Microresearch of the type performed by W. Loban and K. Hunt was used to describe two functions of macroresearch methodology—reporting and classifying—of the type conducted by J. Britton. This was done by contrasting the use of nine linguistic features of writing produced by four groups of students in each of the functions. The features were t-units, adverbial clauses, adjectival clauses, markers of tentativeness, abstract nouns, and four categories of "free modification" (words or phrases set off from the rest of the t-unit by commas). In addition, the study also examined differences between students at different achievement and grade levels. Subjects were borderline-pass and very successful students in grades 10 and 12. The writing was first draft and the audience was the teacher. The results showed that students felt more free to modify loosely, by adding or interrupting or prefacing, the core of their writing when reporting than when classifying. The latter function seemed to call for closer concentration and tighter statements. On the other hand, students tended to limit their cognitive involvement as measured by the linguistic features in that they used shorter t-units, less tentativeness, fewer abstract nouns, and fewer clauses of concession and condition. (Excerpts from two students' writing efforts are included in the paper.) (FL)
LINGUISTIC CORRELATES OF TWO WRITING FUNCTIONS, 
TWO AGE LEVELS, AND TWO ACHIEVEMENT LEVELS

A paper delivered at the C.C.T.E. Conference 
in May 1983, in Montreal

by

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I am embarrassed and on the defensive. First, this paper aims to provide an example of transmission learning, when the emphasis of this conference is on the greater effectiveness of interpretive learning. Second, what I transmit may be quite the opposite of what I intend. Already this week we have heard the humane themes of Andrew Wilkinson made diabolical by bureaucratic Pontius Pilots who not only wash their hands of what they say they know but justify their actions on the grounds that their government ordered their ablutions.

I wish to state clearly, then, that what I describe here is a piece of pure research and the statistical results offer little of direct practical value to the teacher. That one group of students used that gross measure of syntactic maturity, the T-unit, differently from another group is not to be taken as encouragement to teachers to aim at increasing their students' T-unit lengths, for instance.
INTRODUCTION

As we all know, research into children's writing may be important for two main reasons. (1) It is an important means of formulating knowledge (Bullock, 1975) and (2) students do a lot of writing in school (Burgess, 1973).

There seem to be two main types of research in this area. One is that of macroresearchers like Britton and his colleagues who work in large theories and the other is that of microresearchers who deal with the minutiae of writing. Both deflect attention from the traditional rhetorical approach -- writing as communication -- to writing as a mode of psychological activity.

Britton and his colleagues (1975) did us a favor by devising a taxonomy of language functions which considers both the effect on readers and the psychological involvement of the writer in fulfilling the demands of the functions. They devised a continuum to map the cognitive development of students' writing. Microresearchers like Hunt (1965) and Loban (1976) and in Canada, Crowhurst, on the other hand, took as a measure of cognitive development the incidence of certain linguistic features.

The investigation described here used the micro research of the latter method to describe two functions of the former research method, the reporting and classificatory. It did this by contrasting the use of nine linguistic features in the writing of four groups of students in each of the functions.

The writing was first draft and the audience was teacher (general). The four groups comprised borderline-pass and very successful students in both Grade 10 and Grade 12 and thus covered a broad range of development within a senior high school. The features were T-units, Adverbial clauses, Adjectival clauses, Markers of Tentativeness, and Abstract nouns. Also assessed were four
categories of what Christensen (1968) calls "free modification" by which he means words or phrases set off from the rest of the T-unit by commas. (End modification occurs after the main core and early modification occurs before the subject or between the subject and the verb. What both types have in common is that they may both be considered loose or additive types of modification.) This investigation counted not only the words in each of the two positions but also the number of times such free modification occurred, called here "groups".

In addition to indicating differences between functions, the investigation also indicated differences between students at different grade levels (with functions considered jointly) and at different levels of achievement (with functions considered jointly). The statistical results are given in Table I.

Results concerning Function are discussed first. Later, it is suggested that results concerning Achievement and Grade lend support to using the linguistic features as a grid through which to consider student writing.
Table 1

A Check-list of Significant Differences (p. < .05) for the Anova of Three Independent Variables and Nine Dependent Variables

<table>
<thead>
<tr>
<th>Function</th>
<th>Achievement</th>
<th>Grade</th>
<th>Achievement/ Function Interaction</th>
<th>Grade/ Function Interaction</th>
<th>Achievement/ Function Interaction</th>
<th>Grade/ Function Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-unit</td>
<td>.001</td>
<td>.002</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Adjectival</td>
<td>N.S.</td>
<td>.035</td>
<td>.007</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Adverbial</td>
<td>.001</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Tentativeness</td>
<td>.001</td>
<td>N.S.</td>
<td>.006</td>
<td>N.S.</td>
<td>.009</td>
<td>N.S.</td>
</tr>
<tr>
<td>Abstract Nns</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>N.S.</td>
</tr>
<tr>
<td>Early Words</td>
<td>N.S.</td>
<td>.006</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Early Groups</td>
<td>.001</td>
<td>.002</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>End Words</td>
<td>.028</td>
<td>.001</td>
<td>.001</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>End Groups</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.029</td>
</tr>
</tbody>
</table>

A Discussion of the Results for Function

The investigation found seven correlates of the two functions which Britton distinguished on psychological grounds. Only two of the features, thus, showed no significant difference between functions.

Britton's descriptions may be seen to explain these results. The results for nouns indicate that the classificatory function was less concerned with the world of concrete particulars and individual events than the reporting function was, for it was in the former that all writers in general and superior and grade 12 students in particular used more abstract nouns. And not being bound by the demands of the particular, the classificatory function encouraged more
tentativeness, with grade 12 students responding to this demand more success-
fully than grade 10 students responded. The constraint for organization and
the need to be relatively impersonal in the classificatory function may account
too for the fact that there were more clauses of condition and concession in
that function than in reporting. (Adjectival clauses, on the other hand, did
not show a significant difference, though informal observations suggested that
restrictive clauses, organizational aspects of a textual, elaborated code, were
characteristic of the classificatory function.)

As far as loose or "free" modification went, the special cognitive demand
which the classificatory function made on students, that of using experience
organized by language rather than by events in the real world, seems to have
had its effect. It called for fewer words in and groups of end modification
than the report function called for. It also called for a similar number of
words but fewer (thus longer) groups in early modification. Compared with the
reporting function, thus, the classificatory function may be seen as discour-
aging high school students from prefacing, interrupting, or adding loosely to
their core statements. It seems that its demands called for a more closely
knit and straightforward structure. When, however, students did make prefaces
or interruptions in the classificatory function they were longer, but whether
from a need for greater sonority or for greater cognitive content, or both, we
do not know.

In a function where the world was organized by language, where certain
logical relationships were important and asides, intrusions, and additive
statements were discouraged, where subject matter was dealt with at a more
abstract level and where possibilities were explored, a further correlate was
the longer T-unit.
Two of these results deserve special comment. They concern abstract nouns and markers of tentativeness. On average grade 10 students used five times more abstract nouns in the classificatory function than in the reporting function, using 8 more nouns per 400 words (10.28 as opposed to 2.17). Grade 12 student used nearly six times more abstract nouns in the classificatory function, using 16 more nouns, on average (20.07 as opposed to 3.60).

This interaction might be expected on Piaget's theory, as students in high school become steadily more comfortable, for whatever reasons, in the formal operational mode of thinking. The results further support the suggestion that writing encourages abstraction, in that Corson (1982) shows 15 year olds increasing the use of abstract nouns between tasks similar to those of this investigation, but tasks performed orally, by only two times.

The results for tentativeness may be misleading. Although there were significant differences in the use of the markers, students used them sparingly. It was not until Grade 12, in the classificatory function, that the mean number of markers rose to one per 400 words. Also of interest is the fact that there was a greater increase between the functions for grade 12 students over grade 10 students, but superior and inferior students reacted similarly. The ability to be tentative appears to be a function of temporal maturity.
Britton suggested that the small amount of speculative writing in his sample resulted from the pressures of children working for external examinations. Since the students in the investigation under discussion took no external examinations it seems that the pressures not to be tentative come from the teachers.

CONCLUSIONS

If the statistical results may be generalized what do they tell us? They underline that anyone statistically examining these linguistic features had better take into account the functions in which his students are writing, since different functions do have demonstrably different characteristics. They indicate that students feel more free to modify loosely, by adding or interrupting or prefacing, the core of their utterances when reporting than when classifying. The latter function seems to call for closer concentration and tighter statements. On the other hand, in the reporting function, students tend to limit their cognitive involvement as measured by the linguistic features in that they use shorter T-units, less tentativeness, fewer abstract nouns and fewer clauses of concession and condition.

Two other details relating to writing in general seem apparent. First, students appear not to see writing as a means of exploring thoughts, and if teachers want them to use it for other than stating opinions, they need to make this known. And second, some students have such difficulties with using abstract nouns that classificatory writing seems inappropriate for them and yet writing does appear to encourage students to deal with experience at a higher level of abstraction than talk encourages.
The Features as a Grid

All features except Adverbial Clauses showed differences between Grade 10 and Grade 12 or between inferior and superior achievers or between grade levels and achievement levels. And because some groups of students used these features differently from other groups a sort of credibility is given to a grid comprising these features, a grid which may be used to view the writing of individual students (always remembering that a grid may also be a sieve), or writing as a whole.

From using this grid, the one observation about writing as a whole that shone out most clearly was an apparent correlation between most of the linguistic features and a particular attitude to writing. The attitude was that of students who seemed engaged with their writing, who recognized that it could be used for more than creating a shopping list of undeveloped statements and could be used rather to realize more sharply their thoughts; the features were those used typically by superior or grade 12 students or both. Longer T-units, the greater use of free modification, and more adjectival clauses seemed, for example, to come from students who recognized that writing could be a realizor of experience and was not simply dictation for the right arm.

A dramatic illustration of this attitude to writing is provided by a student calmly describing the situation which led to the break-in in his mother's shop:

What I saw totally surprised me and I paused for a split second, it was a man wearing a ski mask and a black hat, he also had a cowboy coat and a pair of jeans on. (4 T-units; 37 words)
Suddenly, he is aroused by his emotions and writes a T-unit of 73 words:

I grabbed a mop which was erected against the counter and was going at him to jab him in the face, stomach or simply crack his head open and beat him senseless which I truly felt like doing and would have great pleasure in doing for there was nothing I could think of which would make me feel happier than seeing that guy in a pool of blood which I could have caused.

Here it seems that the experience was being realized through the writing and suddenly the furnace of the emotion burst into flames, willy-nilly. And in the following delightful piece an immigrant girl living in an apartment building describes the first snow she’d seen:

To me it locked as if we were flying upwards; the snow being objects we passed along the way. That was sheer terror! Never again have I felt so scared. It is hard to explain the fear involved in not understanding what is going on or what one can do about it. (4 T-units; 52 words)

Here, the mean T-unit length is longer than average for her grade and function.

Thus, if any one implication for teaching is to be made it is this: that students need to abandon the procrustean attitude to writing which appears to inform much of what they write in school and be helped to see that writing can be used to explore and refine their thoughts.

I have pointed out that none of the statistical results says anything about the writing of individual students. I have also suggested that using the features as a grid through which to examine students’ writing may be helpful for teachers. The final section of this paper, then, presents brief studies of the writing of Georg, a superior grade 12 student and Tommy, an inferior grade 10 student, using grids of the appropriate grade/function norms. Tables 2 and 3 summarize the relevant details.
Georg's reporting deals with his memories of Poland when he was a boy. He starts by referring to his secrecy in the schoolyard made necessary by his family's religious affiliations. He talks of evening conversations of his parents' friends discussing other friends in labour camps or mental hospitals. When his father became ill, he describes his feelings from seeing his father being taken away, wondering if he was going to a "mental hospital", and believing he would never see him again.

He eschews the stylistics of shock or of rhetoric and appears content merely to get on with the matter in hand.

In parts, reminiscing through writing produces longer T-units:

His room was always dark because it had navy blue wallpaper and to this room various doctors came to give him needles and transfusions. There was a foreign doctor that came once although now thinking about it he probably didn't because why would they send him a good foreign doctor?

Here a thought occurs to him as he writes, introduced by "although" which marks both a clause of concession and also a lengthy piece of end modification. It includes, too, a marker of tentativeness. Immediately after, however, he describes the actions of men arriving for his father, and his thoughts:

I was standing out on the entrance of our apartment house with two of my other friends. I don't remember what we were talking about but a white van with a red cross drove up the street leading to the building from the highway. Two men got out and went into the doorway of our porch. We lived on the second floor, there were nine, and I knew they were going to the second. I remember thinking about a mental hospital.
A Profile of the Writing of Georg, with Mean Grade 12 Scores per 400 words

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td>30</td>
<td>27.35</td>
<td>25</td>
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<tr>
<td>Adjectival Clauses</td>
<td>4.47</td>
<td>5</td>
<td>4.23</td>
<td>11</td>
</tr>
<tr>
<td>Adverbial Clauses</td>
<td>.50</td>
<td>4</td>
<td>1.90</td>
<td>2</td>
</tr>
<tr>
<td>Tentativeness</td>
<td>.25</td>
<td>2</td>
<td>1.07</td>
<td>2</td>
</tr>
<tr>
<td>Abstract Nouns</td>
<td>3.60</td>
<td>2</td>
<td>20.07</td>
<td>42</td>
</tr>
<tr>
<td>Early Words</td>
<td>41.63</td>
<td>31</td>
<td>44.52</td>
<td>73</td>
</tr>
<tr>
<td>Early Groups</td>
<td>9.13</td>
<td>5</td>
<td>7.88</td>
<td>16</td>
</tr>
<tr>
<td>End Words</td>
<td>24.50</td>
<td>36</td>
<td>21.15</td>
<td>31</td>
</tr>
<tr>
<td>End Groups</td>
<td>2.97</td>
<td>4</td>
<td>2.28</td>
<td>3</td>
</tr>
</tbody>
</table>
**TABLE 3**

A Profile of the Writing of Tommy, with Mean Grade 10 Scores per 400 words

<table>
<thead>
<tr>
<th></th>
<th>Mean Report</th>
<th>Tommy Report</th>
<th>Mean Classif.</th>
<th>Tommy Classif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-units, Number of</td>
<td>30.63</td>
<td>39</td>
<td>26.67</td>
<td>33</td>
</tr>
<tr>
<td>Adjectival Clauses</td>
<td>3.53</td>
<td>2</td>
<td>3.45</td>
<td>2</td>
</tr>
<tr>
<td>Adverbial Clauses</td>
<td>.73</td>
<td>0</td>
<td>2.20</td>
<td>3</td>
</tr>
<tr>
<td>Tentativeness</td>
<td>.23</td>
<td>0</td>
<td>.48</td>
<td>1</td>
</tr>
<tr>
<td>Abstract Nouns</td>
<td>2.17</td>
<td>0</td>
<td>10.28</td>
<td>9</td>
</tr>
<tr>
<td>Early Words</td>
<td>39.13</td>
<td>10</td>
<td>39.17</td>
<td>49</td>
</tr>
<tr>
<td>Early Groups</td>
<td>8.93</td>
<td>3</td>
<td>7.32</td>
<td>8</td>
</tr>
<tr>
<td>End Words</td>
<td>16.95</td>
<td>4</td>
<td>10.18</td>
<td>0</td>
</tr>
<tr>
<td>End Groups</td>
<td>2.05</td>
<td>2</td>
<td>1.27</td>
<td>0</td>
</tr>
</tbody>
</table>
The T-units here are shorter but there is no sense of deliberate stylistics. He writes as he remembers and the events are too suddenly intrusive to lead to meditation.

Statistically, Georg's reporting style is average for his grade for T-units and adjectival clauses. He uses more adverbial clauses and tentativeness, reflecting his thoughtfulness, but only half the average for abstract nouns. In free modification, he uses fewer words and groups in early positions than the norm, but in end positions he uses more words and groups, suggesting a tendency to trailing extensions to his thinking rather than to modifying it early.

Like the composition on life in Poland, that on old age is far from normal as far as the subject matter is concerned. But again, the individuality is reflected throughout the statistical profile; for instance, here he uses twice the norm for abstract nouns whereas his reporting writing used half the norm.

The composition ignores the list of physical and social problems treated by most other students. It treats, instead, psychological problems and in some depth -- Georg considers the irritation the old must feel at demanding attention and points out the irony that even if he wasn't irritated the very need for attention must remind him of his loneliness. He considers how having aims makes life worth living but when we are aware that death is approaching our earlier aims seem vain:

With the diminishment of physical ability one becomes more isolated. There is a need to create new goals in order that life be meaningful. Spiritual and intellectual goals may be more difficult to find. Whether they are or not, seeking them requires a change in one's approach to life. Like King Lear's experience, the change may be drastic, one whose magnitude has been matched only by the transition from childhood to adulthood. But in this transition deeper aspects of the human being are involved. This demands a more individual search, one with which most other people cannot help as their experience was different.
This extract conveys well Georg's awareness of the complexity of the subject, which affects the style. He acknowledges that he cannot describe unerringly what will happen and acknowledges other possibilities. Tentatively he observes "goals may be difficult to find" and underlines this with the conditional "whether they are or not" and later, "the change may be drastic". The two long end modifications ("one whose ... adulthood" and "one with which ... experience was different") are used not in a flamboyant way, as several superior students used it, but quietly to convey the size of the problem by comparing it with another important change in human development and to show why others cannot help in the search.

In his classificatory writing, Georg uses nearly three times the grade/function norm for adjectival clauses, all appearing close to the beginning of his composition, as they did for a number of superior students. In this opening sentence the different texture they create is apparent.

A grown up who has found a certain core within himself that enables him to handle various situations alone and who is no longer as cared for or protested may one day come to think that it would have been easier to skip from childhood to senility.

The T-unit is a long one, as a result of the three adjectival clauses. Because of its contrast with the rest of the essay, this sentence seems to mark a warming up before the writer has got into a more extended consideration of the subject. It may be that the writer senses the appropriateness to his subject of long T-units (he uses 2 1/2 units fewer or 1 1/2 words more than the norm) and so uses adjectival clauses as the means of extending them to start with until he has warmed up and can move into the looser style of free modification.
Tommy (Inferior, Grade 10)

The most striking feature of Tommy's writing is its empty ingenuousness. From reading his compositions I got the impression that Tommy never made any adjustments for audience in any of his verbal interactions at school. An indication of his artlessness may be illustrated by this concluding section of his reporting composition, where, after speaking of his first job in a grocery store, he describes his brother's wedding at which he was an usher:

When you walk the people in you are supposed to give out hymn books and prayer books well we both were so excited we forgot all about the books so when the minister said the service for today is on page 501 I and his brother almost had a shit no one had any books to go by. Other than that it was excellent we all had blue tucks on and I give them money and I rented the disc jockey for the party $200.00 dollars and we all got drunk

In his composition on old age he spends a considerable amount of space lamenting the abuse he has to face from old people in the grocery store in which he works:

What I think would be good is if all the young and middle age would treat the old with a little more freedom and I am sure when you and I get old we will all have some problems and give some so all I can say is (hang in there gramps!)

Such unalloyed and unthinking optimism is a delight to read but must be rather trying to a teacher attempting to get Tommy to use writing as a means of exploring or coming to refine his thoughts.

Although for nearly all features, Tommy's scores indicate his underdevelopment, as compared with the norm they do show him acknowledging differences between the functions similar to those acknowledged by all students taken as a whole in the investigation. For the reporting function he used shorter T-
units, he was below the norm for modifying nominals with clauses, he used no
adverbial clauses of condition or concession, no markers of tentativeness and
no abstract nouns. He used a quarter of the norm for words in early and for
words in end modification. His profile for classificatory writing shows simi-
lar relations with the grade norms. Only in words in early modification does
he have a score on the positive side of the norm, and much of this was in free
modification because of Tommy's problem with the word order of standard written
English.

In both functions his writing is concrete and anecdotal, as indicated by
the absence of abstract nouns in reporting and only half the grade norm in
classificatory writing (in contrast with George who used half the norm and
twice the norm respectively). He does use one "maybe" but it is used to
underline how very unlikely it would be for the old to ever act reasonably:
"maybe the old would let the young have a little more freedom". His end
modification for both functions combined consists of two two-word utterances
"real gross" and "$200.00 dollars".

The figures indicate that Tommy's writing is on the undeveloped side of
the norm in nearly all areas. What it is not below the norm in is outside the
realm of measurement, and that is its life, which the figures do not reflect.
The liveliness comes not from playing with style, such as deliberately using
short T-units or little free modification, but from a limited awareness of or a
total disregard for the normal expectations of writing.
SUMMARY

What I have shown is that in one investigation there were uses of most of the linguistic features characteristic of different groups of students and that the features were not simply pulled out of the air by a pusillanimous researcher. What I hope I have done, too, in the second part of this paper, is indicate that the identification of these potentially important features provides an invitation to the teacher to use them (1) in considering the involvement of individual students in their writing and (2) to make informed comparisons between one writer's involvement and another's.

I hope these uses of statistical research have not sounded too diabolical.
BIBLIOGRAPHY


Fuller details of this investigation are presented in my unpublished thesis, Cognitive and Stylistic Features of Reporting and Classificatory Writing in Grade 10 and Grade 12, Dalhousie University, Halifax, Canada.