TRANSACTION IN HOLISTIC SCORING: USING A COMPUTER TO UNDERSTAND THE PROCESS

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INTRODUCTION

Holistic scoring, which made possible the direct testing of writing, is now widely used for screening and placement. Furthermore, it is important in many quantitative studies evaluating writing instruction and programs. But whether this measuring technique is dependable continues to concern researchers; as Davida Charney, for instance, concludes: "the validity of holistic scoring remains an open question" (68). Part of the problem lies in not knowing specifically what holistic scorers are responding to. When asked how a particular score was determined, graders almost always point to features of the text, rather than to their own processes of evaluation. Now computerized discourse analysis—by which we mean using a computer to count selected items in a piece of writing makes possible broad-based but refined examination of exactly what textual features are in the essays, the features which scorers claim to be responding to when they evaluate holistically, the principals in the transaction between text and reader.

Initially, this investigation attempted to verify, by incorporating a considerably larger data base, Andrea Lunsford's report concerning the content of basic writers' essays. Lunsford based her findings on a close reading of two essays; the computer allowed us

to expand to 120. We expected that using the computer to perform the analyses would enable us to discover exactly what features in the essays had caused them to be placed in a particular scoring group. In Study 1, we looked for quantitative differences between basic and average writers' essays, and in Study 2 we performed similar analyses on experienced writers' essays. Study 2 also considers countable features of coherence for all three groups. Instead of defining basic, average, and experienced writing for us, our findings forced us to look beyond these features usually pointed out to explain why holistic scorers respond the way they do and to reconsider other elements contributing to the relationship of the evaluation process to the product.

METHODS

The essays analyzed were randomly selected (except 3's, as explained later) from the Writing Placement Tests used to place students in the freshman English sequence at a large state university. These holistically-graded essays receive scores of 1, 2, 3, or 4, scores corresponding approximately to basic, average, experienced, or superior writers. All the essays in our sample addressed the same topic: "Each year an estimated half million teenagers run away from home. Write an essay arguing for what you consider to be the chief causes." The graders consisted of experienced teaching assistants and high school English teachers; they graded the tests during a six week period and received summer fellowships for their work. The graders participated in a lengthy training session and reviewed model essays at each daily session; they achieved standard reliability rates.

In Study 1, fifty-six essays scored 1 (basic) and fifty-four essays scored 2 (average) were entered into the computer and analyzed by several programs (specifically, the COCOA concordance, MNIRAP for the Raygor readability test, and a SNOBOL 4 program developed by Dr. Bruce Castner), giving us word frequency profiles, reading levels, and limited sentence analyses isolating the use of commas, pronouns, prepositional phrases, subordinating conjunctions, and conjunctive adverbs. In Study 2, the same programs analyzed ten essays scored 3 (experienced). Because of the resulting information on the vocabulary of 3's, we ran a more sophisticated computer program—the WORDS package—on

twenty-nine basic writers' essays, twenty-eight average writers' essays, and the ten experienced writers' essays.

Developed by Howard P. Iker originally to decipher the content of patient-analyst interviews, WORDS not only counts words but also determines correlations among words in the samples. We selected this program because "its search for content is empirical; it starts with no pre-determined dictionary based on a priori assumptions . . . but ferrets out the significant content words from the documents on the basis of their frequency and their interrelationship with each other" (Oakman: 2565). Based on the contingency theories of C. E. Osgood, in particular that "greater-than-chance contingencies [or co-occurrence] of items in messages would be indicative of associations in the thinking of a source" (55), WORDS rests on the assumption "that sufficient meaning resides in the word and in the associations among and between words to provide an accurate representation of content" (Iker: 2).

First, WORDS performs an analysis to omit most function words (such as prepositions, articles, and conjunctions) from the word pool. Then it derives a set of up to 215 content words occurring with high frequency within each scoring group. Next, two statistical operations isolate the content "themes" in these high frequency word lists; WORDS groups these frequently used words on the basis of their statistical similarity, determined by their closeness to one another. Thus, how well a text communicates is analyzed according to the mathematical and geographical relationships of the content words. The high frequency content words are then sorted into factors and clusters, associationally rich subsets of words statistically related within the larger set. To clarify what factors and clusters are, imagine the list of words which constitutes the general index of a book. These words have been selected from the text because they are the most important words, the ones the author has depended upon to convey meaning. Each word in the index is followed by page numbers referring to places where it occurs in the text. Some words have many entries; some few. Now imagine all of the words in the index which occur, for example, on page twenty; those words might be thought of as constituting a factor. To extend the analogy, in a biography words referring to birth most likely would be near the beginning; words referring to death near the end. The birth terms would constitute one factor; the death terms another. Clusters differ from factors

in that they are smaller word groups because repetition is eliminated; a word may appear in one cluster only.

In the terminology of text linguistics, WORDS measures recurrence—the repetition of elements—as well as partial recurrence—the same word used in different functions, as both noun and verb, for instance. And through word correlations, it demonstrates one aspect, albeit a mathematically determined and informational one, of cohesion. De Beaugrande and Dressler define cohesion as "the ways in which the components of the surface text, the actual words we hear or see, are mutually connected within a sequence" including all means "which can be used to signal relations among surface elements" (3). For Halliday and Hasan, cohesion makes the construction of a text possible because "it provides, for the text, which is a semantic unit the sort of continuity which is achieved in units at the grammatical level—the sentence, the clause and so on—by grammatical structures," this continuity being "a primary factor in the intelligibility" of a piece of writing (303). WORDS concentrates on reiteration, a type of lexical cohesion achieved through recurrence. That cohesion is an important category in the processing of texts is asserted by Matsuhashi and Quinn: "Cohesion analysis does point to distinguishing textual patterns in early writing development, in highand low-rated essays, and in text type or topic variables. Use of cohesion analysis and other such taxonomic schemes may provide substantial normative descriptive information . . . " (311).

Taking the entire sample of each scoring group as a sequence, WORDS reveals (by determining factors) how the 215 most frequently occurring words in each scoring group are statistically related. Further, it specifies how the words in an individual essay do or do not correlate with the factors for the essay's scoring group, thus determining to what extent an individual writer uses those words which the other writers in the scoring group have used. The significant correlations (scores greater than 2.0) of a particular essay with the word pool of its scoring group indicate the writer's ability to identify and to manipulate the appropriate and relevant content words for the writing task, depending of course upon the quality of the word pool.

RESULTS AND DISCUSSION

Study 1 focused on basic and average writers' essays, and

the results summarized in Tables 1, 2, and 3 show the differences between the two groups, based on the features counted, to be surprisingly slight. For example, the average writers wrote 56.38 more words per essay—approximately 2.2 sentences more. The basic writers' essays ranged from 118 to 460 words per essay and from 6 to 31 sentences per essay, whereas the average writers ranged from 186 to 674 words per essay and from 10 to 36 sentences per essay. The reading level averages did turn out one grade level apart, but both groups contained essays at reading levels as low as grade 5 and as high as grade 12.

TABLE 1 STATISTICAL PROFILES

	1's	2's
	Basic Writers	Average Writers
Total number of words	17,361	20,462
Total number of different words	1,810	2,187
Type/token ratio	0.104	0.107
Number of sentences in sample	1,034	1,155
Average number of words/sentence	16.71	17.66
Commas/sentence	0.435	0.676
Pronouns/sentence	1.261	1.218
Relative pronouns/sentence	0.376	0.354
Subordinating conjunctions/sentence	0.346	0.416
Conjunctive adverbs/sentence	0.107	0.126
Prepositional phrases/sentence	2.297	2.418

TABLE 2 VOCABULARY AVERAGES

	1's Basic Writers	2's Average Writers
Percentage of words of 3+ syllables	9.4	11.2
Letters/word	4.4	4.5
Syllables/word	1.4	1.5
Number of long words (6 + letters)/ 100 words	26.3	28.7
Number of sentences/100 words	6.2	5.8
Reading level	grade 7	grade 8

TABLE 3 VOCABULARY USAGE

	occurrences in 1's	occurrences in 2's
Personal Pronouns		
I	54	64
me	3	5
my	5	9
you	66	31
he	188	220
she	30	22
his	146	217
her	17	18
we	22	34
they	277	278
one	84	69
ones	7	22
Transition Words		
also	41	45
because	69	52
since	5	6
thus	0	10
however	1	14
moreover	0	0
therefore	9	23
conclusion	7	4
furthermore	0	0
finally	6	5
Frequently Used Nouns		
parent	60	73
parents	276	283
teenager	143	155
teenagers	211	215
alcohol	6	9
drugs	23	28
runaways	58	54
runaway	47	71
sex	8	3
pregnancy	4	4
peer	19	31
school	41	20

	occurrences in 1's	occurrences in 2's
Abstract Words		
affection	2	3
anxieties	5	0
attention	14	16
communication	19	42
environment	12	20
freedom	11	16
future	9	6
gap	9	3
guidance	4	4
hostility	4	0
independence	6	13
individual	10	22
lack	16	29
learn	16	9
love	16	31
need	30	34
problem	82	69
problems	95	114
reasons	44	51
responsibility	6	12
understanding	7	12
values	3	18

Twenty Most Frequently Used Words in Order of Frequency

1's	_	2's	
the	their	the	 are
to	are	to	their
and	teenagers	and	he
of	in	of	his
a	away	a	teenagers
is	he	is	be
they	be	parents	not
parents	or	they	child
that	with	in	away
not	home	that	home

In relation to Lunsford's findings, the vocabulary profiles provide revealing counts. She describes the basic writer's vocabulary as "characterized by a high percentage of personal pronouns, especially those relating to first person, by a relatively low degree of nominalization, and by the use of concrete diction and simple concepts" (287). However, Table 3 shows the basic writers' and average writers' vocabularies to be very much alike. Personal pro-

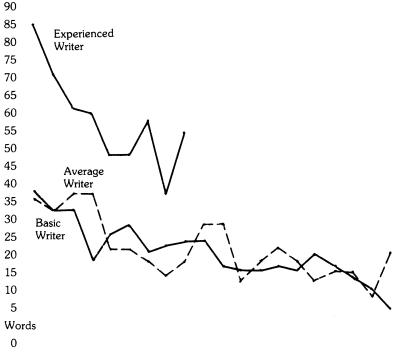
nouns constitute 5.1% of the basic writers' vocabulary, 4.8% of the average writers' vocabulary. Although the basic writers in this sample used more because's and the average writers used more therefore's, transition words make up .7% of the vocabularies for both groups. Contrary to expectation, the frequently-used nouns make up 5.1% of the basic writers' vocabulary but only 4.6% of the average writers'. The average writers used the abstract words listed as 2.5% of their vocabulary, whereas these words constitute 2.4% of the basic writers' vocabulary.

Study 2 sought to discover how the essays of experienced writers differ from the average. We already knew there were significantly fewer of them. In fact, the Writing Placement Test pool contained only ten essays scored 3 on the topic of runaways. Therefore, our information about experienced writers is drawn from these ten, unlike the larger samples of randomly selected 1's and 2's.

The results of the first series of counting programs show that length is not the issue. The average sentence length for experienced writers was 18.2 words per sentence, vs. 17.6 for average writers; and the range of sentences per essay was from 16 to 38 (from 10 to 36 for average writers). The vocabulary counts, however, suggest that vocabulary is a major cue in making readers decide that a text communicates. For example, the experienced writers averaged 30.6 long (6+ letters) words per 100 words vs. 28.7 for average writers, and the reading level of the essays scored 3 ranged from grade 8 to grade 12, averaging grade 9. Even more revealing are the type/token ratios: 0.232 for experienced writers, 0.107 for average writers. (The higher the ratio of type to token, the more different words a writer is using.)

Some of the results of the WORDS analysis are summarized in the following graph and in Table 4. The most dramatic and visible differences lie in the size and the number of factors for the three groups. The factors for experienced writers frequently contain twice as many words as the factors for average and basic writers—even though the total word pool for the 3's was only half as large. Twenty factors were required to account for 87.3% and 90.5% of the items in the word pools of the basic and average writers; only nine factors accounted for 99.9% of the experienced writers' words. What these findings reveal is that experienced writers use more words and use them more often (as shown by the small

Number of Words Per Factor



number of large factors) than do average and basic writers, and thus they achieve a higher degree of cohesion. In Table 4, words in the first factor (the statistically most significant group) and words in the last factor (the statistically least significant group) are listed for basic, average, and experienced writers. Notice not only that experienced writers have more words in their groups than average or basic writers but that the content of their words is clearly more relevant to the topic and thus more likely to communicate.

TABLE 4 FACTORS

Words in	factor 1					
very	come	her	stay	major	independence	another
instead	she	wants	some	usually	has	strict
person	cope	will	over	work	students	almost
things	school	they	them	is	either	home
time	own	best	tell	solution	well	would
teenage	out	he	one	do		
Words in	factor 20					
almost	together	help	this	learn	trust	we
himself	lack	getting	runs	work	one	
AVERAGE W						
Words in freedom	Jactor 1 much	child	cause	situations	let	parent
		pressure	only	may	own	little
way	try	runaway	talk	able	wants	feel
very :1	get that	runaway understand	nake	communication	this	his
if			make become	up	decide	he
new	point	parents down	not	up	ucciue	iic.
every	life	down	not			
Words in	factor 20					
chief	case	social	time	changes	be	being
situations	better	another	causes	get	back	own
want	live	might	it	may	going	else
these	feeling					
	D WRITERS: 3's					
Words in freedom	factor 1 she	ı	old	beyond	her	vears
		ı individual	feeling	person	ways	it
free	new		have	person we	that	may
long	out	way	some	can	find	different
leave	independence feel	running has		leaving	this	home
these			runaway	baby	good	place
just	life	is	been "	more	run	away
emotional	only	leaves	famil.	more would		own
one	spend	time	family	would lead	again environment	
want	say	like	very		need	express
cases	attempt	come	perhaps	various		finally
deal	emotions	problems	half	million	estimated	young
well	understand	realize	parents	result	becomes	discipline
today						
Words in	factor 9 (last factor)					,
our	them	reason	cannot	young	age	of

see	part	no	solution	attempt	children	feels
leaving	more	need	place	leaves	help	runaway
lead	try	we	spend	time	his	home
their	family	little	people	not	reasons	cases
root	only	run	very	sometimes	forced	possessions
hopes	search	attention	just	taking	well	different
others	that	lack	solve	away	do	

Word clusters based on the statistically most highly related seventy-five words are summarized in Table 5. For comparison, the first, middle, and final clusters for each of the levels are listed. The clusters—like the factors—for experienced writers are larger, fewer, and richer in content. One would expect the first clusters for all groups of writers to demonstrate connections to the writing assignment, because these are numerically the most related words. In the final clusters (the statistically least significant group) of the basic and average writers, one finds only personal pronouns, which could have come from discourse on almost any subject. In contrast, the final cluster of the experienced writers—estimated, half, million, and year—is extracted right from the topic. Experienced writers stick to the subject; or, to return to our analogy, it is possible to draw from their texts a meaningful and relevant index.

TABLE 5 CLUSTERS

Cluster 1:	attention	away	aways	bad	better	children	run
	runs	way					
Cluster 10:	"	causes	how				
Cluster 20:	you	your					
Word clusters of e	ssays scored 2 (Average	e Writer):			7, 1, 2		
Cluster 1:	experience	going	having	individual	life	lives	no
	out	peer	person	result	right	therefore	this
Cluster 10:	be	is	wants		Ū		
Cluster 20:	her	she					
Word clusters of e	ssays scored 3 (Experie	nced Writer):		-99		•	
Cluster 1:	another	do	does	emotional	growing	he	him
	himself	his	major	much	others	pressures	reasons
	runaways	school	simply	SO	society	teenager	things
Cluster 4:	communication	hurt	over	problems	seem		J-
Cluster 8:	estimated	half	million	year			

Table 6 presents the 100 most frequent content words for each group (the factors, however, were extracted from the 215 most frequent content words). Words that are arguably content related but that appeared only in the experienced writers' pool include emotional, estimated, freedom, gap, growing, half, independence, love, major, million, society, understanding, and year. Again, words directly from the topic appeared in this list but not in the lists of the basic and average writers. Not surprisingly, experienced writers focus on their subjects and on the writing task. What is surprising is the degree to which average and basic writers do not, a point which a grader may suspect but which computerized discourse analysis makes concretely evident.

TABLE 6 WORD POOLS

%	"	age	all	alot	another	around
as	away	be	being	best	can	cannot
cause	causes	child	children	could	different	do
does	drugs	family	feel	feels	find	friends
get	go	has	have	he	help	him
his	home	how	I	if	is	it
just	know	leave	life	like	lack	main
make	many	may	more	most	need	no
not	often	one	out	own	parent	parents
people	person	problem	problems	reason	reasons	run
runaway	runaways	running	school	she	\$O	some
sometimes	teenage	teenager	teenagers	that	their	them
these	they	things	think	this	time	today
understand	up	very	want	way	will	would
year	you			•		
100 most frequent o	content words (of 11,919) in essays s	cores 2 (Average Wr	iter)		
%	*	all	another	as	away	be
become	being	can	cannot	cause	causes	child
children	communication	do	environment	family	feel	feels
find	friends	get	has	have	he	help
him	himself	his	home	ĺ	if	individual
S	it	just	leave	life	like	many
may	more	most	must	need	no	not
		only	out			

people	person	pressure	pressures	problem	problems	reason
reasons	run	runaway	runaways	running	school	she
SO	some	sometimes	take	teenage	teenager	teenagers
that	their	them	themselves	these	they	things
think	this	time	try	understand	up	very
want	way	we	well	will	world	would
you	young					
100 most frequent con	tent words (of 3,97	0) in essays score	d 3 (Experienced 1	Writer)		
%	,,	abuse	all	as	away	be
become	been	being	can	cases	cause	causes
child	children	communication	could	do	emotional	environment
estimated	family	feel	feels	find	freedom	gap
growing	half	has	have	he	her	him
himself	his	home	how	I	if	independence
is	it	just	lack	leave	life	love
major	many	may	million	more	most	must
need	needs	no	not	often	one	only
others	our	out	own	parent	parents	people
pressure	problem	problems	reason	run	runaway	runaways
running	she	simply	society	some	students	teenager
teenagers	that	their	them	themselves	these	they
this	time	try	understanding	up	very	way
will	year					

When individual essays are correlated to the factors and clusters of their respective scoring groups, the same kind of differences appears. The correlation results for factors show that of the experienced writers' essays, only 20% did not have a significant correlation (z score 2) with any factor in their group. But 50% of the average and 40% of the basic writers' essays showed no correlation at all to the factors of their groups. It seems likely that graders are responding to this lack.

For clusters, the correlation results are more complex. Of the experienced writers' essays, 30% did not correlate with any cluster, 40% had positive correlations with one cluster, and 30% had positive correlations with two clusters. About 25% of both basic and average writers' essays had no correlations with any clusters, but 25% and 39% of the basic and average writers' essays respectively had positive correlations with as many as eight clusters. However, the content of the words in these clusters is more vague than what is found in the clusters of experienced writers. If one

compares the first cluster for the 1's with the first cluster for the 3's (Table 5), this qualitative difference becomes clear. Looking at the first cluster for the 1's, one might infer that the subject of the writing is children who run away. But looking at the first cluster for the 3's, one might infer that these children are actually teenagers and that the subject of the writing is why these teenagers run away. an argument most likely developed by reasons, school, emotional, growing, pressures, and society. Thus, the cluster correlations for basic and average writers reveal not cohesion but the simple repetition of words, words that are not content rich. Lunsford's conclusions about the nature of the vocabulary of basic/average vs. skilled writers (not basic vs. average) are apparently quantitatively confirmed. [This does not necessarily confirm her conclusions concerning basic writers' "egocentric rhetorical stance and their inability to achieve the level of cognitive development Vygotsky labels 'true concept formation' " (Lunsford 287).]

Implications

Computerized discourse analysis, as used in this study, has identified at least one quantifiable feature of writing—cohesion—to explain why graders respond to experienced writers' essays as they do. But using holistic scoring for research, as opposed to placement, has inherent problems. As James Hoetker has pointed out, holistic scoring "is generally inappropriate for [statistical] research simply because rating scales are constructed in such a way that ratings cluster around the 'average' [in our case, a 2] score (which is also usually the lowest acceptable score)" (378). The failure of our computer counts to identify important differences between basic and average writers can be explained partially by the tendency of scores to pile up around the mean, but only partially. Holistic graders are making a distinction based on something. The question is what.

One obvious answer might be the frequency and severity of error. However, the graders for this study were trained in general impression scoring, not in one of the analytic methods which isolate error as a conscious focus. A larger consideration would be organization, so we decided to read (from the computer printout) the essays used in Study 1 for organizational strategies. Table 7 shows the results.

TABLE 7
ORGANIZATIONAL STRATEGIES

	1's	2's
Enumeration of causes	15	3
Keyhole (including attempted keyholes)	23	30
or		
5-Paragraph		
Mixed strategies	6	6
Parent-teen dialectic	4	7
Sources of 1 cause	3	2
Narrative	1	2
Writer-based	4	4

The only surprise in this analysis is that an equal number in each group produced what Linda Flower calls "writer-based" prose, proceeding additively with no easily discernable pattern in mind. Although the average writers were sometimes better able to announce, sustain, and fulfill their patterns, the organizational differences were not sufficient to account for the differences in scores. Because we knew these were trained graders, we suspected they had responded to something not apparent from the democratized typescript of the printout. We decided to look at the essays themselves.

That readers react to handwriting—what Diederich calls "Remondino's factor" (9)—has been demonstrated by a number of empirical studies (e.g., Briggs, Chase, Markham, Soloff). An examination of the essays as written showed that the basic writers' papers tended to look messy—words marked out with cross-hatching, handwriting within an essay slanted in several directions at varying angles, words written on top of each other, whereas the average writers generally produced tidy papers, with consistent slants and words marked out infrequently and neatly. Remarkably, average writers were often able to compose two entire pages without crossing out a single word. To conclude, however, that scores rewarded the legible and punished the illegible, regardless of an essay's content, seems too simple.

Holistic scoring is usually viewed as a process for evaluating products. But text linguistics emphasizes that we must consider texts as they function in human interaction. Readers don't simply find things in texts; rather they participate in the construction of texts. Holistic scoring, then, is not so much a process of evaluating as it is an interaction between grader and writer during which a text is constructed. As described by de Beaugrande and Dressler, the standards or norms of "textuality" include both text-centered principles, such as cohesion and coherence, and user-centered principles—the responses of graders—such as granting that the writer intends to make sense and granting acceptability to the meaning intended. A text is thus a transaction between writer and reader during which the reader may or may not agree to accept a text as cohesive, to supply left out material, to tolerate disturbances, "to bring a textual world together" by drawing inferences (6). And just as the print code sends us a powerful message that we should make sense of the text and should even believe in the text's message, so, it seems, the handwriting code if it is irregular sends us a message that we probably cannot make sense of the text and probably should not believe its message. In applying text linguistics to writing assessments, Martin Nystrand has outlined the misconstraints, or breakdowns in transaction, that can occur between writer or text and reader. These may occur at the level of legibility (graphics), at the level of readability (syntactical and lexical relations), or at the level of lucidity (textual and contextual relations).

Readers responding holistically to writing may be cued first by graphic slips to expect and anticipate misconstraints at more important levels; thus, they refuse to cooperate with the writer in constructing a text. In the same way, we suspect that readers are cued by legibility and surface correctness to expect a coherent text even when such lucidity is not there.

"Are the readers," Charney asks in her overview of holistic scoring, "predisposed by superficial features to be harsh or lenient in their application of substantive criteria?" (78). Our research says, "Yes." Charney, however, believes this predisposition is caused by the grading procedure itself: ". . . given the unnatural reading environment imposed upon readers, the scores can only reflect agreement on salient but superficial features of the writing, such as the quality of the handwriting or the presence of spelling er-

rors" (78). We would suggest that the graders' responses are rather a result of the natural and inevitable transaction occurring between reader and text.

Conclusions

What, then, can computerized discourse analysis tell us about holistic scoring? Not just the text but the reader's interaction with the text determines the score the essay receives. Our findings suggest that when graders are evaluating papers near the mean, they are reacting to a complex network of elements within which too many graphic or surface difficulties can cue the reader to reject the writer's intentions. Thus, the 1's and the 2's, the basic and average writers, do indeed pile up around the mean, and the actual textual differences to be discovered by counting are not especially telling and not necessarily stable. But when graders assign scores which designate writers as experienced, they are responding to a real, statistically significant and observable texture of cohesion, provided by semantic recurrence.

What do these findings tell us about uses for holistic scoring? In spite of the problems at the lower end of the scale, holistic scoring can work effectively enough for placement, particularly if a sensitive appeals procedure is provided. For as Haas and Flower conclude, "We cannot enter the reader's head and watch as the construction of meaning proceeds. Nor can we get anything but an indirect measure of the nature, content, and structure of that representation" (170).

To use holistic scoring for exit exams, as is frequently suggested, should be considered with caution. In addition to being usually a single-attempt test, the kind of exam that invites holistic scoring is one likely to be rooted in the conventions of academic texts. As Haswell discovered when he compared student essays written by "employees chosen precisely because their supervisors had deemed them 'competent' writers," the student essays receiving low scores "performed more like the working-world essays" than did the student essays receiving scores higher in the scale (304). Thus, the expectations holistic scorers bring to their reading of texts may not encompass all the aims of the course the student is attempting to complete. Nevertheless, the value of holistic scoring cannot be denied. Before its development and implementa-

tion, there was no transaction at all between reader and writer in standardized testing.

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APPENDIX

These two uncorrected essays were written in forty-five minutes in response to the directions "Each year, an estimated half million teenagers run away from home. Write an essay arguing for what you consider to be the chief causes." The first essay, which received a score of 2 (average), has no correlations with either the factors or clusters for its scoring group. The second essay, which received a score of 3 (experienced), has a positive correlation greater than 2.0 with factor 1 (the statistically most significant group) of its scoring group and positive correlations greater than 1.0 with clusters 2 and 3 of its scoring group.

ESSAY 1

Unlike the past centuries, more than half a million teenagers have run away from home in the twentieth century. A majority of these adolescents, coming from a conservative home, run away to protest. Some of the teenagers try to "find themselves" in relation to the world. Finally a few runaway for love, a new boy friend or girl friend.

Many teenagers find their parents to be too strict or conservative. They are disturbed when the father tells them to be home early or not to drink. Wanting to do as they "please," many adolescents leave home. To smoke and drink are usually the prime enjoyments of these youngsters. Other teenagers who leave

home do not liked to be corrected in manners or attitudes. Thus to find an uthopia and be completely independent a majority of the teenagers leave home.

Feeling an urge to "find themselves," other adolescents leave home. Some of them wish to learn and accept responsibility. They wish to completely rely on themselves for even food and clothing. By being away from home, some youngsters feel they will discover their own strengths and weaknesses. So many teenagers believe by being away from home they will learn more about themselves.

Finding a new boy-friend or girl-friend is the final reason many youngsters run away. Thinking their kids are too young, many parents do not allow them to get married in their adolescent years. But many teenagers believe they can handle the responsibility of a marriage. Being in a conflict, many of them sacrifice their parents for their beloveds.

Many parents think adolescence is a time of mental growth and development. Thus to guide their children well through this period, they act strict. But sometimes the youngsters run away in protest. Also other teenagers leave home to mature and develop independently. To gain knowledge about themselves and the world, they leave to live alone. Lastly many believe themselves to be mature enough to accept the responsibility of marriage or love. So in the twentieth century teenager sometimes do not do as they are told but leave to live their own different life.

ESSAY 2

The teenaged years are years of highly charged emotion. These pent up emotions must be dealt with in some way. The individual, depending upon his environment, heredity and various other factors which come into the scenario, will eventually deal with these strong emotional drives in his or her own way. One of these ways which has become very popular is "running away."

The very words themselves, running away, ring with the sound of freedom. Freedom, though, is one of only a multitude of reasons that I believe teenagers today find it not only exciting but sometimes necessary to run away from home.

The home environment may itself present the reason for running away. The teenaged runaway will usually have lived at home with his or her family for anywhere from 13 to 18 years. I have found that, for myself at least, in that length of time a person can find an overwhelming desire to express his freedom and independence. Freedom and independence can be expressed in a variety of ways but the final word, so to say, is to run away from your home. For the runaway this is pure independence. He or she has left behind old ways, an old life, their parents, and has made the statement, "I am free and I am an individual." I imagine that the new found freedom can be quite exhilarating for a while. It is the old pioneer spirit of leaving behind a safe and tame life and venturing out into a cruel and unknown region. It is exciting and something new that the individual may have hungered after for a long time. The runaway, upon leaving his home, is finally free.

This still leaves the question, though, just what is it that a runaway is free from? Again the answers are numerous and depend entirely on the individual. In some cases the teenager may have felt unloved or unwanted at home. After feeling unloved or unwanted for from 13 to 18 years I can understand well

why a person would want to leave. Disputes with parents or maybe just feeling out of place can lead to running away. In some more severe cases there may have been harsh discipline and even abuse within the home that causes one to leave it. When this is the case, running away from home becomes more of a means of self preservation than it is an emotional whim for freedom.

Many runaways will feel that they simply don't belong in a structured pattern of lifestyle that has been inherently placed upon them by their family. They may feel that they are different. The runaway may feel that he or she has different goals values or desires than can be obtained in the position that he currently finds himself in. The only way to remedy this situation, they may feel is to leave it all behind and find your own way.

Not long ago I received a letter from a friend in Virginia. She came from a straight-laced yet very close family. In her letter she explained how her plans to spend the summer included running away from home during the month of July and returning before August to work as a camp director for her church. She also indicated that she believed it was silly but wanted to do it anyway to break the monotony of the summer. What would one call this? Perhaps this is a new past time, recreational independence.

Teenagers though can be generalized as a group just beginning to feel their individuality. For good or bad this feeling is often expressed through running away. It is more often than not an attempt to rid oneself of an unfavorable situation. As Bruce Springsteen put it: "we've gotta get out while we're young/tramps like us, baby, we born to run."

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