In an epilogue to the 1967 research report, "Transformational Sentence-Combining" (See ED 018 405.), John Mellon considers the significance of the sentence-combining experience and answers the charges of critics--Wayne O'Neil, James Moffett, and Francis Christensen--regarding his original research findings. Mellon points out, for example, that "mature syntactic fluency," not "mature style," is the chief concern of his method of sentence-combining and that this method is not intended as a writing program, but rather as a game-like activity to enrich language development. He also indicates what he believes to be of final importance in his experiment--that (1) planned enrichment of the student's language environment does foster linguistic development, (2) syntactic fluency can be used successfully as a variable to measure this enhanced development, and (3) sentence-combining tasks do provide successful enrichment activities. (JB)
Over two years have elapsed between the first appearance of this study as a federally supported Cooperative Research Report and its present publication by the National Council of Teachers of English. During this time I have received many comments on it, pro and con. I would like to reply briefly to several of these, as well as to suggest how my own appraisal of its significance has changed in two years' time.

Professor Wayne A. O’Neil of the Massachusetts Institute of Technology, at the time on the faculty of the Harvard Graduate School of Education and one of my advisers on the experiment, has pointed out to me in personal correspondence that by no stretch of the imagination could as many sentence-combining problems as were actually included be considered, as I state in Chapter Two, “an integral part of the grammar course” represented solely as “an activity designed to reinforce and further illustrate transformations earlier learned by the student.” Professor O’Neil is absolutely right about this. Although he would agree, I believe, that some practice exercises are necessary if students are to understand and be able to follow the operations in a particular grammar, I acknowledge in turn that the number would be far fewer than the total used in the experiment. And in no case would there be a need for problems involving multiple embeddings.

The issue at stake, of course, is a matter of honesty to students regarding the purpose of activities required of them, or merely made available, in the classroom. Doubtless the students recognized in some sense or other that, beyond a certain point, the sentence-combining problems were of no further help in illuminating the facts of grammar they were studying. Why then didn’t they look upon further problems as mere busywork? The reason they didn’t, indeed the reason they seemed rather to enjoy tackling longer and more challenging problems, was apparently that they regarded them as a kind of puzzle or game, and fun to do into the bargain. But the appropriate response to Professor O’Neil’s observation is certainly
not to try to justify sentence-combining activities in some other instrumental terms—by reading students the rationale of this study, for example. Rather, it is to create a classroom atmosphere that fully and frankly plays up the "game" aspect of these activities. I return to this below.

Second, I would like to clear up the confusion about this study certain to have been caused by Francis Christensen's remarks in the English Journal ("The Problem of Defining a Mature Style," English Journal, 1968, 57, 572-579). Christensen's first error is to report the study incorrectly and unclearly. In describing the process of transformational sentence-combining as a classroom exercise, Christensen says, "The result was 'complex' sentences, averaging over thirty words, that say much in little" (p. 575). Later, after reexamining some of the prose analyzed by Hunt in his "skilled adult" sample, he says, "By contrast, the ten sentences produced by Mellon's experiment average 30 words in length, compared with 19.5 for the six-author sample [Hunt's] and 20 for Halberstam's paragraph [also in Hunt]" (p. 579).

I cannot imagine what "result" or what "ten sentences" Christensen has in mind. The reader will recall that the experiment "produced" nearly 9,000 T-units in the experimental group at post-test (Table 8), and that the mean T-unit length was 11.25 words (Table 9), not 30 words. Perhaps Christensen is referring to the fifteen sample problems given in Appendix B. Eight of these illustrate the different transform types learned by the students, and seven are identified as general problems selected, though I did not state this in my original write-up, to illustrate the upper limit of difficulty represented in the problems generally. The eight sentences average 18.0 words, the seven average 41.7, and all fifteen taken together 29.1. It may be this last figure that Christensen has computed.

In any event, there were not ten or fifteen sentence-combining problems used in the experiment; there were 281, of which 183 were multiple-embedding problems. Table 6 shows these figures and reports that the average number of embeddings per sentence-combining problem was 3.2, and the average per multiple-embedding problem 4.4. The average of the seven difficult problems in Appendix B is 7.8. Obviously, then, these problems are quite atypical with respect to those used throughout the experiment. Here I must reiterate, however, Christensen's confusing remarks notwithstanding, that the whole point of the practice treatment was to use sentences of as great a length as possible, constrained only by the requirements of the program sequence, which I felt had to progress step by step
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from simple beginnings to problems of greater complexity, as well as by the student's ability to solve the more difficult problems successfully. Indeed, the hypothesis of the study turned crucially on just this assumption, that the sentences to be experienced had to be far longer and more grammatically complex than the average of those the students were writing at the time, or would be expected to write subsequently, even as skilled adults.

The main point here is that Christensen is wrong whichever way one interprets his remarks. That is to say, the sentences in the practice problems were not so long as he seems, on one interpretation, to have surmised, despite the fact that they were just as long as I thought it possible, under the circumstances, to make them— a fact Christensen seems not to have grasped. On the other interpretation, as will be evident in even a casual reading of Chapter Four, the sentences (T-units) produced by the students in their post-treatment compositions, that is, in their actual writing, were only a little over one third as long as the 30-word average Christensen reports.

Vexing as the above may be, it is much less disturbing than Christensen's second error, which is to misread and thus misrepresent the whole purpose of the study. To some extent, a similar misinterpretation also runs through James Moffett's commentary on the experiment, which appears in the chapter titled "Grammar and the Sentence" in his recent volume, Teaching the Universe of Discourse (Boston: Houghton Mifflin Company, 1968). First of all, Christensen explicitly substitutes the term "mature style" for the expression "mature syntactic fluency," despite my stated warnings to the contrary. Syntactic fluency is not the same as style. Indeed, the reader will retail that it is an invented term used to label the development measured by Hunt's studies, and that it was thought necessary precisely because "style" would have been inappropriate for this purpose.

Secondly, again in the face of admonitions not to do so, both Christensen and Moffett choose to look upon sentence-combining practice as a way of teaching writing, a way that assumedly presented students with overly long, overly complex, and utterly context-free sentences as objects to be imitated during subsequent writing acts, whether consciously or as a result of some "conditioning" effect or "learning set." In fact, however, the sentence-combining practice had nothing to do with the teaching of writing. Nor, for that matter, was there any "learning" taking place to occasion a "set." If the experimental group had "imitated" the practice sentences, their T-
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units would have averaged closer to 20 words than to 11. Given the
cognitive and conceptual immaturity of thirteen-year-olds, it is hard
to imagine the bizarre content and the stylistic horrors that would
have characterized such forcibly lengthened sentences. Indeed, under
these conditions I am sure that at some point during the post-testing
most of the students would have quit writing altogether, openly
rebelling against such an artificial and unnatural task.

But none of these things happened. I find no evidence that the
experimental students at post-test were under any compulsion, whether
perceived or latent, to perform unnaturally. On the contrary, I would
argue that their performance was perfectly natural, just as was the
extra inter-test development attributable to the sentence-combining
practice, since this development may only be viewed (though we
have no theory modeling and thereby explaining the process) as an
automatic consequence of the sustained enrichment of the students’
language environment. It is true, as I have stated throughout, that
this enrichment was accomplished by specially structured and a-
rhetorical devices, hence non-naturalistic ones. But insofar as they
are pleasurable to the student, and insofar as they in no way con-
strain his performance while writing, it would seem that their “non-
naturalness” is quite beside the point.

I have purposely stressed in the above the words “natural” and
“naturalistic,” for the burden of Moffett’s very fair critique of this
study is that it unwisely advocates non-naturalistic practice activities.
Moffett recommends instead “sentence-expansion games, good dis-
cussion, rewriting of notes, collaborative revision of compositions,
playing with one-sentence discourses, and verbalizing certain cogni-
tive tasks” (pp. 180-181). Moffett and I have discussed this matter
many times. I am still unclear, however, as to his criterion for
naturalness. I do not understand why the things listed above
are natural activities to require of children, whereas sentence-combining
games are not. I continue to see the latter in the upper elementary
grades, given alone and apart from any formal grammar study, as a
valuable addition to the arsenal of language-developing activities
Moffett includes in his language arts program (A Student-Centered
Company, 1968). And I see them employed in the junior high school
grades much as they were in this study, as a game-like exercise in
the linguistic studies part of the curriculum.

Now a final word on the Christensen article. As stated, Christen-
sen mistakenly interprets my experiment as an attempt to teach ma-
ture style; consequently he faults it for not providing practice sentences instancing what he believes to be the salient characteristics of adult professional expository writing, namely, "cumulative" sentences with short "base clauses" and a high proportion of "free modifiers." Though he had no way of knowing it, since he again bases his conclusions on the mysterious "ten sentences" mentioned above, Christensen is essentially correct in saying that the practice sentences used herein contained relatively few "free modifiers"—that is, introductory and nonrestrictive constructions of a variety of types.

One way to answer this criticism is to quote Moffett's response to it: "But children's sentences must grow rank before they can be trimmed" (p. 172). Though I am not sure exactly in what sense the use of Christensen's free modifiers would represent "trimming," I do agree with Moffett that the developmental sequence moves generally from the expression of secondary or elaborating propositions as separate sentences (though often such secondary statements are simply not made), to their expression as contained clauses, and finally to their expression as reductions of clauses. Another way to answer Christensen is to argue that ordinarily there is insufficient time in the first-year junior high school grammar course to teach the full range of transform types. The reason nonrestrictive verbal and appositive phrases were virtually nonexistent in the practice problems, for example, is that I had earmarked for the projected eighth grade segment of the program a discussion of the conjoining process in which these are derived, as well as of the restrictive/nonrestrictive distinction governing their punctuation.

Here again, Christensen appears to be criticizing this study as if it represented a full-blown writing program. The truth is, however, as I pointed out repeatedly in the original report, it is not a writing program at all. In fact, it has nothing whatever to do with what I conceive to be the teaching of writing. It is limited strictly to a procedure for heightening the growth rate of children's developing syntactic fluency, an aspect of language production (in this case writing) over which one does not and can not (except on occasion and by artifice) exercise conscious control.

I would only add what I have also made clear earlier, namely, that the experiment simulated just the first year of a proposed three-year sequence beginning in grade seven. After the first year, it happens, this sequence would definitely include sentence-combining problems on precisely the kinds of sentences Christensen has in mind. But this is not to suggest that one might then regard it as a writing
program. Instead, I would insist upon construing these activities as a rhetorical in nature right up through grade nine. Altogether they would constitute a program aimed at getting the syntactic fluency of ninth grade students up to a level presently associated with twelfth graders. This would provide writing teachers in the senior high school a much broader base on which to begin the direct teaching of writing styles.

The teaching of styles, incidentally, which I think is what we really mean when we speak of teaching "writing," is something I do not believe should be attempted before senior high school, simply because it assumes of students the cognitive maturity entailed in their being able to think consciously about the "how" of expression while maintaining at the same time an appropriate concern for the "what." Most junior high school children lack this maturity, and treating them as if they did not—as if they could and therefore should look upon and monitor their writing with the same "third eye of objectivity" possessed by older students and adults—generally succeeds only in creating in these youngsters an intense dislike for writing and the writing classroom and in making them very uncooperative students during their high school years. This is not to say that younger children should not engage in writing as an important part of their school activity. Clearly, children should write. The question is, how in regard to this writing should adults presume to teach? Or more exactly, what kind of adult intervention in the child's writing activity counts as proper teaching? I do not claim to have a final answer to this question, though I think our conventional response to it wholly unsatisfactory. That is, I have come to believe quite strongly in the essential wrongness of our attempting to teach elementary and junior high students particular prose styles, "voices not their own," by imposing upon them various forms, structures, patterns, models, norms, and higher level grammars of style and rhetoric to which we expect them somehow or other to conform their writing.

Doubtless all this seems somewhat of a digression, particularly since I have repeatedly claimed that this study has nothing to do with writing or the teaching of writing. In fact, however, it brings me directly to the final point of these concluding remarks, that is, to a very brief statement showing how my own feelings towards this experiment have changed in the two years since I completed it.

In general I have come to believe that programs for preadolescent language education (elementary school "language arts"
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and junior high school "English") are most successful when they
are least structured, content-oriented, and self-conscious, when they
place their greatest emphasis upon the provision of widely varied
occasions for actual use of language by students, and when they do
not require mastery of systematized learnings about language—gram-
matical formulations, literary terminology, paragraph forms, and the
like. In planning such language development programs, one's chief
concern, it seems to me, is to enrich the student's in-school language
environment, maximally and on a sustained basis. "Enriching" the
language environment simply means providing for occasions that
call upon the student to use certain kinds of language, and to
exercise certain intellectual and affective faculties, that for the most
part are not brought to bear when school activities are more or less
limited to things such as drilling and rote memorizing, filling in
blanks in workbooks, listening to oral reading by fellow students, or
submitting to various kinds of catechetical teaching styles. James
Moffett's curriculum, for example, is an excellent illustration of a
program designed to enrich the student's language environment by
providing occasions for varied language use. As noted, Moffett rec-
ommends such things as wide-ranging dramatic activities, focused small-
group discussions, writing workshops, naturalistic discussions of lit-
erature, language games, enactment of dramatic literature, and se-
quences of writing assignments following what is believed to be the
developmental pattern of the child's emerging discourse
competency.

To this program I would only add, during the junior high school
years, rational inquiry into linguistic structure and language
mores as a means of insuring that the on-going talk—the discourse, discussion,
argumentation, and inquiry—be about something of substance and
not merely ephemeral and unfocused.

To advocate any such language education program, however, is
to invite the question, will it work? Since we have no theory of
linguistic and cognitive development capable of explaining by reason
alone and in the absence of experimentation exactly how it is necessary
to regard program A, let us say, as superior to program B as a means
of best fostering such development, we have no recourse other than
to make an empirical comparison of the results of programs A and
B. This is not to say that we would devise candidate programs in a
wholly unprincipled and random way. We have tentative hypotheses,
fragments of theory, common sense evidence, and reason aplenty
to believe that an enrichment model as discussed above, for example,
would be superior to a content-oriented drill-and-memorize model.
What we need to do is try out both in controlled settings and compare their results.

And it is just here that I now feel lies the real significance of my sentence-combining experiment. For the most important thing it shows is that planned enrichment of the student's language environment (through the provision of occasions for language use not otherwise likely to occur in that environment) does foster enhanced linguistic development. Second, it shows that syntactic fluency—that is, elaborateness of sentence structure—is a variable in terms of which such enhanced development may be measured. Third and least importantly, it shows that sentence-combining tasks count as a successful enrichment activity. This is not to say, of course, that syntactic fluency is the only variable on which to measure development; obviously it is not. Nor, even more obviously, is it to say that sentence-combining practice is the only language development activity one should promote. Looking at the list culled from the Moffett curriculum, one sees that sentence-combining problems would be but one kind of "language game." Not only would a language development program include other such artificial game-like activities, but it would also feature the other kinds of language-use activities mentioned. The important thing to note, however, is that I now want to view this experiment as having nothing essentially to do with the teaching of writing styles or of grammar. I see it instead as a potentially powerful piece of evidence in support of curriculums based on the idea of enriching the child's language environment, even curriculums which specifically omit the teaching of grammar.

In this connection I should say a final word on the "game" aspect of sentence-combining activities in a grammar-free context in the elementary grades. First of all, other less-structured procedures are readily imaginable—Moffett's sentence-expansion game, for example, where student B expands a sentence generated by student A, so on to student C, and so forth. Another activity is to ask students to combine sets of minimal sentences freely into as many different complex sentences as they can contrive. Most importantly, the advantages claimed for sentence-combining problems as discussed here-in, namely, that they exercise students in the pseudo-production of particular sentence configurations, can be capitalized on even in school programs entirely free of grammar study. There is no need to teach about parts of speech, phrase structure and transformation rules, and the like in preparing students to work out sentence-combining problems. Relative transforms are signaled by repeated
words and need no label. Nominal transforms may be referred to simply as "TO-forms," "ING-forms," "THAT-forms," and so on, and the children will require only a few trials to associate these simple mnemonic labels with the appropriate sentence transforms. I hope there will be elementary school language development projects willing to try out such informal sentence-combining problems, on an appropriate game basis, with young children.