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*Theoretically, the persistence of surface error in student writing may be understood, at least in part, as a normal side effect of development in writing skill. Language tactics newly attempted by a writer increase the likelihood that new mistakes will be made, or old mistakes made anew. This theory, that the context of writing improvement helps explain writing error, is tested by comparing the impromptu essay performance of college freshmen, sophomores, and juniors, and of postcollege employees. Eight surface errors were measured: misinformation of possessives, faulty predication, faulty pronoun reference, faulty syntactic parallelism, mispunctuation of final free modifiers, sentence fragments, comma splices, and misspellings. For each, four error rates were constructed in order to compare different ways of visualizing the relation of error to other aspects of writing. Generally, the findings support the theory: The college students here do measurably improve their writing and do continue making mistakes at about the same rate, but mistakes allied to the improvement. An implication is that undue efforts by teachers to prevent the mistakes may hinder the improvement.*

# *Error and Change in College Student Writing*

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*A chronic problem for teachers* of composition is the stubborn presence of surface error in the writing of students. Misspellings, unorthodox punctuation, aberrations from sense and syntax, and even grammar do not seem to dwindle with either instruction or maturity. Recently, theorists have begun to argue that the problem may lie less in the writing of the students and more in the heads of the teachers. It is not so much that teachers are unbalanced or oversensitive or overprescriptive in the way they detect error in student writing (though those can be problems in themselves), but that they misconceive the natural role of error in writing growth. That argument has been supported

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by some, but not much, basic research. The present study adds further evidence from an especially blank area, the college years.

## TWO CONCEPTIONS OF ERROR

Sometimes the practice of teachers puts more weight on surface error than does their stated belief. In ranking aspects of writing by importance, the high school teachers studied by W. H. Harris (1977) put error third, yet in marking papers they devoted more space to it than anything else but content. Similarly, the college teachers studied by Kline (1976) declared the communication of "personal feeling" as the main objective of their courses, yet spent the most red ink on error. In the very act of marking, teachers at all levels usually begin with error, as can be told by a glance at the running comments in contrast to the end comments in a set of composition papers. Even in the revision of whole composition programs, error may creep to the head of the objectives, and Bamberg (1981) has shown that, although California schools gave more class time over to composition in the four years after 1975, the largest proportion was devoted to "Correct Written Form."

Some of the priority assigned to surface mistakes may owe to the fact that they are just that, on the surface, hence seen first and easily. Multiple regression analysis of teachers' holistic impressions of essays almost always finds error (usually misspellings) among the top three predictors of their quality judgments, along with vocabulary and essay length. Statistics of concordance, which similarly can ferret out hidden motives, usually show composition teachers agreeing among themselves most over mechanics (in Freedman's careful 1980 study, for instance, more than over content, organization, and sentence structure). The freshman composition teachers of Greenbaum and Taylor (1981) had trouble naming error, mislabeling or not labeling 35% of the mistakes, but they had little trouble concurring on the presence of error, agreeing 88% of the time. In the clarity of those secret lines of understanding that bind a group of English teachers together, again error seems to come first.

But the primacy assigned to error probably also owes to intuition about causation. It seems reasonable to assume that the removal of blunders will lead to improvement:

### ERROR REDUCTION → IMPROVEMENT

This gives error a simple priority. The writer makes mistakes, the mistakes are corrected, the result is improvement. Students too assume this causation,

perhaps in part absorbing the notion from their teachers. Just as teachers mark error first, students often revise error first, and sometimes only error. Indeed, they sometimes seem to equate instruction in writing with emendation. In Stiff's 1967 experiment manipulating teacher commentary on essays, the students who received fewer comments complained that they had not been given "full correction," although they advanced during the course as well as did the other students.

The current theory of error offers a radical reinterpretation:

#### IMPROVEMENT → ERROR PRODUCTION

The theory, not as counterintuitive as it may seem at first, is that mistakes have to accompany learning. Writing errors may be not so much mistakes as mis-takes, or missteps, inevitable in traversing new ground, not so much stubbornness—fossils of previous more ignorant learning stages in need of clearing away to allow subsequent progress—as stumbles, wrong turns made when new tactics are attempted. Clearly the traditional conception of error dwells on what teachers do to products and the new on what development does to writers, but behind the new theory lies an equally new view of that development. Inner human maturation is hypothesized not as a simple sequence of discrete stages but as an ongoing, multidimensional interaction where a temporary mastery of one skill may impede the learning of another (e.g., Riegel in psychology, 1979; Perry in cognition, 1981; Bever in language, 1982; Bereiter in writing, 1980; for a review of studies in composition "viewing error as an active part of learning," see Lunsford, 1987, pp. 212-214).

Researchers have only just begun to test the theory. Perl (1979) and Bartholomae (1980) show that basic writers often write incorrectly what they then correctly read, perhaps evidence of later language skills incompletely mastered (the skills of spelling and punctuation are acquired later because they are not needed in oral speech). In the same context, writers scribe mistakes that they then cannot detect through proofreading but that they can correct once found (Haswell, 1983; Hull, 1987). Developmental studies also provide some evidence. Eleventh- and twelfth-grade students commit more lapses in pronoun reference than do younger students (Freedman & Pringle, 1980) because, as Stewart and Grobe (1979, p. 214) suggest, they are attempting to write more complex sentences. After two semesters practicing sentence-combining, the college students of Maimon and Nodine (1979) simultaneously lengthened clauses and t-units and more than doubled the number of embedding mistakes in writing O'Donnell's "Aluminum" exercise. The freshmen of Gorrell (1983) achieved a statistically significant rise

during the semester both in holistic score on their essays and in number of errors while doing "Aluminum." These cases illustrate the paradox of greater skill performing worse than less skill. The paradox attends language acquisition from the very beginnings. Bever (1970) provides the classic instances, for example, where 3-year-olds make more mistakes than do 2-year-olds in acting out the sentence "It's the horse that the cow kisses" (p. 298). Understanding of the developmental context resolves the paradox: The older children pay for the fact that they have better learned the actor-action-object sequence canonical in English.

### ERROR CONTEXT AND ERROR RATES

Attention to context is crucial in understanding error. When context is neglected, as in much research into the relation of error and change in writing, conclusions are often difficult to interpret, sometimes even outright misleading. This can be seen in the ways error rate is reported. The denominator of a rate always expresses the context. Using raw numbers as a rate, for instance, reduces the context to the mere fact that the writing was a single effort (the denominator is 1). Sloan (1979) reports that in his sample of student writing from 1950 to 1957 "tries" is misspelled 26 times, but in his 1973-1976 sample 132 times. This looks like retrogression until we ask more about the context, for instance, how many opportunities the writers had to make the mistake, how many times they tried to write "tries."

But even converting raw number of mistakes to a more contextual error rate can mislead. In his influential study of writing during the college years, Kitzhaber (1963) chooses the usual context of production, reporting mistakes per 1,000 words. With misspellings it again looks like a retrogression; freshmen (end of year) 2.16, sophomores 3.21, seniors 4.22. But among other things this assumes the 1,000 words were all alike, or at least equally easy to spell. What if we add vocabulary to the context? Were older students trying to spell more difficult words? As we will see, in the study of writing growth, failure to consider context may easily mark a plateau or even progress appear a retreat.

### THE STUDY

I will return to Kitzhaber, since my own research into undergraduate writing reverses his conclusion of a general "backslide" in skill from freshman

to senior (p. 117). My study takes a closer look into the context of error and its relation to change in writing. Since initially the study measured a large variety of writing features, presetting 84 variables intended to cover a synoptic range of areas (ideas, support, organization, diction, syntax, as well as surface error), it allows construction of different contextual error rates for post-facto comparison. The design was cross-sectional, with a sample of 32 writers drawn each from 18-year-old first-semester freshmen (FR), 19-year-old first-semester sophomores (SO), and 20-year-old first-semester juniors (JU). These three undergraduate groups recorded equivalent precollege writing performance, representing in range and distribution normal skills of matriculating students at a land-grant university. The sophomores and juniors were making normal academic progress, had taken the same writing courses, and registered, along with the freshmen, similar distributions by academic major. As a mark of mature writing skill, a fourth sample of writing was elicited, from postgraduate, 30-year-old or older employees in business, industry, and civil service, deemed by their supervisors to be “competent” writers in their workplace (WP). One other group was sampled—freshmen at the end of the first semester—but that group will not be considered here.

Besides initial writing skill and academic progress, the confounding contexts of age, gender, topic, and writing situation were controlled for. Differences in group means for parametric measures were tested by a 5 by 2 by 2 fixed-effects ANOVA, with main effects for Group ( $df = 4$ ,  $N = 32$ ), Gender ( $df = 1$ ,  $N = 80$ ), and Topic ( $df = 1$ ,  $N = 80$ ). Posteriori contrasts between groups were tested by Newman-Keuls multiple comparison. Nonparametric data were tested by chi-square, separately for Group, Gender, and Topic. All subjects wrote impromptu for 50 minutes on one of two matched topics (see Appendix), with the explicit rhetorical goal of communicating to interested researchers the writer’s personal understanding of the part that ideas of physical appearance or that codes of conduct play in our lives. Students wrote in class on the second meeting of a writing course, aware that their essay would be used diagnostically by the teacher. Employees also wrote longhand, at their place of work, monitored by a research assistant, aware that their essay would be diagnosed by a university composition teacher. The writing situation, then, was equivalent among the three student groups discussed here, though perhaps only comparable between students and employees. All subjects on, the other hand, had exactly the same amount of outside assistance in avoiding error: none.

A full and detailed account of design, procedures, and findings is available in Haswell (1986). Two general findings, however, are crucial to the analysis of error in the present study. First, as judged by the “competent” workplace standard, undergraduate writing improves from freshman to

junior. In 21 of the 84 preset measures, the older students differ significantly ( $p < .05$ ) from the freshmen; and of those 21, 19 show freshman/junior change in the direction of the employee performance. Adding trends to the picture supports this general finding of undergraduate progress, for of the 41 measures where the workplace group differed significantly from student groups, freshman/junior change shifts toward the employee performance in 35.

Second, this progress was not perceived by a group of college composition teachers, averaging 4.7 years' experience teaching composition. When they rated all these essays holistically (with provenance of writer unknown), they recorded no significant differences among the undergraduate groups on an 8-point scale ( $\alpha = .92$ ), but they did rate the workplace essays as substantially better than the undergraduate (mean summed score of 7 rates: FR, 27.7; SO, 29.5; JU, 29.7; WP, 39.9;  $F = 6.94, p < .001$ ; significant N-K contrasts of WP and the other groups,  $p < .001$ ). The situation appears one of student growth either undetected or depreciated by teachers.

What is the role of error in this situation? As we will see, of the 8 preset measures of surface error, none showed significant differences among the undergraduate groups, and only three significant differences between the workplace and student groups. So initial measurement found no evidence that the undergraduate's error performance changed, for better or worse. But a second, post hoc look shows that different, more contextual rates may reflect the situation differently. It also shows that different rates may be interpreted quite differently by teachers.

How do teachers perceive rate of error in pieces of student writing? Obviously, they rarely compute an error *figure*, but it seems reasonable to assume that the way they size up error involves the intuitive grasp of some context, some rate. One possibility is a raw-numbers rate, where the reaction to three comma splices in one paper will be the same whether the paper is 300 or 600 words long. Another possibility is a trigger rate, where a particular problem draws a teacher's concern, triggers an alarm, only at a critical number of errors per paper. With some errors, teachers may perceive a production rate—mistakes per word or line or page. Of more context-sensitive ratings, probably most teachers have only a fund of ungeneralized judgments, for instance, that "ust to" is a more serious misspelling than "use to."

In the following analysis, three rates attempt to approximate these different intuitive rates: (a) error per group, or simply the raw sum of mistakes each group totaled; (b) error per essay, here reported as a frequency distribution; and (c) error per 1,000 words. A fourth rate will then be offered, as reflecting more accurately the context of error: (d) error per 100 instances of the construction generating the opportunity to make the error. Other aspects of

the context possibly influencing the error performance will then be considered. The eight particular kinds of error were chosen to represent surface mistakes that experienced readers consider damaging and that raters could measure reliably. Seven of the eight reflect kinds of error deemed by the readers of Hairston (1981) as “serious” (the exception is pronoun reference, which Hairston did not test). According to Hairston, the main errors of equal seriousness not represented here are “substandard status markers” (such as “can’t hardly”), incorrect capitalization, adverb misinformation (“treated bad”), and some misuses of the comma (such as around “however”).

The tables presented in the next sections summarize these four rates. The preset measure is marked with a single asterisk. The basic statistical test for differences was ANOVA with Newman-Keuls for post hoc comparisons, but when more than one-third of the essays in any group failed to record any instance of the relevant error, chi-square was instead computed on percentage of zero-error essays in group, recorded in rate b. Since writers who show no error of a given sort have allowed themselves no opportunities to make the error (e.g., show no mistakes with apostrophes because they form no possessives or contractions), rate d eliminates such essays from its computation (therefore establishing a new N for each group). No hypothesis testing, of course, was conducted on post-facto measures. Standard deviations are shown in parentheses. Topic, incidentally, showed no statistical effect on any of the following measures of error, and Gender on only one: orthographic errors per words (see below).

## ANALYSIS

### Errors in Formation of Possessives (Table 1)

Any misinformation of a possessive, noun or pronoun, with or without an apostrophe, was counted as an error. Ambiguous formations such as “boys club” were not counted. The rate that possessives are used remains stable across all four groups, at about 50 per 1,000 words, but as rate d shows, sophomores and juniors here jump from misforming a third of their possessives to half—an increase in error rate most teachers will notice. A look at the errata helps explain the increase. Compared to freshmen, sophomores and juniors form a third more of their possessives from abstract or highly generalized nouns, burdening themselves with the problem of making possessive words such as *societies* and *women*. Twice as many of the sophomore possessives involve plural nouns, and four times as many of the junior. All this



TABLE 1  
Errors in Formation of Possessives

	Freshman N = 32	Sophomore N = 32	Junior N = 32	Workplace N = 32
(a) Errors per group	18	26	26	13
(b) Number of essays with				
0 errors*	19	19	16	25
1 error	10	6	9	5
2 errors	1	4	4	1
3 errors	2	1	3	0
4 errors	0	1	0	0
5 errors	0	1	0	0
6 errors	0	0	0	1
(c) Errors per 1000 words	2.01 (3.96)	2.65 (4.17)	2.11 (2.51)	1.14 (2.95)
(d) Errors per 100 possessives formed	36.03 (40.80) N = 23	52.81 (42.43) N = 19	54.94 (45.02) N = 23	17.00 (31.12) N = 24

\*The preset measure:  $\chi^2 = 6.54$ , NS.

is part of an increased attraction of the older students toward higher-level generalizations. For instance, compared to freshmen, sophomores made 22% and juniors 14% more of their sentence subjects superordinate or abstract nominals (e.g., "clothing" or "people") rather than more specific nominals (e.g., "designer jeans" or "teenagers"). Another context leading the older students to misformed possessives is their increase in amount and complexity of nominal modification, as with "the present day countries practices" (percentage of words in nominal modification: FR, 31.9; SO, 34.6; JU, 37.6; WP, 41.7;  $F = 7.48$ ,  $p < .001$ ; significant N-K contrasts of WP and the student groups,  $p < .001$ ; of JU and FR,  $p < .05$ ).

### Errors in Faulty Predication (Table 2)

Only the predicate structure of the independent clause of each t-unit was judged, hence the construction of rate d. Dependent and nonfinite verbs were disregarded. Considered as error was failure of the main verb(s) to agree in number with the subject(s) or to carry on the semantic import of the main clause (e.g., "The wife you marry may often result from your concept of beauty."). With juniors at least, raw numbers again mislead, compared to opportunity rate d. Context includes some of the same influences blocking a decline in faulty possessives, since highly generalized and lengthy subjects

TABLE 2  
Errors in Faulty Predication

	Freshman N = 32	Sophomore N = 32	Junior N = 32	Workplace N = 32
(a) Errors per group	72	91	91	30
(b) Number of essays with				
0 errors	5	6	4	15
1 error	7	3	9	10
2 errors	11	3	5	3
3-4 errors	7	16	7	4
5-6 errors	1	2	4	0
7-8 errors	0	1	1	0
9-10 errors	1	1	2	0
(c) Errors per 1000 words	7.14 (5.65)	7.94 (5.54)	7.10 (5.37)	2.06 (2.66)
(d) Errors per 100 main clauses formed*	6.37 (4.91) N = 32	7.34 (5.07) N = 32	6.51 (5.00) N = 32	2.08 (2.73) N = 32

\*The preset measure:  $F = 7.80, p < .001$ . Significant N-K contrasts of WP and other groups,  $p < .001$ .

must help precipitate verb error. Daiute's (1981) miscue analysis of impromptu freshman placement essays shows that some common types of faulty predication tend to follow complexly modified subjects (e.g., her example of "The recent outbreak of riots are upsetting."). Relevant here is an interesting post-facto finding, that the workplace writers, who committed so few faults in predication, put less than a third of their compounded nouns in the subject position, whereas students put more than half of theirs there. Structures interposing between subject and predicate also must hinder accurate predication. Twice as many sophomores and juniors attempt appositives in their essays as do freshmen (percentage of essays in group using appositives: FR, 21.9; SO, 40.6; JU, 40.6; WP, 75.0; chi-square = 19.01,  $p < .01$ ). Finally, the sophomores and juniors show a significantly greater use of words seen infrequently in print, which may also stand as a hazard to perfect predication (see below under "Errors in Orthography").

### Errors in Pronoun Reference (Table 3)

Counted as error was failure of pronoun and its immediate antecedent to agree in number or gender. Included as error were "everyone" ("anyone," "everybody," and so on) as antecedent of "they," a human substantive as an-

TABLE 3  
Errors in Pronoun Reference

	Freshman N = 32	Sophomore N = 32	Junior N = 32	Workplace N = 32
(a) Errors per group	41	43	37	19
(b) Number of essays with				
0 errors*	13	15	14	22
1 error	10	8	7	5
2 errors	4	3	5	3
3 errors	1	2	4	1
4 errors	2	0	2	0
5 errors	1	2	0	1
6 errors	0	1	0	0
7 errors	1	1	0	0
(c) Errors per 1000 words	4.15 (5.60)	4.19 (5.99)	3.04 (3.60)	1.77 (3.49)
(d) Errors per 100 pronouns formed	6.10 (7.42) N = 32	7.14 (8.08) N = 32	4.62 (4.37) N = 32	2.08 (3.31) N = 32

\*The preset measure:  $\chi^2 = 6.02$ , NS.

tecedent of "that," and constructions such as "he/she" as antecedent of "he" or "she" (or vice versa). Obscurity of reference was ignored. Just as for predication error, rates c and d for faulty pronoun reference show a more substantial decline with juniors than does the raw-numbers rate a. This occurs with no increase in the percentage of nominals expressed as pronouns but, with sophomores, a sudden increase in the proportion of pronouns that are third person, where trouble with pronoun reference almost always occurs (percentage of pronouns that are third person: FR, 59; SO, 68; JU, 50; WP, 50). The advance in syntactic complexity that Stewart and Grobe (1979) saw influence a rise in faulty reference with high school seniors continues with college undergraduates, a rise reflected most broadly in increase in sentence length (words per sentence: FR, 17.2; SO, 16.6; JU, 18.6; WP, 19.8;  $F = 5.07$ ,  $p < .001$ ; significant N-K contrasts of WP and other groups,  $p < .001$ ; of JU and SO,  $p < .05$ ). Again one thinks of interposing structures, here between pronoun and antecedent—not only nominal modifiers and appositives but also final free modifiers, which grow in length and nearly double in frequency from freshman to junior (see below under "Errors in Punctuation of Free Modification").

TABLE 4  
Errors in Syntactic Parallelism

	Freshman N = 32	Sophomore N = 32	Junior N = 32	Workplace N = 32
(a) Errors per group	42	51	43	8
(b) Number of essays with				
0 errors	12	7	11	26
1 error	8	15	10	4
2 errors	8	2	5	2
3 errors	1	5	1	0
4 errors	2	0	5	0
5 errors	0	2	0	0
7 errors	1	1	0	0
(c) Errors per 1000 words	4.20 (4.95)	4.85 (5.74)	3.24 (3.01)	0.61 (1.49)
(d) Errors per 100 parallel* structures formed	9.94 (10.01) N = 32	12.40 (14.24) N = 32	9.36 (8.28) N = 32	1.38 (3.55) N = 32

\*The preset measure:  $F = 5.93, p < .001$ . Significant N-K contrasts of WP and other groups,  $p < .001$ .

### Errors in Syntactic Parallelism (Table 4)

Analysis did not extend beyond the sentence as punctuated by the writer. Syntactic parallelism was judged faulty when coordinated elements were of different grammatical class, for example, noun and adjective, or noun and nominalization. Obscurity in parallelism formation (for instance, failure to repeat a preposition) was not judged error. Here all rates generally agree. All show a sophomore regression—statistically only a trend, of course, but two changes in context support it. First, compared to freshmen, sophomores make 33% more of their parallel structures not simple coordinations (with “and,” “or,” and so on) but comparatives and other noncoordinative forms (e.g., “not X, but Y”). But juniors (and workplace writers!) show less favor for these more complex formations. Second, juniors in fact disfavor syntactic parallelism of all kinds, one of the few upper-class deviations from the direction set by the employee essays (instance of parallelism per word: FR, .040; SO, .039; JU, .033; WP, .041;  $F = 2.58, p < .05$ ; significant N-K contrasts of FR and JU,  $p < .05$ ). The junior push toward other kinds of syntactic complexity, especially toward modification of nominals and greater sentence size, may carry with it liabilities, in this case perhaps a reluctance to attempt forms such

**TABLE 5**  
**Errors in Punctuation of Final Free Modification**

	Freshman N - 32	Sophomore N - 32	Junior N - 32	Workplace N - 32
(a) Errors per group	23	44	34	33
(b) Number of essays with				
0 errors	17	10	13	12
1 error	10	10	9	8
2 errors	2	6	7	11
3 errors	3	3	1	1
4 errors	0	2	2	0
5 errors	0	1	0	0
(c) Errors per 1000 words	2.22 (2.91)	3.69 (3.05)	2.99 (3.61)	2.76 (2.82)
(d) Errors per 100 final free modifiers formed	41.4 (39.4) N = 22	41.9 (33.1) N = 30	37.1 (33.7) N = 27	27.8 (30.6) N = 32

as parallelism that can give trouble. Again support can be found in Daiute's study of problems in syntax in freshman essays—problems such as fragments, dangling constructions, and verb agreement, as well as faulty parallelism. She found that sentences without error average 17.9 words, and sentences with error 20.3. Juniors may be simplifying sentences syntactically to avoid error while making them longer.

### Errors in Punctuation of Final Free Modification (Table 5)

In all major ways, definition of free modification followed Christensen (1968). The study initially set no measure for this error. Post-facto analysis was confined to the t-unit. Final free modification was judged as mispunctuated when it was preceded by no punctuation, a semicolon, or a full stop. Mispunctuation of *bound* modification in a terminal position (as if it were free) was disregarded. With these groups, predilection for free modification in the terminal spot rises with age (percentage of free modification that is terminal: FR, 5.5; SO, 9.0; JU, 8.2; WP, 10.8;  $F = 5.38, p < .001$ ; significant N-K contrasts of WP and FR,  $p < .001$ ; of SO and FR,  $p < .05$ ). As a result, rates a and b badly misrepresent performance. With the more familiar *initial* free

TABLE 6  
Errors in End Punctuation of Sentences

	Freshman N - 32	Sophomore N - 32	Junior N - 32	Workplace N - 32
(a) Errors per group	20	17	7	7
(b) Number of essays with				
0 errors*	19	20	26	27
1 error	8	9	5	3
2 errors	4	2	1	2
4 errors	1	1	0	0
(c) Errors per 1000 words	1.84 (2.52)	1.36 (2.08)	0.56 (1.33)	0.52 (1.27)
(d) Errors per 100 final free modifiers formed	34.47 (41.09) N - 32	18.33 (29.69) N - 32	7.18 (15.88) N - 32	4.29 (11.12) N - 32

\*The preset measure:  $\chi^2 = 8.28$ , NS.

modifier, whose production remains steady, opportunity rate for mispunctuation drops with juniors (percentage of structures mispunctuated: FR, 16.4; SO, 18.2; JU, 9.1; WP, 8.0—here error was counted only when the free modifier was 6 or more words long and followed by no punctuation, semi-colon, colon, or full stop). But *final* free modification clearly is a tactic actively being acquired during the undergraduate years. Sophomores and juniors increase the freshman rate by more than half (instances per t-unit: FR, .092; SO, .147; JU, .128; WP, .199). It is understandable that the older students continue to have trouble punctuating a form so new to them, especially—as we will see in the next section—since it is a form involved with their feeling for sentence length.

### Errors in End Punctuation of Sentences (Table 6) and in Punctuation of Compound Sentences (Table 7)

Counted as fragment (Table 6) was any structure both (1) grammatically dependent yet punctuated by the writer as a complete sentence and (2) attachable syntactically to the previous or, rarely, following sentence. Not counted then were nonattachable structures, such as “Quite the contrary.” Counted as comma splice or run-on (Table 7) was any sentence composed of two independent clauses linked only by a comma or by no punctuation. Even

TABLE 7  
Errors in Punctuation of Compound Sentences

	Freshman N - 32	Sophomore N - 32	Junior N - 32	Workplace N - 32
(a) Errors per group	10	20	24	12
(b) Number of essays with				
0 errors*	24	19	23	25
1 error	6	8	5	4
2 errors	2	3	2	1
3 errors	0	2	0	2
7 errors	0	0	1	0
8 errors	0	0	1	0
(c) Errors per 1000 words	1.16 (2.50)	1.95 (2.74)	1.70 (3.33)	0.97 (2.80)
(d) Errors per 100 t-units not beginning with a coordinating conjunction	1.64 (3.54) N = 32	3.19 (4.50) N = 32	3.11 (7.01) N = 32	1.63 (4.76) N = 32

\*The preset measure:  $\chi^2 = 6.72$ , NS.

short and parallel clauses, so punctuated, were marked as error, and, occasionally, as with fragments, a few constructions were included that might well fall within the bounds of current writing convention.

All the rates here draw the same picture for undergraduates, a decline in fragments with a rise in splicing. I place the two punctuation problems together because their undergraduate history seems to record the same motivation. Both abet the impulse toward writing longer sentences, splices lengthening and fragments shortening them. All three of these mistakes in punctuation illustrate especially well the folly of attacking error without considering context. Besides longer sentences, other traits of mature style might well foster the mispunctuation. Kagan's (1980) analysis of run-ons in college writing, for instance, finds the strongest miscue to be the juxtaposition of a long, complex t-unit with a short, simple one: "Because he had lost money he did not buy a gift he arrived empty-handed" (p. 130). Such long-short combinations almost always reflect a healthy rhetorical flow, and certainly would help students increase their variety of t-unit length, which in my sample marks a clear advance in workplace writing (variances of t-unit word length: FR, 7.40; SO, 7.07; JU, 6.81; WP, 9.21;  $F = 6.14$ ,  $p < .001$ ; significant N-K contrasts of WP and other groups,  $p < .001$ ). And of the 44 undergraduate attachable sentence fragments here, 41 were free modifiers of the previous sentence—hence the

**TABLE 8**  
**Errors in Orthography**

	Freshman N = 32	Sophomore N = 32	Junior N = 32	Workplace N = 32
(a) Errors per group	180	186	208	69
(b) Number of essays with				
0 errors	4	4	3	11
1 error	1	2	4	8
2-3 errors	10	7	9	5
4-5 errors	3	4	4	3
6-7 errors	3	6	3	4
8-9 errors	5	1	4	1
10-15 errors	5	6	4	0
16-23 errors	1	2	1	0
(c) Errors per 1000 words*	20.70 (21.44) N = 32	18.46 (19.08) N = 32	16.76 (16.63) N = 32	6.19 (7.56) N = 32

\*The preset measure:  $F = 3.76, p < .01$ . Significant N-K contrasts of WP and other groups,  $p < .01$ .

construction of rate d (the fragment errors here are essentially a subdivision of the previous free-modification errors). One must consider reasonable M. Harris's (1981) warning that brute red-inking of the mispunctuation will stunt the growth of that "late-blooming" form (p. 177).

### Errors in Orthography (Table 8)

Counted as error was any departure from conventional orthography, whether an apparent misspelling, *lapsus calami*, or mistake in grammar: "existence" in place of "existence," "loots" in place of "tools," "it's" in place of "its" (this category of error subsumes the errors in possessive formation, above). Hyphenation and capitalization were not considered. Alternate spellings given by the *American Heritage Dictionary* (1969) were accepted as correct. Since any word written runs the risk of being misspelled, the per-word rate c here is also an error rate per opportunity (rate d). Lapse in orthography, incidentally, was the only one of these eight errors to show the effect of Gender. In all groups, females performed better than males, forming on the average 4.4 fewer errors per 1,000 words.

With the undergraduate groups, raw number of errors increases but only because the length of their essays increases (word length of essay: FR, 316.9; SO, 359.4; JU, 364.4; WP, 429.5;  $p < .01$ ; significant N-K contrasts of WP



and FR,  $p < .01$ ). But when these errors are considered in the context of vocabulary, the situation appears less of a plateau and more of a change. If we take as a rough estimate of sophistication the relative infrequency with which a word appears in print, defining an "uncommon" word as one occurring less than ten times per million words (Thorndike & Lorge, 1944), then with our groups, uncommon words (such as "emphasis," "flare," and "nuisance") increase with age, sophomores and juniors advancing the freshman rate by half and workplace writers more than doubling it (percentage of uncommon words: FR, 2.0; SO, 3.2; JU, 2.6; WP, 4.4;  $F = 8.79, p < .001$ ; significant N-K contrasts of WP and other groups,  $p < .001$ ; of FR and SO,  $p < .05$ ). With the increased use of uncommon words comes an increased success in spelling them (Tamor & Bond, 1983, p. 112, hypothesize this very interaction), and freshmen misspelled 15.3% of their uncommon words, sophomores 8.4%, juniors 10.7%, and workplace writers 3.4%. Older writers seem to have more trouble correctly scribing common words. The percentage of orthographic errors that are correctly spelled common words—for instance, where "are" is penned and "all" intended—continues growing all the way to the workplace writing: FR, 22%; SO, 34%; JU, 37%; WP, 49%. The proportion of misspellings caused by dropping suffixes also grows steadily: FR, 6%; SO, 7%; JU, 11%; WP, 25%. This misspelling of common words may attend improvement in other techniques, among them a greater concentration on content, a more automatic scribing of all words, and a more rapid rate of production, although it also may reflect simply less concern or time spent on proofreading.

#### "PREPOSTEROUS EXACTION"?

Trends across all eight of these measures show the tricky course a teacher must run in appraising error. Rate of error, intuitive or not, must be assessed with care. Raw number of errors, rate a, seems to grow during college, and both sophomores and juniors total more mistakes than do freshmen in all but one area (sentence fragments). Yet the rate of error per word, rate c, summing all the nonduplicated instances above, is nearly identical for the three groups: 36 to 38 mistakes per thousand words. The number of problem writers, rate b, also seems to grow, and if we take 4 instances of an error per essay as a critical standard (Lange, 1948), freshman essays here reach that level 43 times; sophomore essays, 63; junior essays, 51. Yet, given the equivalent error-per-word rate of the three groups, this means mistakes are being concentrated in fewer writers, evidence perhaps that some writers have

greater problems adjusting to new techniques of writing. Finally, the sophomores seem to stand out as the most culpable group, achieving the worst opportunity rates (rate d) of the three groups in six out of eight measures. Yet since all these measures of error may be causally interconnected with rhetorical features showing increased use among the postfreshmen and arguable ties with advances toward matured writing, the evidence seems to portray less a slump, less an “increasing carelessness” (Kitzhaber, 1963, p. 102), and more an awkwardness in handling something new.

The causality of student error, of course, is bound to be very complex. The older students in this particular writing task may be making surface errors for many other reasons: because the wrong form is ingrained and difficult to erase, because most teachers—at least outside of freshman composition—have paid an attention to mistakes that makes no difference on grade, because the complex rules governing conventional expression are forgotten or misunderstood or partly understood or simply discarded as too involved and too trivial, because the impromptu and timed writing situation sets the compositional priorities first, even because such a diagnostic essay is taken as a chance to see how the teacher would react to surface mistakes. Quite likely some or all of this entered into the undergraduate performance here. How much entered in cannot be told using the present partially post-facto, exploratory study.

This study, however, offers one empirical finding, which need not counter the above motives for error but does draw a different perspective on them, a developmental perspective that is deeply antiprescriptive. This is the double fact that in impromptu writing these older students generally are holding their own in the rate at which they scribe certain forms incorrectly, and simultaneously are making measurable growth in that same writing toward mature competence. For teachers such evidence would caution against unthinking or wholesale instructional tactics to squelch writing mistakes. Such tactics may only be squelching the growth in writing that precipitated the mistakes. In “On Education” John Milton calls tasks forced prematurely on students “preposterous exaction.” He means (with his customary attention to etymology) pedagogical acts wherein the posterior is put first, with the result that “proficiency” is cast “so much behind.” To treat surface error as source rather than symptom may still be premature with college-age writers.

This general finding contrasts with the picture of undergraduate writing development drawn by Kitzhaber (1963), who saw seniors writing worse than freshmen in all eight of his rhetorical areas, represented by 82 measures of error. The difference may lie in the fact that Kitzhaber measured only error. Such an approach takes error to be the simple negative of some positive skill. If there are “stringy sentences”—at least Kitzhaber counted them—then the

rest must be nonstringy, or in that respect correct. But error has no opposite. Contextually, correctness is not the opposite of error, just as a cause is not the opposite of an effect. Error and correctness are no different from other measures of writing, such as words per clause or cohesive devices per paragraph—measures that, as points on a continuum, have no opposites, just quid pro quo connections with everything else. Especially in impromptu writing, more attention on correctness means less attention elsewhere, just as more concentration elsewhere may mean more mistakes. Undergraduates know they should not think too much about error. During the writing pauses investigated by Schumacher, Klare, Cronin, and Moses (1984), upper-classmen thought no more about “surface elements” than entering freshmen did, but the older students did think more about organization, transitions, and other factors influencing flow and production.

So when Kitzhaber reports that Dartmouth seniors made a great many more mistakes—including “stringy sentences”—than beginning freshmen made, one would like to know what else they were doing that the freshmen were not, or how many mistakes the freshmen would have committed had they tried to write as the seniors did. We do know that the context of audience changed for Kitzhaber’s groups: His freshmen wrote composition themes for English teachers, sophomores wrote commentaries in a schoolwide reading program, and seniors wrote journal entries for a great-issues course. Fifteen years earlier, when Lange (1948) found far fewer mistakes in the essays freshmen submitted to composition classes than in the essays the same freshmen submitted to a non-English class, he in effect predicted that had Kitzhaber’s Dartmouth freshmen been writing for their school’s upper-class non-English courses, they would have made easily as many blots as Dartmouth seniors did. Read in context, Kitzhaber’s 82 measures of error may record something positive: the rhetorical instinct of students to reserve the least energy possible for scraping by the reader’s level of tolerance for error. In that case, though Kitzhaber’s assessment made it first, error again came in second.

## APPENDIX

### Topic A

We are all aware of the part that codes of conduct play in our lives. But there remain many questions about the nature of these codes, questions worth considering. Are conceptions of “right” or “proper” different for different age levels? All told, do these conceptions cause more benefit or more harm? Why

are such conduct codes created and maintained? How are they spread? Are they more difficult for males or for females to handle? What part do they play in politics, movies, dating customs, attitudes toward criminals, concern with drinking, etc.? Clearly, these are just a few of many issues related to this central problem of the way people judge conduct in terms of right or wrong.

Imagine that a researcher wants to know your understanding of one of these issues. Focus on one and write a unified, organized, and well-developed essay setting forth your ideas.

## Topic B

We are all aware of the part that ideals of physical appearance play in our lives. But there remain many questions about the nature of these ideals, questions worth considering. Are conceptions of human “beauty” or “handsomeness” different for different age levels? All told, do these conceptions cause more benefit or more harm? Why are such standards created and maintained? How are they spread? Are they more difficult for males or for females to handle? What part do they play in politics, in the cosmetics and clothing industries, in dating customs, in attitudes toward physical handicaps, in concern with overweight, etc.? Clearly, these are just a few of many questions related to this central problem of the way people judge physical appearance.

Imagine that a researcher wants to know your understanding of one of these questions. Focus on one and write a unified, organized, and well-developed essay setting forth your ideas.

Out of the 84 measures preset by the full study, only 7 showed statistically significant differences in regard to Topic. None of the 7 was a measure of error.

## REFERENCES

- Bamberg, B. J. (1981). Composition in the secondary English curriculum: Some current trends and directions for the eighties. *Research in the Teaching of English, 15*, 257-266.
- Bartholomae, D. (1980). The study of error. *College Composition and Communication, 31*, 253-269.
- Bereiter, C. (1980). Development in writing. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing*. Hillsdale, NJ: Lawrence Erlbaum.
- Bever, T. G. (1970). The cognitive basis for linguistic structures. In J. R. Hayes (Ed.), *Cognitive and the development of language*. New York: John Wiley.
- Bever, T. G. (1982). Regression in the service of development. In T. G. Bever (Ed.), *Regression in mental development: Basic phenomena and theories*. Hillsdale, NJ: Lawrence Erlbaum.
- Christensen, F. (1968). The problem of defining a mature style. *English Journal, 57*, 574-578.

- Daiute, C. A. (1981). Psycholinguistic foundations for the writing process. *Research in the Teaching of English, 15*, 5-22.
- Freedman, A., & Pringle, I. (1980). *The writing abilities of a representative sample of grade 5, 8, and 12 students*. (ERIC Document, ED 217 413)
- Freedman, S. W. (1979). How characteristics of student essays influence teachers' evaluations. *Journal of Educational Psychology, 71*, 328-338.
- Gorrell, D. (1983). Toward determining a minimal competency entrance examination for freshman composition. *Research in the Teaching of English, 17*, 263-274.
- Greenbaum, S., & Taylor, J. (1981). The recognition of usage errors by instructors of freshman composition. *College Composition and Communication, 32*, 169-174.
- Hairston, M. (1981). Not all errors are created equal: Nonacademic readers in the professions respond to lapses in usage. *College English, 43*, 794-806.
- Harris, M. (1981). Mending the fragmented free modifier. *College Composition and Communication, 32*, 175-181.
- Harris, W. H. (1977). Teacher responses to student writing. *Research in the Teaching of English, 11*, 175-181.
- Haswell, R. H. (1983). Minimal marking. *College English, 45*, 600-604.
- Haswell, R. H. (1986). *Change in undergraduate and post-graduate writing performance: Quantified findings*. (ERIC Document, ED 269 780)
- Hull, G. (1987). The editing process in writing: A performance study of more skilled and less skilled college writers. *Research in the Teaching of English, 21*, 8-29.
- Kagan, D. M. (1980). Run-on and fragment sentences: An error analysis. *Research in the Teaching of English, 14*, 127-138.
- Kitzhaber, A. (1963). *Themes, theories and therapy: The teaching of writing in college*. New York: McGraw-Hill.
- Kline, C. R., Jr. (1976). I know you think you know what I said. *College English, 37*, 661-662.
- Lange, P. C. (1948). A sampling of composition errors of college freshmen in a course other than English. *Journal of Educational Research, 42*, 191-200.
- Lunsford, A. (1987). An update of the bibliography on basic writing. In G. Tate (Ed.), *Teaching composition: Twelve bibliographical essays*. Fort Worth: Texas Christian University Press.
- Maimon, E. P., & Nodine, B. F. (1979). Words enough and time: Syntax and error one year after. In D. A. Daiker, A. Kerek, & M. Morenberg (Eds.), *Sentence combining and the teaching of writing: Selected papers from the Miami University Conference*. Akron, OH: University of Akron Press.
- Perl, S. (1979). The composing processes of unskilled college writers. *Research in the Teaching of English, 13*, 317-336.
- Perry, W. G., Jr. (1981). Cognitive and ethical growth: The making of meaning. In A. W. Chickering (Ed.), *The modern American college*. San Francisco: Jossey-Bass.
- Riegel, K. F. (1979). *Foundations of dialectical psychology*. New York: Academic Press.
- Schumacher, G. M., Klare, G. R., Cronin, F. C., & Moses, J. D. (1984). Cognitive activities of beginning and advanced college writers: A pausal analysis. *Research in the Teaching of English, 18*, 169-187.
- Sloan G. (1979). The subversive effects of an oral culture on student writing. *College Composition and Communication, 30*, 156-160.
- Stewart, M. F., & Grobe, C. H. (1979). Syntactic maturity, mechanics of writing, and teachers' quality ratings. *Research in the Teaching of Writing, 13*, 207-215.
- Stiff, R. (1967). The effect upon student composition of particular correction techniques. *Research in the Teaching of English, 1*, 54-75.

- Tamor, L., & Bond, J. T. (1983). Text analysis: Inferring process from product. In P. Mosenthal, L. Tamor, & S. A. Almsley (Eds.), *Research on writing: Principles and methods*. New York: Longman.
- Thorndike, E. L., & Lorge, I. (1944). *The teacher's word book of 30,000 words*. New York: Teacher's College Press.

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