing Effectiveness of College Freshmen,” *Research in the Teaching of English*, 13 (October 1979), p. 201.

Enhancing the Development of Syntactic Fluency in English Composition (1969), he voiced a lingering suspicion: “Clearly, it was the sentence-combining practice associated with the grammar study, not the grammar study itself, that influenced the syntactic fluency growth rate.”<sup>11</sup> This cleared the way for Ockham’s razor, since what can be done with fewer assumptions is done in vain with more.

Frank O’Hare replicated Mellon’s experiment, banishing the grammar lessons altogether and simplifying the textbook exercises. In 1973, he published *Sentence Combining: Improving Student Writing without Formal Grammar Instruction*.<sup>12</sup> Where Mellon had gotten two years’ growth in one, O’Hare got five: his experimental class moved from 9.63 to 15.75 words per T-unit (beyond Hunt’s norm for twelfth graders, 14.40). More importantly, a group of experienced English teachers, unaware of the experiment, rated the experimental group’s themes above the control group’s in overall quality. Clearly, formal grammar instruction—traditional or transformational—was no stimulus to syntactic maturity.

Sentence combining had thus rapidly garnered impressive results. Still, it was not without its critics, whose objections, though answered, echo to this day.<sup>13</sup> Notably, James Moffett and Francis Christensen voiced fears about sentence combining’s possible side effects. Mellon had called his program “a-rhetorical”—not part of the students’ composition program but, rather, a linguistic exercise. Since in *Teaching the Universe of Discourse* (1968) Moffett championed a “naturalistic” language-arts curriculum, Mellon’s “a-rhetorical” experiment drew his fire. Furthermore, Mellon’s exercises had stressed sentence-embedding transformations like subordination, relativization, and nominalization. Cultivated in a hothouse, such structures might sprawl and blossom into gobbledegook. Yet even Moffett allowed that “sentences must grow rank before they can be trimmed.”<sup>14</sup> Fortunately, later researchers found that to be able to expand a sentence is not to be constrained to do so against rhetorical considerations.

Francis Christensen also featured an “a-rhetorical” sentence-combining program. Like Moffett, he worried that the embedding exercises would promote the long noun clause, “the very hallmark of jargon.”<sup>15</sup> In place of the restrictive clausal embedments that Mellon had stressed, Christensen championed the non-restrictive “free” (*i.e.*, moveable) modifiers, mostly phrases rather than clauses, particularly the appositive, the participial phrase, the prepositional phrase, and the absolute. For him, good writing was mainly a matter of *addition* to rather than *expansion* of the main clause. Thus, he advocated not the complex but the “cumulative” sentence made up of a base clause with added modifiers, like this one from a waggish student: “Mr. Whipple squeezed

the Charmin like a man possessed, cackling softly, eyes closed, alone in the supermarket.”

Christensen’s objection is open to dismissal on two counts. First, it begs the question. Free modifiers are themselves created by sentence-combining transformations and clause reductions. Secondly, to favor one rhetorical option over another out of context is absurd. Writers need *both* bound and free modifiers at their disposal. As Frank O’Hare sensibly observed, “It would surely be a mistake to favor any one particular syntactic pattern to the exclusion of the other possible patterns” (p. 72). As the work of Willis Pitkin, Jr., at Utah State University has shown, any dilemma drawn between sentence combining and generative rhetoric is a false one, since for basic writing students especially, the two methods work synergistically. Once the writers get their syntactic *options* under control through sentence-combining practice, they can more easily face up to the rhetorical *choices* before them.<sup>16</sup>

With these objections countered, we can turn from theory to the laboratory’s more immediate concern, practice. Fortunately, well-documented studies of both sentence combining and generative rhetoric at the college level have appeared in the last two years. The results are significantly positive—and strikingly similar. In 1976, a team of researchers at Miami University in Oxford, Ohio, tested a sentence-combining curriculum against a traditional one. Max Morenberg, Donald A. Daiker, and Andrew Kerek published their results first as “Sentence-Combining and Syntactic Maturity” and then in more detail as “Sentence Combining at the College Level: An Experimental Study” (both 1978).<sup>17</sup> More recently, at the University of North Dakota, Lester Faigley compared the effects of a generative rhetoric curriculum based on Francis and Bonnie Jean Christensen’s *A New Rhetoric* against a traditional program. Faigley’s results appeared first as “Generative Rhetoric as a Way of Increasing Syntactic Fluency” and then, again in more detail, as “The Influence of Generative Rhetoric on the Syntactic Maturity and Writing Effectiveness of College Freshmen” (both 1979).<sup>18</sup>

In the Miami and North Dakota studies alike, the researchers measured the students’ gains in Hunt’s three factors of syntactic maturity—and in overall writing quality as assessed by experienced teachers. Tables 1, 2, and 3 represent the results—which are strikingly similar. In both studies the experimental groups gained almost one word per clause in a single semester, a very significant increase. Both the experimental groups made impressive gains in words per T-unit as well, although this figure is less significant for young adults than for schoolchildren. Most interesting, however, are the gains in overall writing quality as measured by “blind” holistic ratings. Sentence combining and generative rhetoric affected the students’ overall writing to about the same degree, a mean increase of a little over half a grade point—and one-third grade point over the respective control groups.

**Table 3**  
**Sentence Combining and Generative Rhetoric**  
**Comparison of Pretest-Posttest Mean Scores' on Holistic**  
**Ratings (Scale 1-6) for Experimental and Control Groups**

	<i>Experimental</i> Miami: N = 151 Faigley: N = 70	<i>Control</i> Miami: N = 139 Faigley: N = 68	Difference
	Mean	Mean	
Miami Pretest	3.20	3.16	.04(NS)
Miami Posttest	3.73	3.37	.36***
Faigley Pretest	3.06	3.13	-.07(NS)
Faigley Posttest	3.70	3.29	.41**

'Posttest scores covaried with pretests in both experiments (Sources: Miami, p.251; Faigley, p. 202)

NS—Not significant

\*\*—Significant at or beyond the .01 level of confidence

\*\*\*—Significant at or beyond the .001 level of confidence



Table 2

Sentence Combining and Generative Rhetoric  
Comparison of Pretest-Posttest Mean Scores<sup>1</sup> on the Three Factors  
of Syntactic Maturity for Experimental and Control Groups

Factor	Experimental		Control		Difference
	Mean	Mean	Mean	Mean	
<b>Words/Clause</b>					
Miami Pretest	8.75	8.80	8.80	8.67	-.05(NS)
Miami Posttest	9.64	8.67	8.67	7.96	.97***
Faigley Pretest	7.75	7.96	7.96	8.01	-.21(NS)
Faigley Posttest	8.90	8.01	8.01		.89***
<b>Clauses/T-unit</b>					
Miami Pretest	1.76	1.72	1.72	1.73	.04(NS)
Miami Posttest	1.68	1.73	1.73	1.76	-.05(NS)
Faigley Pretest	1.84	1.76	1.76	1.71	.08(NS)
Faigley Posttest	1.77	1.71	1.71		.06(NS)
<b>Words/T-unit</b>					
Miami Pretest	15.31	15.00	15.00	14.95	.31(NS)
Miami Posttest	16.05	14.95	14.95	13.99	1.10**
Faigley Pretest	14.22	13.99	13.99		.23(NS)
Faigley Posttest	15.65	13.52	13.52		2.13***

<sup>1</sup>Posttest scores covaried with pretests in both experiments (Sources: Miami, p.250; Faigley, p. 201)

NS—Not significant

\*\*—Significant at or beyond the .01 level of confidence

\*\*\*—Significant at or beyond the .001 level of confidence

The Hartford sentence-combining laboratory arose out of these exciting experiments. It is original only in its logistics. Appropriately, its basic text has been *The Writer's Options: College Sentence Combining* by Daiker, Kerek, and Morenberg, the Miami troika. These writers have gone a long way toward amalgamating sentence combining and generative rhetoric.<sup>19</sup> *The Writer's Options* breaks into two major sections, each containing both signaled and open sentence-combining exercises. Part I, "Structures," offers students instruction and practice in manipulating the principal sentence-combining structures from the relative clause through the absolute phrase and noun substitutes. Part II, "Strategies," addresses larger rhetorical issues: rearrangement, repetition, emphasis, coherence, and tone. Moreover, after a brief introduction to the structure or strategy at issue, every chapter in the text includes rhetorical as well as syntactic exercises, exercises like "Judging Sentences" and "Rewriting Exercises" that ask students to make rhetorical decisions in relation to varying purposes and audiences.

At Hartford, a typical two-hour laboratory breaks into three parts, each about forty minutes long. First, students compare and discuss their sentence-combining exercises from the previous session in the light of their leader's annotations. While in their helpful essay "Using Sentence Combining: A Sample Exercise" Daiker, Kerek, and Morenberg recommend dittoing off several versions of a given exercise for comparison, we found that basic writing students prefer to work less formally, considering the most difficult combinations closely and testing out new strategies aloud.<sup>20</sup> Naturally, much discussion of the remedial basics—grammar, spelling, punctuation, and coherence—arises during this time as the students check over their leader's comments. Furthermore, during this time the leaders often present brief lessons on these and more sophisticated matters.

Next comes a presentation of new material, either a new structure or a new strategy. Students are asked to read a chapter of the text before each week's lab, but lab leaders review the lesson informally during the session. More importantly, they get the students to practice the structure or strategy aloud, on the board, and on paper. Here the leaders choose freely among the "Basic Pattern," "Creative Pattern," and open sentence-combining exercises, avoiding only the one exercise that has been set aside for all the students to write up and hand in.

Finally, when about forty minutes remain in the session, all the students write up their weekly assignment, an open sentence-combining problem made up of from fifty to one hundred simple sentences. During this time the lab leader circulates around the group as needed, whether to help a student with a particular combination (or a non-combination; *not* to combine always remains a writer's option) or to dispense incidental

aid with grammar, punctuation, or coherence. At the session's end, the students hand in their papers, thus leaving a record of their attendance—and performance.

At the end of their experiment, the Miami researchers took an “attitudinal survey” of their students. Asked “Did you like sentence-combining as an approach to writing?” 69% of the students' responses were positive (five or better on a seven-point scale). To “Would you recommend a sentence-combining section of Freshman English to a friend?” 67% of the students responded positively. Finally, asked “Do you feel that sentence-combining practice for a semester helped you increase your writing skills?” a resounding 72% of the students answered positively.<sup>21</sup>

At Hartford, where the two-hour laboratory was a requirement above and beyond the call of the regular composition class for basic writing students, we can only marvel at such rave reviews. Still, while students regularly complained of being worked to death, many kissed the rod and praised the laboratory. As one weary student wrote in his evaluation of the pilot study, “The sentence-combining exercises were long, but they were the only effective way to get the point across.” More heartening still, several students felt that the lab was indeed what Strong had hoped, “a skill-building adjunct to regular composition work,” as this comment from Mark Slusarz indicates:

The sentence-combining English lab helped me to recognize sentence structures, but moreover, it helped me to use them. My revised papers [for Composition 1] improved in sentence structure when my point was better made by the techniques I learned in the lab. English is easier to understand when it's broken down into simpler forms; English lab helped me accomplish this. Whenever a problem arose in Composition 1 I could always bring my problem or paper to the lab for help; the instructor as well as the whole class helped me.

As Mark's note hints, for the most part our lab leaders were also adjunct instructors, the same people who taught Composition 1 and gave tutorials in the Learning Skills Center. It was possible, though not likely, for a student to have the same teacher in all three. This triple-duty system bound the three-part writing program together, since lab leaders often referred their students to the LSC and classroom teachers monitored their students' work in the lab. Lab work itself was graded only “Pass” or “Not Pass”—no letter grades were given. Passing the lab was made a condition of passing the Composition 1 requirement, however, so students took their lab work seriously.

The Mellon, O'Hare, Miami, and North Dakota studies all suggest that as *parts* of a comprehensive writing program sentence combining and generative rhetoric are fail-safe methods of enhancing both syntactic

maturity and overall writing quality. Indeed, John Mellon (the “founding father” of sentence combining) boldly asserted at the 1978 Miami University Conference on Sentence Combining and the Teaching of Writing, “For now we can brush aside the research reviewer’s ritualistic caution, ‘more research is needed.’ More research on sentence combining is not needed, though more is welcome and more will be done.”<sup>22</sup> Predictably, subsequent research has proved Mellon’s conclusion to be premature. For example, Lester Faigley’s provocative essay “Problems in Analyzing Maturity in College and Adult Writing” suggests that while syntactic maturity and overall writing quality are constantly conjoined, the former cannot be proved to be the cause of the latter—a quandary worthy of David Hume.<sup>23</sup> Furthermore, in their recent study, “The Effects of Overt and Covert Cues on Written Syntax,” William L. Smith and Warren E. Combs demonstrate that “While the effectiveness of [sentence combining] has been established, there is reason to believe that the impact of instruction has not been adequately tested.” Specifically, these researchers found that both covert and overt teacher cues (such as telling students to write for “a highly intelligent person who is influenced by long, complex sentences”) prompt sudden gains in syntactic maturity, gains comparable to those in extended sentence-combining practice, although of shorter duration.<sup>24</sup>

Fortunately, those who wish to can carefully monitor their students’ progress in the laboratory. Classroom grading is, of course, holistic, a general assessment of each student’s progress over the course. Since lab work centers for the most part on enhancing the students’ syntactic maturity, pre- and post-tests can be used to measure students’ growth in terms of Hunt’s three criteria, with the “normative” statistics from Table 1 serving as general standards for freewriting samples. Moreover, in a later study of *Syntactic Maturity in Schoolchildren and Adults* (1970), Hunt developed a “rewriting” test entitled “Aluminum” which reliably measures students’ syntactic maturity on a controlled-content problem consisting of thirty-two short kernels—a sentence-combining exercise. As Hunt observed, “An experimental curriculum designed to accelerate syntactic maturity might well use this instrument as one of the devices for measuring the success of the program.”<sup>25</sup> Finally, Elaine P. Maimon and Barbara F. Nodine of Beaver College recently opened a promising line of inquiry in their study “Measuring Syntactic Growth: Errors and Expectations in Sentence-Combining Practice with College Freshmen” (1978).<sup>26</sup> While these researchers found the usual gains in syntactic maturity among their sentence-combining students, they also tallied the mean number of sentence-combining (embedding) errors per composition: faulty subject-verb agreement, dangling verbals, misplaced modifiers, fragments, vague pronoun references, faulty parallelism, comma splices and run-on sentences. They observed a pattern of error that deserves further study: on a freewriting test at the beginning and end

of the semester, students' errors decreased from 1.21 to .42 per composition, while on the "Aluminum" rewriting test errors increased from .59 to 1.53 per composition. More recently, in a follow-up study, these authors have suggested that such patterns of error may well provide "a window to the students' cognitive processes."<sup>27</sup>

Some years ago in a pioneering essay, William Strong urged basic writing teachers not merely to go *back* to basics but *beyond* them, into the exciting fields of inquiry that sentence combining opens to us. As an ongoing experiment within a comprehensive writing program, the Hartford sentence-combining laboratory represents one school's attempt to break new ground continually by translating exciting theory into everyday practice.<sup>28</sup>

#### Notes

<sup>1</sup>Leo Rockas, "Teaching Literacy," *College Composition and Communication*, 28 (October 1977), 273-75.

<sup>2</sup>See two classic studies: P.C. Werner and W.S. Guiler, "Individual versus Group Instruction in Grammatical Usage," *Journal of Educational Psychology*, 24 (1933), 140-51; and M. Karp, "An Individual Method and a Group Method of Teaching College Freshmen the Mechanics of English Composition," *Journal of Experimental Education*, 11 (1942), 9-15. On the larger question at issue, see Janice Neuleib, "The Relation of Formal Grammar to Composition," *College Composition and Communication*, 28 (October 1977), 247-52.

<sup>3</sup>William Strong, "Sentence Combining: Back to Basics and Beyond," *English Journal*, 65 (1976), 61. This article is printed with a counterstatement by Robert Marzano, "The Sentence Combining Myth" (pp. 57-59).

<sup>4</sup>See Walter Loban, *The Language of Elementary School Children*, NCTE Research Report No. 1 (Urbana: National Council of Teachers of English, 1963). James W. Moffett summarizes this research in *Teaching the Universe of Discourse* (Boston: Houghton-Mifflin Company, 1968): "From various research studies it is also clear that by at least fourth grade children use in their writing all the kernel-sentence types, all the simple transformations, and all the transformations that operate on embedded sentences. Orally, most children seem to be able to use all the transformations before they enter school" (pp. 158-59).

<sup>5</sup>Francis Christensen, "The Problem of Defining a Mature Style," in Francis and Bonnie-jean Christensen, *Notes Toward a New Rhetoric: Nine Essays for Teachers*, 2nd ed. (New York: Harper and Row, 1978), p. 148. This essay originally appeared in *English Journal*, 57 (April 1968), 572-79. See also Christensen's seminal essay "A Generative Rhetoric of the Sentence," which first appeared in *College Composition and Communication*, 14 (October 1963), 155-64, and is reprinted in *Notes*, pp. 23-44.

<sup>6</sup>See Frank O'Hare, "Conclusions and Implications," the last chapter of *Sentence Combining: Improving Student Writing without Formal Grammar Instruction*, NCTE Research Report No. 15 (Urbana: National Council of Teachers of English, 1973), pp. 71-74. This is also the topic of my own current research.

<sup>7</sup>Charles R. Cooper, "Research Roundup: Oral and Written Composition," *English Journal*, 64 (1975), 72-74. For a fuller assessment of sentence combining's prospects, see *Sentence Combining and the Teaching of Writing: Selected Papers from the Miami University Conference*, eds. Donald A. Daiker, Andrew Kerek, and Max Morenberg, *Studies in Contemporary Language*, No. 3 (Conway, Arkansas: L & S Books, 1979).

<sup>8</sup>Noam Chomsky, *Syntactic Structures* (The Hague: Mouton Publishers, 1957) and *Aspects of the Theory of Syntax* (Cambridge: The M.I.T. Press, 1965).

\*Kellogg W. Hunt, *Syntactic Maturity in Schoolchildren and Adults*, Monographs of the Society of Research in Child Development, No. 134 (Chicago: University of Chicago Press, 1970), p. 4.

<sup>16</sup>The table's normative data follows Kellogg W. Hunt, *Grammatical Structures Written at Three Grade Levels*, NCTE Research Report No. 3 (Champaign, Illinois: National Council of Teachers of English, 1965), p. 56, and *Syntactic Maturity in Schoolchildren and Adults*, p. 9. The latter incorporates data from Roy C. O'Donnell, William J. Griffin, and Raymond C. Norris, *Syntax of Kindergarten and Elementary School Children: A Transformational Analysis*, NCTE Research Report, No. 8 (Urbana, Illinois: National Council of Teachers of English, 1967).

<sup>11</sup>John C. Mellon, *Transformational Sentence-Combining: A Method for Enhancing the Development of Syntactic Fluency in English Composition*, NCTE Research Report, No. 10 (Urbana, Illinois: National Council of Teachers of English, 1969), p. 74.

<sup>12</sup>Frank O'Hare, *Sentence Combining: Improving Student Writing Without Formal Grammar Instruction*, NCTE Research Report, No. 15 (Urbana, Illinois: National Council of Teachers of English, 1973).

<sup>13</sup>See for example Charles M. Duke, "Caution: Sentence-Combining Ahead," *The Leaflet*, 78, No. 3 (Fall 1979), 10-13. for a counterstatement to Professor Duke, see my essay "Sentence Combining: Full Speed Ahead!" in *The Leaflet*, 79, No. 2 (Spring 1980), p. 25-30.

<sup>14</sup>James Moffett, *Teaching the Universe of Discourse* (Boston: Houghton-Mifflin Company, 1968), p. 172. See also Douglas R. Butturff, "Sentence Combining, Style, and the Psychology of Composition," in *Sentence Combining and the Teaching of Writing*, pp. 39-42.

<sup>15</sup>"The Problem of Defining a Mature Style," in *Notes*, p. 140.

<sup>16</sup>See Louis T. Milic, "Rhetorical Choice and Stylistic Option: The Conscious and Unconscious Poles," in *Literary Style: A Symposium*, ed. Seymour Chatman (London: Oxford University Press, 1971), p. 81. Pitkin's work includes "Discourse Blocks," *College Composition and Communication*, 20 (1969), 138-48; "Hierarchies and the Discourse Hierarchy," *College English*, 38 (March 1977), 649-59; "X/Y: Some Basic Strategies of Discourse," *ibid.*, 660-72; and *X/Y: Writing Two Steps at a Time* (Logan: Utah State University Department of English, n. d.).

<sup>17</sup>Donald A. Daiker, Andrew Kerek, and Max Morenberg, "Sentence-Combining and Syntactic Maturity in Freshman English," *College Composition and Communication*, 29 (February 1978), 36-41; and "Sentence Combining at the College Level: An Experimental Study," *Research in the Teaching of English*, 12 (October 1978), 245-56.

<sup>18</sup>Lester L. Faigley, "Generative Rhetoric as a Way of Increasing Syntactic Fluency," *College Composition and Communication*, 30 (May 1979), 176-81; and "The Influence of Generative Rhetoric on the Syntactic Maturity and Writing Effectiveness of College Freshmen," *Research in the Teaching of English*, 13 (October 1979), 197-205.

<sup>19</sup>Donald A. Daiker, Andrew Kerek, and Max Morenberg, *The Writer's Options: College Sentence Combining* (New York: Harper and Row, 1979). This book is reviewed by Carol Gurolnick Rossi in *College Composition and Communication*, 31 (February 1980), 93-95.

<sup>20</sup>Donald A. Daiker, Andrew Kerek, and Max Morenberg, "Using Sentence Combining: A Sample Exercise," *Arizona English Bulletin*, 21 (April 1979), 16-22. See also William Strong, "Doing Sentence Combining: Some Practical Hints," in *Sentence Combining and the Teaching of Writing*, pp. 209-15.

<sup>21</sup>"Sentence-Combining and Syntactic Maturity," p. 41.

<sup>22</sup>John C. Mellon, "Issues in the Theory and Practice of Sentence Combining: A Twenty-Year Perspective," in *Sentence Combining and the Teaching of Writing*, p. 35.

<sup>23</sup>*Sentence Combining and the Teaching of Writing*, pp. 94-100. Faigley's conclusion in light of this "paradox" suggests lines for further research: "The answer must be that

sentence combining and generative rhetoric affect some part of the writing process more fundamental than the enhancement of syntactic maturity, that besides expanding the student's syntactic repertoire, these methods offer students insight into structure in writing" (p. 99).

<sup>24</sup>*Research in the Teaching of English*, 14 (1980), 19-38; p. 19. See also in the same issue Stephen P. Witte and Anne S. Davis, "The Stability of T-unit Length: A Preliminary Investigation," pp. 5-18.

<sup>25</sup>*Syntactic Maturity in Schoolchildren and Adults*, p. 59. The "Aluminum" test was written by Roy O'Donnell, but Hunt administered it to over a thousand students from grades four, six, eight, ten, and twelve in the public schools of Tallahassee, Florida. See also Hunt's more recent studies, "Early Blooming and Late Blooming Syntactic Structures," in *Evaluating Writing: Describing, Measuring, Judging*, eds. Charles R. Cooper and Lee Odell (Urbana, Illinois: National Council of Teachers of English, 1977), pp. 91-104; and "Anybody Can Teach English," in *Sentence Combining and the Teaching of Writing*, pp. 149-56.

<sup>26</sup>Elaine P. Maimon and Barbara F. Nodine, "Measuring Syntactic Growth: Errors and Expectations in Sentence-Combining Practice with College Freshmen," *Research in the Teaching of English*, 12 (October 1978), 233-44.

<sup>27</sup>Elaine P. Maimon and Barbara F. Nodine, "Words Enough and Time: Syntax and Error One Year After," in *Sentence Combining and the Teaching of Writing*, p. 104.

<sup>28</sup>See also James L. Kinneavy, "Sentence Combining in a Comprehensive Language Framework," in *Sentence Combining and the Teaching of Writing*, pp. 60-76.

#### Biographical Note

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