"Strong," "Typical," and "Weak" College Writers: Twenty-two Case Studies

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We wish to thank Lillian Bridwell-Bowles for her major contribution to the development of this research project, including her helpful advice and comments throughout its various stages. We are also grateful to the Center for Interdisciplinary Studies of Writing for funding the project, to its members who offered revision commentary while it was in draft stages, to thoughtful outside reviewer Willa Wolcott, and to the staff, most especially Mark Olson, for seeing the editing through to completion.
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Preface

The research reported in this monograph is a result of a research project sponsored by the Center for Interdisciplinary Studies of Writing at the University of Minnesota. Each year, the Center invites proposals for workshops on or studies of any of the following:

- characteristics of writing across the University's Curriculum;
- status reports on students' writing ability and the University;
- the connections between writing and learning in all fields;
- the characteristics of writing beyond the academy;
- the effects of ethnicity, race, class, and gender on writing; and
- curricular reform through writing-intensive instruction.

This study was undertaken to provide teaching assistants at the University of Minnesota with some "objective" benchmarks against which they could measure the writing abilities of the students in their classes. Because there are no generally accepted standards or objective measures for writing at the college level, those who teach writing must often develop their own standards for judging the writing their students produce. Most instructors want to provide students with some comparative information about their work, i.e., whether it is "strong," "typical," or "weak" in relation to the work of other college students at their institution. Often, a grade on a piece of writing or in a composition class is determined by two factors: the specific criteria of the individual class and 2) the quality of the essays produced in relation to the writing of other students within the institution. Beginning instructors typically find setting their own criteria relatively easy, after initial training, but developing a sense of the range of quality within the institution takes more time.

The overall evaluation project was designed to help composition instructors develop standards and to provide examples and illustrations for their students. To accomplish these goals, we gathered hundreds of essays ranked "strong," "typical," and "weak," according to experienced teaching assistants in a larger project within the Program in Composition and Communication at the University of Minnesota. The principal investigators in this more detailed study of the data compared the perceptions of the
student authors to the ratings given their essays by instructors. In addition, they interviewed a subsample of students to determine factors in their composing processes that might be related to their successes or failures as writers. Finally, they compared the information they obtained from instructors and from students about quality to "blind" ratings of the essays by trained raters. The results suggest to writing instructors that they should take into account a range of successful writing strategies that students use when they compose outstanding essays. They also need to be aware that students respond very differently to instruction, depending upon their initial writing ability. In particular, weaker students often respond defensively to criticism that would be seen as helpful by a more sophisticated writer. The twenty-two case studies in this monograph tell individual stories about the effectiveness of writing instruction, but they leave us with some clear messages about providing for diversity within our classrooms. Useful materials, especially for beginning instructors, will be found in the appendices of this monograph where we have reproduced students' essays, instructors' comments, and materials from the interviews.

I am individually grateful to Hildy Miller of The University of Louisville (KY) and Mary Ellen Ashcroft of Bethel College (MN) for their continuing interest in this project. They were exemplary teachers of writing during their graduate careers at the University of Minnesota, and their legacy in this project is a great gift to the University of Minnesota.

Lillian Bridwell-Bowles, Series Editor
Mark Olson, Editor
January 1996
Introduction

Since we cannot reduce the complexity of composing to a single factor, writing ability is, as we have learned, not a simple valuation to make. Instead, at this point in composition studies, we are generally aware that we need broader accounts of writing abilities that include descriptions of diverse kinds of writers seen from different points of view through the lenses of multiple measures. In this study we attempt to do exactly that by providing case studies of college writers considered to be “strong,” “typical,” or “weak” by their composition instructors. We looked at the writers through several research lenses, including instructor evaluations, holistically scored writing samples, other samples of the students’ writing, and questionnaire responses designed to reveal deeper thought processes. Through these means we show student writers reflecting on their ways of working from a vantage point far closer to the source of production than what we as instructors can usually see. At this close range we can “listen in” to what students have to tell us about their writing.

The guiding categories of “strong,” “typical,” and “weak” were developed by Lillian Bridwell-Bowles for a large assessment project at the University of Minnesota, of which this study is a part. While previous studies (Perl, 1979; Pianko, 1979; Sommers, 1980) have contrasted ways “experienced” and “inexperienced” writers work, we wanted to make finer gradations of writing abilities. Seven University of Minnesota Program in Composition and Communication instructors of lower and upper division writing courses were asked to rate students in their classes as “strong,” “typical,” or “weak” relative to the usual writing performances seen in their classes. From the subsequent groups of “strong,” “typical,” and “weak” student writers, we selected several from each rating to interview. Through the interviews we wanted to learn the mixture of characteristics these writers possessed that led their instructors to rate them as they did.

As some researchers have pointed out (Brandt, 1986; Odell, 1985), studies of writers need to balance accounts of internal cognitive processes of writers with those of attitudes towards the social context in which they write. In our study we captured some of this mix as we looked at variations in
internal processes, writing experiences, and attitudes toward writing in college. To form as complete a picture as possible we took into account two key aspects of writing:

1. **Descriptions of internal writing processes:**
   What characterizes the approaches of “strong,” “typical,” and “weak” writers to their internal processes? How do they handle invention, drafting, revising, and editing? How do they establish a purpose and a persona? How do they reach their audiences? How do they handle content issues such as organizing their work or abstracting and synthesizing ideas?

2. **Attitudes towards external factors:**
   How do “strong,” “typical,” and “weak” writers cope with the writing situations in which they find themselves? In what ways do they respond to demands of specific assignments, comments of instructors, and the general constraints and conventions of academic writing? What experiences with writing have they had that result in “inner social contexts” that they bring to the academic context?

Often as we spoke to students, we saw pronounced similarities in approaches to writing within each of the three groups and striking differences between each of the groups. Some of the findings echo previous studies of writers. For example, like Bridwell, Sirc, & Brooke (1985), we found that for “strong” writers, writing processes are highly individualized, and like Berkenkotter (1985), processes can vary significantly from one task to another. “Weak” writers, in contrast, often seem to feel overwhelmed by their internal processes. With this group we found, as did Britton (1975), that many students resist changing from expressive writing to writing that adheres to externally imposed conventions.

Because we worked from multiple perspectives and multiple measures, contradictions sometimes appeared in the data. We expected some disparities and found them revealing, for these contradictions captured some of the mutable quality of writing abilities. After all, as we know, writing ability is an ever-changing process, not a fixed state. We learned, for example, that self-perceptions of many of these student writers are in flux. Some formerly “strong” writers now saw themselves as “typical,” while other “typical” writers felt they once were “weak.” Sometimes a self-perception based on performance in an earlier school context colored the current one. These holdover perceptions led at times to contradictions in instructor and student ratings. In one case a student considered “strong” by her instructor only saw herself as “typical.” Such contradictions were also evident in the varying pictures of writers we saw through different measures and different perspectives. In one case, in fact, a writer rated herself as “strong” while her instructor called her “typical” and the holistic score on her writing sample fell within the “weak” range.
We also found writers adjusting to academic writing from other contexts to a greater extent than we had expected. Much attention has been given in previous studies to the shift from oral to written language (Ong, 1982) and to the shift out of expressive language (Britton, 1975). We spoke with many writers who had formed other identities during past experiences with, for example, creative writing, journalism, or business writing. On the face of it, the student writers’ actual involvement with other kinds of writing may seem minimal, perhaps amounting only to writing a few short stories or working on a school newspaper during high school or writing memos on a part-time job. Yet these writers, in particular, were trying to adjust to academic writing with varying degrees of success. More than one “strong” creative writer was seen by instructors as only “typical” or even “weak.” Such writing experiences constitute “worlds” that many students bring to the academic writing context. In this study these inner social contexts appear to be as influential on writers as immediate contexts. Thus throughout the study we point out both generalizable patterns and interesting anomalies with the hope that both will round out our understanding of student writing abilities.

Design of the Study

Methodology

As mentioned above, the in-depth interviews with students form part of a larger assessment project overseen by Lillian Bridwell-Bowles at the University of Minnesota. For this part of the project, we gathered samples of what instructors considered “strong,” “typical,” and “weak” writing from all the composition classes offered by the Program in Composition and Communication. We then wrote descriptions of the kinds of texts that these students produced (Bridwell-Bowles, Bock, & Miller).

In our study we sought to complement our descriptions of the final products of “strong,” “typical,” and “weak” writing by adding descriptions of the composing processes of students. This part of the study took place in two stages. In the first stage, 148 students from seven composition classes produced writing samples. In addition, as students wrote, they completed several brief questionnaires asking them to report their thoughts while writing. Three of the questionnaires were written “thought sample” surveys designed to reveal a few seconds of cognitive processes. The fourth questionnaire was a “post-sample” survey for students to reflect on their writing processes. We applied two measures of writing ability to this group of writing samples: The writers’ respective classroom instructors rated the writers as “strong,” “typical,” or “weak,” and then a group of experienced composition instructors holistically scored the samples.

In the second stage we selected twenty-two students from the larger group. In standardized interviews with the selected students, we discussed their ways of working in general and their specific
responses to the questionnaires, and we learned what we could about their internal writing processes, as well as their attitudes toward academic writing situations. The case studies, we hoped, would give us more complete accounts of writing abilities to balance against the other measures. A more detailed account of our method follows.

**Stage 1: Evaluating Writing Samples**

Writers produced writing samples, filled out questionnaires both during and after the samples. Holistic and instructor ratings of writing abilities were gathered.

**Participating Writers**

All together, 148 student writers, 102 upper division and 46 lower division students, participated in the study. They were drawn from composition classes of seven instructors offered during Spring 1989, including two sections of freshmen composition and five upper-division sections of writing in the content areas of business, science, social science, technical fields, and the humanities. Thus the students represented a spectrum of major fields. Sixty-three students were female and 85 were male.

**Procedures and Instruments**

In one session students from each of the seven classes wrote for 45 minutes about their learning processes for what they were told was an audience of academic researchers interested in ways people learn. Writers were assured that neither the writing nor any other part of the project would affect their course grades in any way. In addition to producing writing samples, participants filled out four written questionnaires. The first three were brief “thought sample” questionnaires designed to capture a few seconds of thought. During the 45-minute sessions students were interrupted three times at approximately eleven to thirteen minute intervals to fill out the thought sample questionnaires. Each questionnaire took approximately three minutes to complete.

Thought sampling is used in psychology as a self-reporting technique in which subjects report the contents of their last few seconds of thought in response to a prompt. After reporting thoughts, they resume whatever their activity was before the interruption. Since the technique is a random and periodic sampling of near-concurrent thought, participants can perform tasks with only minimal interruption. Though it can be used to examine general thought processes, thought sampling has also been adapted for studying mental images (Anderson 1981; Klinger 1978). Questionnaires developed for this study to determine the amount and type of visual activity reported by writers during composing were adapted from those of Klinger. Some questions were designed to capture
both overall thought (A: "What was the last thought you had in mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to"; B: "What, if any, connections do you think the thought had to your piece of writing?"). Other scaled questions determined specific dimensions of thought, such as whether thoughts were mostly words or images.¹

Participants were trained to provide accurate verbal reports prior to the session in which they produced writing samples. (See Appendix A for training materials.) Following established training procedures, participants were familiarized with the dimensions of thought under study and practiced the process of writing, being interrupted, and completing a questionnaire. Later during the interviews, the selected participants reviewed their thought sample responses and provided additional commentary.

The questionnaires thus enabled us to gauge the amount of visual activity used by writers. We expected that for writers in the arts and sciences especially, visual thinking would often play a large role in cognitive processes. Indeed, many writers in the study reported a variety of visual strategies. Different groups often reacted differently to these inner images. "Strong" writers, for instance, often used images to assist them in writing, while "weak" writers found ongoing visual activity added to their sense of cognitive overload. (See Appendix B for examples of thought sample questionnaires.)

The fourth questionnaire was a post-sample survey allowing writers to reflect on their just-completed writing samples. From this measure we determined whether writers generally used "directed" or "nondirected" cognitive processes in writing. These terms, taken from the field of psychology, describe two general directions of thought. Either thought is "directed," that is, consciously channeled in a chosen direction, or it is "nondirected," that is, allowed to proceed randomly without conscious control. Previous studies of cognitive processes in composition have tended to emphasize one or the other. The work of Flower and Hayes (1981), for example, focuses on "directed" writers who seem propelled forward in their writing by conscious, logical decisions. Perl (1979), on the other hand, describes writers who proceed "nondirectionally" through what she calls a "felt sense," an intuitive and largely unconscious way of allowing ideas to develop. These terms provided us with a shorthand reference to the two ways often used to describe writers' working styles.²

One set of items on the questionnaire listed characteristics of these kinds of writing and allowed students to choose those that most closely described themselves. In general, we ascribed the following features to the two kinds of writers:

*Directed writers:*

1. I prefer to think through carefully what I am going to say before I write, then write one draft, returning only for minor changes.
2. When I write I usually think about only what directly pertains to what I'm going to say next.
3. I really work carefully and deliberately to develop my ideas as I write.
Nondirected writers:
1. I prefer to find my ideas by writing and rewriting extensively.
2. When I write I often let my mind roam expansively over a lot of ideas.
3. I write intuitively. My best ideas usually come to me without my having to direct and control them.

In the case studies we often refer to these characteristics as a means of explaining the general ways the various writers work. While most writers fell into the categories of “directed” or “nondirected,” some were “combination” writers who reported a mixture of qualities. (See Appendix C for an example of the post sample questionnaire.)

Instructor Ratings Procedure

Each of seven instructors from whose classes participants were drawn was asked to rate writers in his or her class as “strong,” “typical,” or “weak” relative to the usual performance seen in the course. These instructors were advanced graduate students who had been trained in composition instruction by the Program in Composition and had at least three years teaching experience. Their classes all followed a programmatic philosophy that encouraged students to write several papers developed through process work. Instructor ratings were gathered four weeks into the ten-week course and again during the final week of the course. In a few cases where initial ratings changed, the latter rating was used. (See Appendix D for results of instructor ratings.)

Holistic Ratings Procedure

In one session two pairs of experienced raters, all current or former instructors in the program, scored all writing samples on a scale of 1-6. Each sample was read twice, and when there was disagreement, a third time. Raters developed the holistic rubrics themselves using sample student papers. In order to develop balanced criteria, raters considered the following rhetorical issues:

1. Rhetorical context: development of approaches to audience, purpose, and persona.
2. Rhetorical content: ability to abstract material, analyze critically, order ideas effectively, and convince within the constraints of audience and purpose.

(See Appendix E for results of holistic ratings and samples of essays rated 1-6.) Table 1 summarizes the features that raters ascribed to numerical values. Ratings 1 and 2 are grouped as “low”; 3 and 4 are “average”; and 5 and 6 are “high.”
Table 1: Features Used by Holistic Raters

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>“High” 5-6</td>
<td>Writers demonstrated unusual awareness of audience needs and a strong voice. Essays operated on several conceptual levels; showed complex organizational choices shaped by material. Graceful command of language using appropriate vocabulary and complex syntactical structures.</td>
</tr>
<tr>
<td>“Average” 4</td>
<td>Tended to focus on generic audience; students less committed to stances on topics and more concerned with following directions. Beginning to grasp multiple conceptual levels but couldn’t always express this complexity; serviceable organizing structures such as “thesis-three points.” Fluent, with solid sentences and vocabulary, but without the grace and daring of “high” papers.</td>
</tr>
<tr>
<td>upper half</td>
<td></td>
</tr>
<tr>
<td>“Average” 4</td>
<td>Inconsistent efforts to accommodate audience; less sophisticated strategies for lower half presenting academic persona. Ideas and organization uneven and unfocused, though with thesis and repetitions, digressions, list-like structures, all specifics and no generalizations and no specifics. Distracting mechanical problems led to rereading.</td>
</tr>
<tr>
<td>“Low” 1-2</td>
<td>Lack of audience awareness reflected in explanatory gaps; childlike personas. Little evidence of control and development of topic, most often stream-of-consciousness structure with no thesis and unity. Undeveloped sentences containing syntactical and grammatical errors; limited and incorrect vocabulary; surface problems so severe that essays were often incomprehensible.</td>
</tr>
</tbody>
</table>

Stage 2: Interviews

In this part of the study we selected 22 representative “strong,” “typical,” and “weak” writers from the larger group for in-depth discussion of their writing.

Participating Writers

Of the total 148 writers in the study, 53 (35.8 percent) were “strong,” 70 (47.3 percent) were “typical,” and 25 (16.9 percent) were “weak.” Although approximately 50 percent of all the writers in our sample were rated as “typical,” for the interview stage we asked seven “strong,” seven “weak,”
and eight "typical" writers to participate. We further categorized writers by year in school. The "strong" and "weak" groups each included five upper-division and two lower-division students, and the "typical" group had five upper-division and three lower-division students. Out of the twenty-two writers, thirteen were male and nine female.

**Instruments and Procedures**

We met with each writer for about one and a half hours during which time we discussed their history as writers, their general writing attitudes and habits, examples of their writing, and responses to the questionnaires. In general, we standardized the interviews by working from a series of jointly developed questions and by using thought samples, writing samples, and pieces of finished writing brought in by students. Like many other case studies of writers from Emig (1971) on, we combined general retrospective accounts with activities to reveal more specific writing abilities. Yet we also recognized newer models of research interviewing in which the interview context is seen not so much as an "objective" attempt to overcome biases, but as a unique "speech situation" from which to learn (Mishler, 1986).

Procedures for interviews were uniform. Before our meetings, participants were asked to review thought samples, post-sample questionnaires, and writing samples. In the interviews we first discussed participants' writing history and general ways of working and then reviewed each questionnaire in turn. Writers were thus able to elaborate on both the processes and products elicited in the writing session. Participants were also asked to bring at least two samples of writing that they could use to tell stories about themselves as writers. Papers from varied courses, letters, creative writing, and newspaper articles were some of the kinds of writing students brought with them. Thus the final part of each interview provided time for students to discuss their writing in relation to the samples of writing they had selected. (See Appendix F for examples of interview materials for three representative writers—Jean, "strong"; Ethan, "typical"; David, "weak"—including all questionnaires, holistically-rated papers, sample papers, and transcripts of interviews.)

Overall, then, for this study we gathered a variety of measures of writing ability: Instructor ratings of "strong," "typical," and "weak" writing suggested how writers performed in an academic context. The holistically-scored writing samples provided evidence of the abilities of writers on an impromptu task. From the questionnaires we had evidence of the writing processes of students on a particular task. The thought samples provided glimpses of deep cognitive processes, including visual activity, while post-sample questions enabled us to categorize the processes of writers as basically "directed" or "nondirected." Interviews showed how all of these measures of writing came together in the writers themselves. What follows are accounts of the "strong," "typical," and "weak" writers.
Notes

1For further information on thought sampling methodology, see chapters by M. P. Anderson ("Assessment of Imaginal Processes," pp. 149-181) and M. Genest & D. C. Turk ("Think-Aloud Approaches to Cognitive Assessment," pp. 233-269) in T. Merluzzi et al., *Cognitive Assessment.* For use of written thought samples to study underlying figurative processes in composing, see H. L. Miller, *Design for Writing: Image and Metaphor in Cognitive Processes of Composing.*

2The terms "nondirected" and "directed" are neutral terms which emphasize key differences in the "flow of thought." While these terms are not used by compositionists, similar dichotomous labels are familiar (cognitive-literary; cognitive-affective; objective-subjective; Aristotelian-Platonic). L. Bridwell et al. used the terms "Mozartian" and "Beethovenian" in their case studies of writers reported in "Revising and Computing" in S. Freedman, *The Acquisition of Written Language.* H. L. Miller also used the terms "nondirected" and "directed" in a study of figurative cognitive processes in writing in *Design for Writing.* See E. Klinger, "Modes of Normal Conscious Flow," (pp. 226-257), *The Stream of Consciousness* for an account of the use of the terms in psychology.
Chapter 1
Case Studies: "Strong" Writers

The seven writers whose cases follow are described by their instructors as "strong." In different ways, all of the five upper-division and two lower-division student writers are aware of audience demands. Most are balancing their own preferences with the values of the academy. Doug, Christie, and Jean retain a sense of ownership of their writing by being open-minded but discriminating in listening to instructor comments. John and Greg are learning to negotiate demands of different audiences: John is shifting between creative and academic writing, while Greg is shifting into academic writing from journalism. Michael and Rick are motivated primarily by their need for praise from instructors.

The internal processes the writers describe are distinctly different from one another. Unlike the "typical" and "weak" groups, no special ways of working or particular set of strategies and problems stand out as features that the "strong" writers have in common. What distinguishes this group from the others is their awareness of internal processes and their ability to articulate their experiences in writing. Generally, these writers are successful students. Often they seem confident, self-critical, and willing to work hard. All tend to set high standards for themselves in everything they do. As Table 2 shows, the seven writers come from a variety of majors. Four are "directed," two are "nondirected," and one is a "combination." All of them score in the upper half of the six-point holistic rating of writing samples. Yet, while three students score 5-6, within the strong writing range; four others only score 4-5, within the typical range.

Upper-Division "Strong" Writers

Doug: Balancing Ownership of Work with Audience Awareness

Doug is a chemistry student who said that he genuinely enjoys reading and writing both in and out of school. As a combination writer, he plans extensively but still discovers ideas while writing several drafts. He roams expansively yet manages to maintain his overall direction as he writes. Like many science students, he works visually and sees information as graphs, charts, and detailed
Table 2: "Strong" Writers

<table>
<thead>
<tr>
<th>Upper Division</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Writer</strong></td>
<td><strong>Major</strong></td>
<td><strong>Holistic Score</strong></td>
<td><strong>Kind of Writer</strong></td>
</tr>
<tr>
<td>Doug</td>
<td>Chemistry</td>
<td>5</td>
<td>Combination</td>
</tr>
<tr>
<td>Christine</td>
<td>Computer Science</td>
<td>6</td>
<td>Directed</td>
</tr>
<tr>
<td>Jean</td>
<td>French, Psychology</td>
<td>4</td>
<td>Nondirected</td>
</tr>
<tr>
<td>Michael</td>
<td>Accounting</td>
<td>4</td>
<td>Nondirected</td>
</tr>
<tr>
<td>John</td>
<td>Psychology</td>
<td>4</td>
<td>Directed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower Division</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Writer</strong></td>
<td><strong>Major</strong></td>
<td><strong>Holistic Score</strong></td>
<td><strong>Kind of Writer</strong></td>
</tr>
<tr>
<td>Greg</td>
<td>Journalism</td>
<td>5</td>
<td>Directed</td>
</tr>
<tr>
<td>Rick</td>
<td>Russian, International Studies</td>
<td>4</td>
<td>Directed</td>
</tr>
</tbody>
</table>

*Values are represented on a six-point scale: 5-6, strong; 3-4, typical; and 1-2, weak.*

images. "Excerpts from experiments come in pictures," he told us. Unlike many science students, however, he reported that he also conjures up purely imaginative images and hears bits of classical music as he works, perhaps reflecting his interest in science fiction and classical music. His wide-ranging thought processes are not distracting to him; on the contrary, this breadth is what makes writing fun for him. He stays in control of his work by adapting to his writing circumstances with flexibility. If, for example, he is unfamiliar with a topic, he expects to plan and revise more thoroughly; if he is writing while tired, he decides to roam less.

Like many strong writers, Doug struck us as being not only a confident writer but a confident person. In approaching writing assignments he seems adaptable while still setting up challenges for himself. He knows that the expectations of instructors in their assignments differ, and he is successful at discerning the purpose of an instructor while developing a purpose of his own. For example, he said that once in an assignment for a creative writing class, his instructor, "a gentle man," asked the students to avoid violence or vulgarities in their stories. Doug laughed as he recounted how he cleverly stayed within these parameters by having his characters say and do all the forbidden things, so that he could argue that as the author he was not responsible for their transgressions. While typical and weak writers in our study struggle to figure out instructors' rules, strong writers like Doug seem to know the rules and how far to bend them.
This knack of maintaining a balance between ownership of his work and awareness of audience is useful to Doug in the uncomfortable situation many students in our study described: What do you do if an instructor objects to the stance you have taken in a paper? Students responded differently to this predicament. Doug told us in a revision he once decided pragmatically to reverse completely the stance of a previous draft, a decision that proved challenging since he then had to develop arguments for a position he did not really hold. While weaker writers often become frustrated and embittered facing this situation, Doug never allows it to change his positive attitude toward his own work and toward academic writing in general. He is confident enough to make even this acquiescence a sporting challenge.

Christine: Retaining Confidence in Her Writing Processes while Accommodating Instructor Demands for Change

Christine is a student majoring in computer science whose writing processes seem strikingly organized and methodical. Outside of writing for school, she writes poetry, keeps a journal, and composes so many long letters to friends that she buys her stamps by the roll. She has worked as a proofreader and finds she still best likes the "technical" aspects of writing such as grammar and spelling. A conscientious student, she told us she has even revised "A" papers "so they'd look better."

Unlike Doug, her questionnaire responses indicated that she is a directed writer who plans extensively, thinking only of what to say next as she writes and carefully developing ideas by visualizing her outline while working. Relying on outlines feels natural to Christine since, as she explained to us, she "thinks in outlines." In fact, she uses outlines not only for writing but also to organize her thoughts on the telephone and even to arrange the clothes in her closet.

Christine's description of her writing processes reflects her need for organization and detail. Before putting pen to paper, she deliberates and then constructs an elaborate outline with each point designed to correspond to each paragraph in her paper. As she drafts, she continues to visualize her outline, complete with Roman numerals and indentations. She sees what appears to be a "split screen" on a computer. As she describes it: "Usually when I'm writing, I still have the outline in my head, so I tend to be visualizing—no matter what sentence I'm writing—which part of the outline I'm on now and what's coming up next." Working methodically, she places each paragraph on a separate sheet of paper, double-spacing throughout, so that she can revise more efficiently.

Christine's priority is organization. She says that she first produces a draft organized by outline; then she amplifies the content in succeeding drafts. While final versions of papers are usually successful, in one composition class, her rough drafts were not well received since her instructor felt they read like "technical documents." She found she had to change her early drafts so they "weren't
as organized as I think.” Yet, as she told us, “You’ve got to learn to write the way they want.” Although she will change her writing for a good grade she said, “I’m not as happy with my own work, myself, and I have a lower opinion of the instructor.” She reminds herself that one day she will be in a position not to have to change her work for anyone. While Doug had to change his stance on a topic, Christine had to change her writing processes. Like Doug, she maintains her sense of herself while accommodating instructors.

Jean: Maintaining Ownership by Applying Advice Selectively

Jean, a French and psychology major, said she does not really like to write. She reads a lot when her schedule permits, but except for personal letters, she seldom writes. She is anxious about her writing, rating herself as “average” or “slightly above average.” Like many anxious writers, she postpones writing until the last possible minute. The pressure of a deadline makes her concerned about connecting ideas and “saying it the right way.” Since she plans to attend graduate school in psychology, she worries about how well she can handle the writing load. Yet while Jean does not consider herself to have a natural flair for writing, she seems to have become a competent writer through her steady, sensible approach.

Jean is a nondirected writer whose ideas often occur in pictures, graphs, and things she hears. Though she has a planning process that helps her to categorize ideas, she does not refer to the kind of orderly system that Christine does. Instead, most of her ideas simply unfold as she writes. Usually she starts with a “funnel” structure she learned in high school in which ideas start out as broad concepts, then grow more specific. At one time she said that she tried using that strategy for all of her papers, but she found that audiences got bored with their predictability. Learning from comments of instructors, she now just uses the funnel to get started, then develops other structures as she drafts. She is learning to trust her intuition. Like many other strong writers, Jean adapts what she has been taught in writing classes rather than following advice blindly.

Writing at the last minute leaves little time for revision, especially since she does not use a word processor. However, in a recent composition class, she found herself dissatisfied with a first draft and wound up revising her work drastically. For her this revision was a real breakthrough and was supported by her delight in the “A” she received on the final paper.

Jean’s sensible approach to writing is exemplified in the way she wrote her first literature review for a psychology class. She was very anxious about doing it right and, as usual, got off to a late start. However, once at the library, she adapted a note-taking method successfully. Then she grouped her sources according to the categories that suggested themselves. The result was what appeared to us as a well-organized and well-developed literature review, and, most importantly, for Jean it was a successful set of procedures she could file away for future assignments. Her willingness to learn, to
change, and to grow as a writer suggests how she achieves competence even though she is not a “natural.”

**Michael: Motivated by Praise**

Michael is an accounting major with business writing experience who, like Jean, does not really like to write. As he said, “I don’t despise writing, but I also don’t get a big thrill out of it. I tend to ... put off most writing assignments.” Writing for Michael is a “chore” that he feels would just “flow” if he were really a good writer. Yet, even though he finds writing too time-consuming, he revels in the praise his work often receives. Having his papers held up in classes as examples of good writing is what he said provides him with motivation to write.

Since Michael considers writing to be such a limited enterprise, he seems to succeed almost in spite of himself. He accounts for his success by saying that he has learned to meet instructor expectations, as we heard from other strong writers. Although he does not articulate a variety of strategies as our other strong writers do, he clearly works hard on actual papers. Though basically a nondirected writer, he follows intuitive work by developing ideas with careful, painstaking review of his material. As he explained, his ideas develop without conscious direction: “I never have more than a couple of things to say before I start.” Then working slowly, he “writes a paragraph and goes back to read and re-read and revise it.” He focuses only on what he is going to say next rather than roaming expansively over many ideas. His wife serves as writing collaborator by offering revising advice. From thought sample responses, we gathered that Michael relies on visual images in order to “draw out words or ways to express an environment,” a characteristic of many nondirected writers and others, who, like Michael, prefer expressive writing. Yet until he did the thought sample for our study, he did not realize how much images shaped his thoughts. Unlike Jean, who has become a strong writer by diligent effort, Michael seems surprisingly unreflective and unconcerned—a strong writer unaware.

**John: Negotiating Differences in Academic and Creative Writing**

John is majoring in psychology and plans to pursue graduate work in order to become a chemical dependency counselor. Like Jean, he seems to have honed his writing abilities by consciously developing strategies in courses that require writing. And like Doug and Christine, he struck us as being a perfectionist who has a strong sense of ownership of his work. He has his own set of standards apart from those of his instructors, a sense of the “ideal copy,” as he told us. To control his writing environment, John takes the phone off the hook and writes “at home in the morning or afternoon, with a pack of cigarettes and a pot of coffee, standing up.”
John, like several writers in our study, does both creative and academic writing. He faces the difficulties of these writers in finding an appropriate interface for the two: What processes and strategies for creative writing can be transferred to academic writing? Which should remain separate? John said that he negotiates the issue by separating the two kinds of writing completely. He sees personal writing, which he prefers, as a way to express feelings and to write for himself according to his own standards. Academic writing, in contrast, seems factual and logical because it is for “the institution of rational thought.” Yet he finds merit in both kinds of work because, as he told us, academic writing “fulfills my need to break things down into black and white,” while poetry is “a chance to explore colors.”

As he described them his processes for the two kinds of writing vary drastically. In academic writing, John works “directedly,” conceiving of his structures as a line that is then filled in with parts that “should fit together like a puzzle” in a “tight logical progression.” If conducting research, he draws “flow charts” in order to build categories of ideas. Then he just polishes his work since most structural decisions are made while planning. Working methodically from planning to revising, he “does everything in threes.” In contrast, with fiction, he says that ideas simply “float from my heart.” He writes only one draft since “the way it comes out is the way it’s meant to be.” The only commonality between the two kinds of writing that he reported is his reliance on the sounds of words to guide him. While he writes he whispers words “as if my mind is reading something to me.”

Until now, John has viewed the two kinds of writing as drastically different, but he is finding to his dismay that these distinctions are breaking down: For years he resisted using “inhuman” word processors. He felt these “impersonal” machines were appropriate for academic writing since they made writers feel as if thoughts “were coming through your fingers.” Now that he uses a computer, he finds that very quality of composing makes academic writing more like creative writing since ideas “just come to you.” Also, he recently wrote a paper on child abuse, a topic that disturbs him. Rarely does John choose topics for academic writing that touch him emotionally. In this case, he struggled to conceal his emotional biases, only partially succeeding. The quality of the final paper was uneven compared with most of his work, yet he found he enjoyed the challenge this situation posed. Thus far John has succeeded at academic writing by separating his creative writing from academic writing. With his distinctions now breaking down, he is beginning to negotiate a synthesis between the two categories.

Lower-Division “Strong” Writers

**Greg: A Journalist Adapts to Academic Writing**

Greg, an avid reader and writer who plans to major in journalism, said of his writing, “It is one of my given talents.” As a freshman, he also began college writing with two advantages: First, Greg
said that his father, a math teacher, “taught [him] how to think,” by teaching him the principles of problem-solving. He enjoys thinking through problems and presenting them as arguments so much that one day he would like to write editorials. In the meantime, the pleasure he takes in constructing an airtight argument seems to provide him, like our other strong writers, with his own purpose for writing apart from that of his instructors. Secondly, Greg has extensive experience writing for classes and his high school newspaper.

Greg is a directed writer who has developed his own techniques for planning like other strong writers: The inverted pyramid scheme generally serves as a point of departure for him. He revises little because he crafts each sentence in his first draft carefully, stopping to search for just the right word, re-reading quickly to make smooth transitions, and checking to see that each point is adequately supported. He focuses so intensely on what he is to say next that he describes his processes as “straight dictation on the subject I’m writing—a teletype of thoughts.”

He appears to be successfully adapting to academic writing. In journalism his credo is “get rid of the deadwood” by fashioning short sentences and paragraphs. In academic writing, he finds himself writing longer, more complex sentences without any conscious effort because they “look and sound natural.” His logical approach and interest in argument transfer easily to academic writing but not to creative writing. As he said: “Organization confuses me. Logic doesn’t work. I’m not sure how to write it, how to start, what to say.” While Greg is well beyond the organizational problems that plague our typical writers in academic writing, in writing we found him more like a typical writer who grapples with basic organization. His directed approach seems to limit him to nonfiction writing; however, we wonder if this style will eventually limit him in academic writing too. Perhaps like John, who can no longer split his academic and creative writing processes, Greg will find that he must also synthesize the two.

**Rick: A Perfectionist Seeking Praise**

Rick, a returning student with experience at technical writing in the military, is planning to major in Russian and International Relations. He likes writing of all kinds, especially letter writing, and plans to write a military adventure novel some day. A directed writer, he told us he focuses on organization and reaching his audience.

In Rick we found almost a composite of the traits that we noticed in our other strong writers. Like Jean, he is anxious; like Christine, he is highly organized; like John, he likes to maintain control; and like Michael, he needs to feel outstanding. Rick and so many strong writers we spoke with seem to be conscientious, self-critical students who set high standards for themselves. A perfectionist, he told us: “If it doesn’t read well to me—even if others find it very acceptable—I’ll trash it.” He is anxious that an inferior product will reflect badly on him.
Unlike our other strong writers who take making changes for instructors in stride, Rick feels helpless and enraged by these accommodations. He was particularly upset by some comments on sexist language in a philosophy paper that affected his grade. He said, "If you don't write into the place where they're coming from, it's a pretty sticky situation." In the writing sample for our study, he candidly admitted that he labored to write an impressive first paragraph because he wanted to be selected. "I wanted mine to stand out," was the way he characterized his routine practice. Like other strong writers, Rick is trying to balance ownership of his work with audience awareness. But he puts so much pressure on himself that he seems to feel considerable conflict, even though as a strong writer, he usually meets all the perceived standards. Still, our strong writers generally develop their own reasons to write; pleasing an instructor is simply not sufficient motivation for them. Rick reminds us that often that reason appears to be dictated by their own desire to achieve.

"Strong" Writers: Conclusions from the Cases

Though some of our strong writers like to write and some do not, all are conscientious students who choose to work hard at actual assignments and at developing sets of strategies from writing experiences to guide their work. We noticed that they seemed to take a genuine interest in the pieces of writing they brought in to discuss. Even though some students were in majors that required little writing, we found strong writers across all disciplines.

The strong writers in our study are aware of their processes and can articulate easily how they work. They have learned the language instructors use in talking about writing. In terms of specific processes, these writers have developed planning, drafting, and revising methods to suit themselves. The methods can vary drastically: Some directed writers plan their writing logically at the outset, while nondirected writers trust intuition to guide them as they draft. Some say they work meticulously to produce sentences of "final draft" quality in their first drafts, while others focus instead on harnessing wide-ranging ideas, as has been shown in other studies (Bridwell, Sirc, & Brooke, 1985). Some students draw ideas from words, while others work from pictures and ideas they hear as interior monologues or comments from others. Some rewrite their papers several times, while others revise paragraph by paragraph as they draft. The common denominator seems to be that whatever their processes, they are chosen with care.

Strong writers have already developed organizational strategies that work for them, unlike typical and weak writers, for whom organization is a major stumbling block. Some strong writers describe an intuitive sense of how ideas should flow together, while others develop abstract structures to graph out patterns for organization. One writer found that once he established his purpose, his organization decisions fell into place. With organization under control, strong writers focus instead
on rather sophisticated writing goals. For instance, one writer was struggling with the question of how much information to supply her audience. She wanted to follow the academic convention of providing support for her assertions without condescending to her audience by explaining too much. The strong writers are generally able to articulate such writing problems and are growing quickly as a result.

These writers generally balance ownership of their work with audience awareness. They can figure out what instructors want in assignments, but they still develop their own purposes and challenges. In different ways, they are coming to terms with the requirements of their main audience—instructors—and the power of grades. In most cases, the strong writers are discriminating in their responses to instructor comments on writing: We found these students generally open to suggestions and able to apply instructors’ comments in order to improve their writing, while also able to reject comments that seem to reflect teacher biases. In the same way that strong writers do not unquestioningly follow advice about the actual processes of planning, drafting, and revising, but instead use this advice to fashion their own methods, so, too, they listen but do not accept uncritically all comments on their final products. These writers are receptive but in control of their work.
Chapter 2
Case Studies: "Typical" Writers

The five upper-division and three lower-division students whose cases follow are described by their instructors as "typical." While strong writers generally arrived at successful approaches to the internal and external demands of writing, typical writers are struggling both to understand their internal writing processes and to cope with demands of instructors. Of the writers in the typical group, Paul, Megan, and Elizabeth are preoccupied with figuring out how to organize their work. Tracey and Eric are puzzled by revision. Eric and Lisa are convinced that writing should be an opportunity for self-expression, but sense the dilemma in expressing themselves freely while at the same time reaching an academic audience. Megan and Tracey grow very little as writers, in part because they accept instructor advice indiscriminately.

Whereas the strong writers we spoke with are often very confident, the self-esteem of typical writers seems shaky. Many have a history of problems with writing in school. Paul, Megan, Tracey, and Brett state outright that they do not like to write. In addition, typical writers' evaluations of themselves are often in flux. Elizabeth, for instance, feels better about herself now that she is overcoming the detrimental effects of early instructor criticisms. Brett wonders why he used to be a better writer than he is now. Even though these students see writing as less than a joy, they are struggling through their problems and, as a result, are growing as writers.

Table 3 shows the varied majors of these students. Two are "directed" writers, three are "nondirected," and three others are "combinations." Most were holistically rated within the 3-4, "typical," range. Ethan, however, appears as an anomaly with his score of 6, the highest rating possible. Lisa scores 2 to put her writing in the "weak" holistic range.

Upper-Division Typical Writers

*Paul: Struggling to Understand his Processes and Organize His Texts*

Paul, who is majoring in economics and sociology, generally dislikes writing and sees himself as a below-average writer. Like many of our typical and weak writers, he has had writing problems to
Table 3: “Typical” Writers

<table>
<thead>
<tr>
<th>Upper Division</th>
<th>Holistic Score</th>
<th>Kind of Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writer</td>
<td>Major</td>
<td></td>
</tr>
<tr>
<td>Paul</td>
<td>Economics, Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Megan</td>
<td>Marketing</td>
<td>4</td>
</tr>
<tr>
<td>Tracey</td>
<td>Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Eric</td>
<td>Electrical Engineering</td>
<td>4</td>
</tr>
<tr>
<td>Ethan</td>
<td>English, Philosophy</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower Division</th>
<th>Holistic Score</th>
<th>Kind of Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writer</td>
<td>Major</td>
<td></td>
</tr>
<tr>
<td>Elizabeth</td>
<td>Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>Lisa</td>
<td>Undecided</td>
<td>2</td>
</tr>
<tr>
<td>Brett</td>
<td>Engineering</td>
<td>4</td>
</tr>
</tbody>
</table>

*Values are represented on a six-point scale: 5-6, strong; 3-4, typical; and 1-2, weak.*

overcome that have affected his work. In his case, he grew up in a family that used nonstandard grammar; grammar was difficult for him until he came to understand it through a foreign language course. However, writing still makes him uncomfortable. Unlike most of our strong writers, who are conscientious about their writing, he hurries through his papers, writing “late at night.” As he said, “I don’t take time to do a good job.”

Paul is growing as a writer in many ways. Using a word processor has enabled him to move parts of his writing around, so he has begun to conceive of revising as more than “getting rid of run-on sentences.” Like most typical writers, he is also increasingly able to figure out what instructors want. College writing, he has learned, is not just self-expression. As he said, “One of the things I’ve learned is that there are limits to how much you can be yourself if you want to get good grades.” Unlike strong writers, who balance ownership of work with audience awareness, Paul instead feels his work is aimed so much at instructors that he can scarcely call it his own. Yet with his overall writing growth, composition classes are getting easier for him.

But we also found Paul frustrated in his struggle to organize his writing processes and products. He tends to be a directed writer who briefly thinks through what he plans to say before writing, then works by focusing on what he wants to say next, often picturing his ideas. In spite of his sense of a process, he seems not to have developed a solid method of working. Since he plans and revises little,
he tries to do nearly everything in a single draft. Whereas some of the strong writers—like Greg—do manage to cope with the pressure of perfecting a first draft, Paul does not. Instead, though he proceeds slowly and carefully, he frequently finds himself lost on "tangents" and "dead-ends." As he told us, "It's frustrating to work yourself into a corner."

Most of Paul's energy is focused on trying to get ideas to "flow together from paragraph to paragraph." While he struggles to put his ideas in a sequence, so far he lacks a comprehensive view of organization. His final papers reflect this lack of overall development. From our observations, we find them generally to be limited to one main idea repeated several times in different ways. Though he has long sensed a problem with the organization of his papers, until recently he has been unsure how to resolve it. Now that he can move sections of writing around on a word processor over a "couple of drafts" this change in his revising habits offer some promise. Like many of our typical writers, Paul sees writing as difficult, but feels encouraged that he is beginning to understand at least some aspects of it.

**Megan: Struggling with a Superficial View of Processes and Uncritical Acceptance of Instructor Comments**

Megan is a marketing major who enjoys reading but has never liked to write. Lately, though, she has been getting better grades on papers, and so she has begun to feel more positive about writing.

We found Megan’s writing abilities evolving in many areas. She is a combination writer who says, "I picture and imagine everything." She has developed a congenial approach to planning papers: Before writing, she thinks for weeks about an upcoming paper, allowing ideas to accumulate and interconnect, holding ideas in a visual pattern in her mind. Unlike Paul, who also works visually, she has figured out how to use her imaging abilities to her advantage. Like many directed writers who use images, Megan said, "I never write down an outline." Yet she does not logically combine ideas through conscious effort; instead, she said, her overall pattern just emerges from her extended reflection on her material. After this long incubation, she then writes her papers—even ten-page papers—in a day. As she drafts, she holds the overall pattern in mind while allowing other ideas to develop. She roams expansively but has developed techniques for staying on track such as jotting down an idea for a conclusion in the margins if it occurs to her midway through her work. Megan can safely roam, unlike Paul, who gets lost as he writes.

While we found her "customizing" some parts of her processes—adapting what she has been taught to suit herself—in other areas she is struggling with the combined problems of accepting instructor comments indiscriminately and substituting superficial remedies for substantive changes when organizing and revising papers. Like Paul, she is preoccupied with figuring out principles for
sequencing ideas. Comparing two papers, she said of one, “I do get a little choppy with each paragraph. You know, going from ‘payments’ to ‘inflation’ to ‘political situation.’ I didn’t know how else to . . . I didn’t want it wordy.” With the other paper, she was pleased she had made it “flow” from the topics of “location” to “competition” to “consumers,” but did not know how she had accomplished it. She tries to handle the “flow” problem in her incubation period, but finds her first drafts list-like. A superficial sense of revision hampers her further, since, for her, revision does not mean reconceiving the project but “fixing up the grammar” or “working on transitions.”

Comments from instructors cannot help her much with these problems either, in part, because like our other typical writers, Megan seems to soak up comments uncritically. We found her almost parroting what she had been told rather than adapting, rejecting, or thinking through the comments. For instance, when we asked her to elaborate on how she would change one of the papers that she brought in, she responded, “Work on the conclusion, which was too short.” Word for word she repeated her instructor’s written comment. Like Paul, she has learned to accommodate her audience to get good grades. While Megan is owning her processes in some ways, in other ways, she, like other typical writers, is dependent on—and perhaps limited by—external demands of instructors.

Tracey: Trying to Own Her Processes while Accepting Instructor Comments

Tracey, a chemistry major, is, in her own words, “petrified” of writing. She writes competent lab reports and enjoys writing letters, but she becomes so anxious about most academic writing that she postpones starting papers until right before deadlines. Like several other typical writers, she has had a learning problem to overcome. She finds it hard to concentrate for any length of time and this has proved to be an obstacle in both reading and writing.

Like many other typical writers, Tracey uses writing strategies she has learned in composition classes without entirely adjusting them to her own needs. She finds that rules about, for example, correct introductions and how paragraphs should contain one main idea, alleviate some of her anxiety, so she tries conscientiously to apply them. Like other typical writers, she forgoes attempts to establish her own purpose in writing, instead trying to second-guess “what instructors want.” For her, writing feels like reporting and therefore is boring. Like Paul, Tracey has not developed a solid way of working. Like Megan, she struggles to understand organizational principles. But most of Tracey’s energy is simply spent trying to stay focused.

We found that Tracey is trying to grow as a writer. Recently, she changed her usual “last-minute” approach to paper writing and started one well ahead of time on a word processor. To her surprise, she found that once she took time to revise thoroughly, she actually enjoyed the revising process. She discovered that revising was more challenging and less stressful than struggling to put
ideas into words in a rough draft. This breakthrough, taken together with the priority she places on just getting ideas out in a first draft, suggests that she is probably a nondirected writer who needs to work gradually through multiple drafts, gaining a sharper focus with each revision. This approach would also diminish the stress she feels in trying to concentrate.

Yet Tracey has been told by an instructor that her rough drafts contain too many digressions, and, as a result, she is trying to avoid them. Like Megan and other typical writers, she seems to absorb instructor comments uncritically. When Christine, the strong writer who uses outlines extensively, was told her rough drafts were too organized, she simply altered her drafts for the instructor, then resumed working according to what she confidently knew was her process. But Tracey, an anxious typical writer, unquestioningly accepted as truth a comment that unfortunately may hinder her in coming to understand that for a directed writer such as she is, a digressive first draft is normal. In fact, uncritical acceptance of such comments may interfere with the new-found skill in revising that she is developing.

Eric: Negotiating Need for Self-Expression with Demands of Academic Writing

Eric genuinely enjoys writing. He has always excelled in science and plans to be an electrical engineer. As a child he took apart toys and bikes in order to see how they worked. A nondirected writer who, like many other science students, is a visual thinker, Eric sees a “mental clipboard” as he writes that enables him to place ideas as they occur to him so that he can remain undistracted from the task at hand. In other ways, however, he has less control of his writing processes. Like Megan and Tracey, he does not sort out instructor criticisms, and he sees revision as making only superficial changes.

Eric’s main concern is trying to square his enthusiasm for writing as a creative outlet with his knowledge that academic writing must reach an instructor. “I like to write a lot,” he says. “I can express myself that way.” With his wide range of creative interests—painting, drawing, photography, and writing long letters and humorous poems—it is not surprising that he sees the best part of writing as self-expression. “Doing what I want to do and then having a finished product” give him satisfaction.

Presently, he modifies his desire for self-expression by analyzing different writing situations and figuring out an appropriate approach to audience and persona. He says that most academic writing demands that he be persuasive, but he seize opportunities to vary this routine. The writing sample he brought in, for example, was a memo briefly outlining a technical proposal for his small writing group in a composition class. Though he followed standard memo conventions, he decided the situation was one in which he could safely incorporate some playfulness. From his original salutation, “Okay, here it is again, guys,” to his idea for demonstrating robotics technology, “SO!___ we design
a little robotic arm that will do a little task, like painting a little picture,” we found him successfully blending creative ideas. Although Eric feels immediately compelled to find avenues of self-expression within academic writing, he is sensibly balancing this need with the need to adhere to the conventions of academic writing.

**Ethan: Negotiating Differences in Creative and Academic Writing**

Ethan, majoring in both English and philosophy, grew up in a literary family and plans to become a fiction writer. Both of his parents are English majors who read constantly and have an enormous collection of books around the house. His earliest memories are of standing in a bookstore pleading with his parents to buy five books instead of three and of sitting in the back seat of the family car writing poetry while on a vacation.

Ethan is attempting to negotiate differences between creative and academic writing. Although he was one of the few students to score a 6 on his holistically-scored writing sample, his instructor only ranked him as “typical.” He said that he often finds himself in the predicament Langston Hughes describes in the poem entitled “Theme for English B,” in which the poet, when asked to write an academic essay, instead writes a poem. Instructors have told Ethan that although he writes well, the aesthetic qualities of his work are not “convincing.” They want proof, and they find the words he chooses so carefully to be “pretentious.”

He compromises in different ways. One way is to approximate academic style by presenting material logically and analytically. As he said: “After you’ve written for a couple of years, you get the forms—introduction, ideas, and conclusion. That’s all you can really do.” But he finds upon reflection, “I always read a page and think, ‘God, this is really boring.’” In other papers he tries to incorporate creative ideas. For example, once he successfully structured a history paper on *Robinson Crusoe* around three symbols rather than dryly explaining the three stages of Crusoe’s life. Yet he said it is hard to adjust to the “lack of persona” and the emphasis on content in academic writing; he prefers creative writing in which he can use word choices to establish a strong persona. With creative writing he can also be less directly concerned about his readers, whereas with academic writing he feels pressure to persuade his audience.

Ethan is a combination writer who plans what he is going to say before writing, working carefully and deliberately, while allowing his mind to roam expansively and to draw ideas from images. For academic writing, instead of using outlines, he follows an internalized, logical pattern. He told us that as a result of years of schooling these patterns have become ingrained as “structures you have in mind” rather than “structures for a particular paper.” In fact, this sort of thinking has become so automatic for him that “when you think of a point, you’re going to think of three things to back it up
with.” In contrast, for creative writing he uses original ideas to shape a unique piece of writing. With both academic and creative writing, he works slowly, choosing words painstakingly, and revising as he drafts by writing a paragraph and going back immediately and rewriting it three or four times. Ethan is further along than Eric in approaching academic writing creatively. Like John, a creative writer in the strong group, Ethan is having uneven results trying to write for an academic audience and still satisfy himself aesthetically.

“Typical” Lower Division Writers

Elizabeth: Struggling to Understand Her Processes and Overcome Instructor Criticism

Elizabeth grew up in Canada and has recently moved to the United States. While she is a good student who plans to major in biochemistry, she ranks herself as between average and below average as a writer. In the past, instructors responded so negatively to her writing that she became convinced she was a poor writer. Now, she is struggling to overcome the low self-esteem that resulted from these experiences.

Elizabeth’s problems lasted throughout her grade school and secondary school years. Her papers, usually critical essays on literary works, received low grades based on their many surface errors. In response, she was left feeling helpless and bewildered about how to improve her work. She said, “I always thought I did well when I wrote the essay, but then when I’d get it back, I’d realize there were a lot of mistakes.” She came to hate English and to feel ashamed of her writing.

But in college everything turned around when she discovered dimensions to writing apart from surface correctness and, most of all, when she had her writing succeed when judged on bases other than mechanics. As a science student in a Canadian college, she was required to write many lab reports, and she discovered that she could write them. In the American system, she began to earn “A’s” for her writing. Best of all, her composition instructor would supportively “bring out the good things” in comments on her papers.

With her conception of writing expanding, Elizabeth, like our other typical writers, recognizes that she needs to learn how to organize her papers. As a nondirected writer, she first works by immersing herself in images that transform themselves into controlling themes for her writing. She trusts that a structure and a thesis will emerge. But this process calls for substantive revision to produce an organization acceptable in academia. At this point, since she does not like to revise, she depends on the standardized formats of lab reports or guidance from instructors to help her structure papers. Though organizational issues are still a hurdle, Elizabeth is overcoming the effects of early harsh criticism of her work, and is tentatively beginning to gain confidence in her writing abilities.
Lisa: Unable to Resolve the Dilemma of Writing as Self-Expression with Demands of the Academic Audience

Lisa, who rates herself as “a little better than average” as a writer, is generally stronger in math than in writing. Yet on her own, she writes poetry, short stories, and letters. She is also interested in photography. Like Megan and Elizabeth, her thought sample responses showed that she works from vivid images that become her controlling ideas. Though the images are clear to her, she has difficulty “putting it into a sentence structure so that people can understand it.” A combination writer, her tendency to roam expansively as she writes provides her with plenty of material, but she has difficulty finding continuity in these tangents. Like so many typical writers, Lisa also has little control of her writing processes.

Lisa has figured out that she must write for teachers, but it is not a happy accommodation. Though she generally does not like to write, she said, “I can write what I want to write better than what I’m supposed to write.” Lisa, like Paul, cynically feels that she must capitulate to instructors’ demands unlike our strong writers, who manage to balance ownership of their work with audience awareness. She told us: “One thing I’ve found is that you should write what the teacher wants to hear—not what you believe. . . . It’s a matter of guessing what the teacher wants and giving it to them to get the grade. It’s life—I’m glad I learned it now.” Like Eric, she feels a tension between her concept of writing as self-expression—“what you believe”—and writing to reach an academic audience. Writing for Lisa and many other typical writers is a struggle to understand their own writing processes and to give instructors what they believe that they want.

Brett: The Problem of Separating Creative and Academic Writing

Brett, a prospective engineering major, reads and writes seldom, but when he must write, he works conscientiously by planning and revising extensively. His processes, in contrast with the intuitive processes of Elizabeth and Lisa, are logical in the extreme: A directed writer, he plans what he wants to say carefully and focuses only on what he is going to say next as he writes.

Brett’s focus in his writing centers almost exclusively on the task of discovering relationships between ideas, almost as if he were constructing mathematical equations. In one thought sample, for instance, we found him asserting that students’ interest in classes is related to the grades they receive. During the interview he explained that he wanted to “develop the relationship between those two things” so he first thought of “the student’s mind, the teacher’s mind, and the grade book” Then Brett says he “set up a three-way relationship in my mind and put it on paper.” Though he generally works out these relationships in a measured way, trying to order ideas logically, organization remains a problem for Brett, as it does with the other typical writers in the study. In Brett’s case, his papers
read as disjointedly as telegrams with short subject-verb-object sentences and little cohesion between sentences throughout.

Although Brett sees himself as an average writer now, he reported that this was not always the case. At a certain point in high school his abilities in math and science seemed to shift. As his interest and ability in math increased, his writing dropped from "above average" to just "average," with his fiction writing becoming especially poor. Like Greg, the logical freshman writer in the strong group, Brett has problems with creative writing. Brett cannot understand why his poems fail when he goes about writing them by setting up abstract relationships and structures in a conscious, logical way. However, it is not just his creative writing that suffers from his logical approach, but his academic writing as well.

"Typical" Writers: Conclusions from the Cases

Generally, typical writers are growing in many basic ways. Not as confident as strong writers, they feel they are coming to understand some parts of the writing process, although much of the process remains a struggle. Whereas strong writers often bring strengths from other life experiences to their writing, typical writers often bring problems that complicate their current writing processes. Like Tracey they may have learning disabilities, like Paul they may have difficulty with mechanics, or like Elizabeth they may have memories of negative responses to their writing. Often, students in the typical group do not like to write. Other typical academic writers are strong in creative writing, but find it difficult to adapt their creative writing processes to academic writing. Visual thinkers such as creative writers and students in the arts and sciences have mixed success in using images to develop themes or structures for papers and in translating pictures into words.

Writers in the typical group frequently feel overwhelmed by the internal demands of their writing processes. While strong writers are in control of their work and can articulate their strategies, typical writers are more vague and uncertain. Some of their strategies succeed and others fail. They are less able to adjust their tactics to meet the needs of different writing situations. Strong writers adapt what they have been taught about writing processes to suit themselves, whereas typical writers struggle, with varying degrees of success, to adapt themselves to the methods they have been taught. Their directed or nondirected styles are only partially developed: Nondirected writers cannot figure out how to stay on the topic and go off on tangents; directed writers stay on the topic but cannot see why their ideas are so disconnected. Figuring out how to organize writing is a special problem, one typical writers find difficult since their sense of process is somewhat vague and their views of planning and revising somewhat superficial.
In addition to these internal demands, typical writers struggle to cope with external demands of instructors. They are less sure of the purpose of assignments than our strong writers. While strong writers can generally build in their own purposes while satisfying instructors, typical writers focus so much on pleasing instructors that they often feel their writing is not their own. They are torn by a sense that the purpose of writing should be to express themselves honestly while feeling obliged to tell instructors what they think instructors want to hear. To resolve the ownership-audience dilemma, the typical writers simplify the issue into the dictum: “Give them what they want.” These writers are also more likely to assume that instructors’ criticisms are right and to try to apply these critiques to their writing without entirely understanding them. Their ideas about writing often reflect what they have been told, not what they actually think. Typical writers pose a real challenge for teachers, because even though they are often willing to learn, they need to grow in far more basic ways than do strong writers.
Chapter 3
Case Studies: “Weak” Writers

The five upper-division and two lower-division students whose case studies follow are seen as "weak" by their instructors. Unlike "strong" and "typical" writers, these students, in general, are vague about their ways of working. They have little control over internal processes and are proud about what they do understand. For example, Barbara expressed her confusion about all of the inner demands and distractions of writing. Tim and Benjamin described processes that are strikingly undeveloped, such as writing down whatever comes to mind and then turning that effort in for a grade. Many of the students, like Barbara and David, reported long-standing learning disabilities that continue to make writing difficult for them.

With so little under control internally, many weak writers focus on external problems with instructors or with education in general. Unlike typical writers, who tend to accept instructor comments uncritically, weak writers defend themselves by rejecting most instructor comments out of hand. Barbara, Dale, Jessica, and Benjamin all expressed frustration that expressive writing is not valued. While typical writers are beginning to cope grudgingly with audience demands, weak writers are often mired down in resistance. In contrast with typical writers who are continuing to grow in their writing abilities, weak writers are often at an impasse. Some exceptions do appear in the cases below, however. David, for example, has broken out of the cycle of blaming teachers for his problems and Gena, in learning to revise, has begun to negotiate differences between creative and academic writing.

Table 4 provides further information on these writers. Four are "nondirected" and three are "directed." Interestingly, the writers in the weak group are distributed widely across the holistic scale. Only Barbara, David, and Gena score under 3, within the weak range on the holistic instrument. Three other writers—Tim, Dale, and Jessica—actually score in the upper half of the holistic range. In these cases, long-standing grudges against academic writing can cause students to behave uncooperatively. Such negative responses, in turn, lead instructors to assume that the students are weak writers.
Table 4: “Weak” Writers

<table>
<thead>
<tr>
<th>Writer</th>
<th>Major</th>
<th>Holistic Score</th>
<th>Kind of Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbara</td>
<td>Sociology</td>
<td>1</td>
<td>Nondirected</td>
</tr>
<tr>
<td>David</td>
<td>Physiology</td>
<td>2</td>
<td>Nondirected</td>
</tr>
<tr>
<td>Tim</td>
<td>Mechanical Engineering</td>
<td>4</td>
<td>Directed</td>
</tr>
<tr>
<td>Dale</td>
<td>Business</td>
<td>4</td>
<td>Directed</td>
</tr>
<tr>
<td>Gena</td>
<td>Art History</td>
<td>2</td>
<td>Nondirected</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Writer</th>
<th>Major</th>
<th>Holistic Score</th>
<th>Kind of Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jessica</td>
<td>Journalism</td>
<td>5</td>
<td>Directed</td>
</tr>
<tr>
<td>Benjamin</td>
<td>Computer Science</td>
<td>3</td>
<td>Nondirected</td>
</tr>
</tbody>
</table>

Values are represented on a six-point scale: 5-6, strong; 3-4, typical; and 1-2, weak.

Upper-Division “Weak” Writers

Barbara: Frustrated with Instructors and Herself

Barbara plans to become a police statistician. She finds writing very difficult. A typical sentence in her writing sample reads: “Someone about six months ago ask me how have I integrate what I have learned to what I am doing I could not think of an response to explain this.” No doubt growing up in a family in which both parents were deaf may account for some of these writing problems. But she is struggling with other writing issues as well. Like many weak writers, she finds it hard to generate and organize ideas. As she describes it, her nondirected writing processes sound confusing: “Trying to do ten things at once; balancing using sources, summarization of material, grammar. . . . It’s hard to balance all these things and integrating everything together.” With so few aspects of her writing under control, Barbara is proud of her few successful strategies. For instance, she told us that although she usually just hopes things will come out right in papers, she now sometimes diagrams her ideas on the blackboard in an empty classroom. This innovation really pleases her.

Barbara knows from instructors’ comments on her papers that in many ways her writing is not up to college standards, but she cannot fathom why. She resents teachers’ comments because to her they seem arbitrary. She explained: “In writing classes, there are often ten different ways to do the same thing, and my writing is the way I want to write it.” Unlike typical writers, she refuses to “play the game” in order to get good grades. Instead, as a means of protecting herself from negative
criticism, she has adopted a defiant stance. For Barbara, "My writing is my writing." She seems caught in a painful spiral in which severe writing problems lead to negative comments that, in turn, leave her so paralyzed that growth becomes unlikely, and thus, invites yet more writing failures. Frustration with writing contributes to her overall assessment of college as a very oppressive place. While typical writers are often trying to take charge of their writing, and so are able to grow in basic ways, Barbara and many weak writers we spoke with hardly seem to know where to begin to resolve their problems. Instead, they often bog down, futilely blaming instructors and the educational system for their difficulties.

**David: Overcoming Writing Problems**

David is a physiology major who has always disliked both reading and writing. Like Barbara, David has serious difficulties in his writing. In his case, problems with spelling and grammar are so severe that he once failed a high school English class. After attending a trade school, David decided that he wanted to go to college in order to become a doctor, so he has worked very hard in the last few years to bring his writing up to college level by taking remedial writing and freshman composition. Unlike Barbara, whose writing problems seem insurmountable at the moment, David feels optimistic because he is making real headway. He has mastered the art of writing lab reports, in part, he said, because standard formats relieve him of having to make structural decisions. More like writers in the typical group, he is successfully using tips about paragraph construction in order to increase his sense of control. Also, he has figured out a strategy for managing his sense of cognitive overload for in-class writing: Since his spelling problems become worse when he is writing under pressure, he told us that he consciously simplifies his ideas so that he is able to cope with both content and mechanics.

Most importantly for David, he is actually passing his upper-division writing for the sciences class. After dreading the class for years, he finally enrolled with the attitude, as he said, that "I know I'm not strong, but I want to survive comp." Finding his instructor to be understanding about his mechanical problems really helped. As he put it, "I couldn't believe she never got down on me for being such a bad writer." Keeping a journal in the class has enabled him to see writing more positively. He finds that the informality of journal writing frees him from his constant anxiety about spelling. While he had always considered writing to be a boring chore of reporting, experimenting with the kind of writing he has done in his journal has shown him that it can also be used to discover ideas. In fact, he has begun keeping his own journal at home to explore personal problems.

A nondirected writer, David is a visual thinker with such a keen eye for detail that he can sketch a dollar bill from memory. He uses his imaging ability to cope with his spelling problems by both seeing and hearing words spelled out while he works. But he has a hard time controlling the constant
stream of pictures that flash by as he writes: “It’s like a video; it keeps going; something triggers something else—not just stills.”

While he has made great strides, David, like many weak writers, described writing processes that seem quite undeveloped. He said that he usually plans little, just jots down ideas into draft form. Then he reads his work to see if it “flows.” If it does, he types his paper immediately, making surface changes as he types. It is hard for him to generate and organize material. As with other weak writers, we found David working hastily in a somewhat vague and superficial way. Although he is a weak writer, David has broken out of the cycle of blaming the teacher and has worked hard to achieve the degree of competence that he currently has.

Tim: Hampered by Undeveloped Processes

Tim, like David, is an older student who is reversing a negative attitude towards education—and towards writing in particular—in order to pursue a degree in mechanical engineering. Before he began college work, he always found writing frustrating. As he told us, “Writing has been a stumbling block for me. I can’t seem to express exactly what I feel or see on paper. In speech I stumble and stutter.” He attributed some of his problems to the pressure of his mother insisting that he use “proper English” in both speaking and writing. Chronic spelling problems made it impossible for him to meet her high standards. “Correct” is a word Tim used often in talking about writing.

Because Tim felt bored with the topics he had to write about in high school, he told us that he habitually avoided writing whenever possible. Now that he is in college, Tim’s attitude towards writing has changed. Knowing his writing needs improvement, he has sought out courses that require writing. In these courses he has discovered that when he chooses topics he enjoys, he puts more effort into his work, sometimes writing three or four drafts instead of his usual single draft. With his grades improving, Tim now sees himself as an average writer.

But we found Tim, like many other weak writers, operating with undeveloped writing processes over which he has little control. A directed writer, he said that he sits down at his word processor, thinks of a general outline, then begins composing directly on the computer. Unless he is particularly interested in his topic, he then just edits his one draft, running a spelling checker to correct errors. Tim, as seems to be the case with many science students, appears from his thought samples to be a visual thinker who sees a stream of images as he writes. He finds these images distracting, yet still pressures himself to make his first draft “correct,” rather than revising through multiple drafts. Unlike typical writers who are tackling the problem of organization, Tim finds what he calls “correct organization” a mystery. He is unaware that his final papers consist of short, choppy, subject-verb-object sentences.
Like David, Tim is a weak writer who really wants to improve his writing. Towards that end he has courageously enrolled in classes that require papers. But as yet he is focusing on external considerations such as interesting topics and is far from understanding how complex the internal writing processes really are.

**Dale: Rebelling against the Academic Audience**

Dale, an older student majoring in business, is a writer who may not actually be as weak as he appears to be based on his performance in his business writing class. He has consciously decided to "blow off" the class, as he said, by doing only the minimum work needed to pass. Locked into a personal conflict with his instructor, who has said his writing is too wordy, Dale has responded by grudgingly paring down the wordiness but turning in drafts dashed off at the last minute. Like many weak writers, he unwillingly accommodates his instructor.

However, in general, Dale has a more positive attitude toward writing and more control of his processes than most weak writers do. He actually enjoys writing, seeing it not just as reporting but as "a way of realizing things." Generating and organizing material are no problem. Outside of writing for course work, he writes poetry and fiction and plans to write a novel eventually. As a directed writer who thinks in pictures, Dale, unlike David and Tim, does not find images distracting or hard to translate into words. Clearly, images drove the essay he wrote for us. As he said: "My ideas came mostly in the form of pictures and then I concentrated on how I would express them in words." Along with using images, he also created a controlling metaphor to organize his essay. This evidence suggests that Dale is incorporating his creative writing strengths into the processes and products of academic writing. Unlike for Ethan, the creative writer in the typical group, this process of synthesizing is not deliberate: When we reviewed Dale's thought-samples, he was quite surprised at the extent to which images guided his nonfiction writing.

While Dale's internal processes are more developed than those of many weak writers, he is, like them, struggling to cope with external demands. He feels ambivalent about education in general. Like Tim, he has been bored by school in the past and even now works hard on only those assignments and classes that interest him. Like Barbara, he rebels at instructor criticisms and seems strikingly uncritical of his own work. Though he resented his composition instructor's comment that his writing was too wordy, Dale reported that in a business writing class offered through his department, he finally agreed, after much resistance, to his instructor's request that he make his writing "terse and straightforward." It seemed to us that perhaps he fails to see that both instructors were actually telling him the same thing, and were, in fact, referring to conventions of business writing. Yet for Dale, as for many weak writers, all instructor comments are interpreted as arbitrary and idiosyncratic.
While strong writers can sort out the genuine pieces of instructor bias they run across, weak writers cannot. Unlike some weak writers who struggle with both the internal and external demands of academic writing, Dale is held back mainly by his response to external demands.

**Gena: Learning to Reach the Academic Audience**

Gena, an art history major, paints and draws; she is also a serious photographer. Besides working in the visual arts, she is a creative writer who keeps a daily journal, and writes poetry and short stories. She is working on her first novel. A nondirected writer, she works by allowing ideas to accumulate over several weeks. Parts of papers develop throughout her day—while she is out walking, when falling asleep, or washing the dishes—so she always carries a notebook in which to jot down thoughts. She said she knows it is time to begin drafting when she feels inspired: “It’s like this overwhelming feeling, and I’ve got to write it down. The sentences are rushing at me so fast that I can’t keep it inside. . . . I’ve had to write on paper bags or while I was driving.” When writing, Gena roams widely, producing much of her material from images and metaphors. After this torrent of drafting ends, she looks over her material critically to “see what I’ve got.”

Although she had been a successful writer both in and out of school, Gena found, like many weak writers, that when she began college, her academic writing was not well received. Papers came back marked “C” and “D” with comments such as “too wordy”; “too long”; and “need to make it more to the point.” Over the years, she has struggled to adjust to the demands of her instructors, and now, especially since completing an advanced composition course, she has finally found some strategies that have helped her to adapt. Her method is to follow her usual creative writing processes through the rough draft stage. Then, at that point she sets up an outline and begins a rigorous revision: “I try to remove myself, then get rid of all those wonderful words I like to use and change sentences. I like to use long sentences. I try to get rid of those—just stick to basic sentences.” In the end, she now turns in papers that stay on the topic, are well supported, and are “something everyone can understand.”

Gena is a formerly weak writer who has grown remarkably. When we interviewed her, we found her becoming more critical of her own work and more willing to revise. She said in the interview, “I’m more serious about it than I used to be. I used to just scribble something out, and now I go back and rearrange it, change it, where before I just left it in its original form.” At one time she resented the accommodations she had to make in academic writing and felt her work was unappreciated. Now she credits the adaptations she has made to academic writing with forcing her to develop more control of her writing processes.

Still, she feels her nondirected way of working is devalued by the academy. Like Tracey, an intuitive writer in the typical group, Gena has been told by instructors that her rough drafts are too
disorganized and unfocused. In an effort to offset these discouraging comments, she hands in her revised academic versions instead of her actual rough drafts. Yet she has resisted altering her basic intuitive processes in spite of the pressure on her to work logically. And she said she still often prefers her first drafts to the “conveyer-belt” papers into which she must convert them: “I like to save my first drafts because I find them more interesting. I don’t think teachers would share my appreciation of them!” After a long struggle, Gena, like many of our other creative writers, is beginning to negotiate successfully the differences between academic and creative writing.

**Lower-Division “Weak” Writers**

**Jessica: Holding that Writing Is Self-Expression and Resisting Audience Demands**

Jessica, a directed writer who hopes to become a news broadcaster, has been doing poorly in her freshman composition class. Like Barbara, she has responded defensively to negative comments, and she now bitterly resents her instructor. She is trying to preserve an image of herself as an excellent writer, since she was pegged “the scholarly one” in her family and in high school rated herself “10 out of 10” as a writer. Now having dropped to a “7,” she feels angry and cheated.

Part of Jessica’s problem is that, like so many typical and weak writers, she seems to be struggling to retain her conviction that writing means self-expression. She said writing is best when “I can speak from my gut and explain things descriptively.” Some of her rage stems from having the expectation of being free to express herself in college writing upset. Like many students who see writing as self-expression, she believes that the way her work turns out is the way it was meant to be. Along with these students, she is offended by instructor criticisms of her creative efforts. Jessica’s outrage is compounded by her inability to critique her own work. Like many other weak writers, she is easily satisfied with her own writing and cannot understand why her instructors do not agree.

Since writing means self-expression to her, Jessica does not feel she must accommodate an audience. As she explained, “Your audience will come to you.” Unfortunately, this expectation was also disappointed when she received low grades on her composition papers. Now, frustrated and helpless, Jessica feels angry about accommodations she does not want to make. In particular, she feels coerced by the narrow parameters of assignments that force her to take a feminist stance in one paper and to write about “the sixties era” in another. She said, I haven’t felt excited about anything I’ve written. I like to write about something that I can get excited about.” Her predicament is not unusual. Many students that we interviewed complained about having to change positions in papers or even alter their writing processes in order to appease instructors. Strong writers take these accommodations in stride, managing to retain a sense of ownership of their work. Typical writers shrug their shoulders and resign themselves to “giving them what they want.” Weak writers, however,
often feel tremendously oppressed by their accommodation. We found Jessica practically immobilized in a futile effort to regain her self-confidence by resisting audience demands and insisting that her academic writing be self-expression.

**Benjamin: Also Insisting that Writing is Self-Expression**

Like Jessica, Benjamin is doing poorly in his freshman composition class and is lashing out at an educational system that he feels has undermined his confidence. As a prospective computer science major, Benjamin thinks back wistfully to high school when he had a reputation as a computer expert. And, as Jessica also said, he thinks academic writing should be expressive. For Benjamin, writing is fun when he can write about his feelings. But after receiving a low grade on a paper with a topic that was personally very meaningful to him, he was left feeling oppressed and powerless. He said, “It’s got to be done a certain way, the instructor’s way, because I’m being graded—so I don’t have a choice.”

Yet Benjamin, like other weak writers, is far from understanding what is expected of academic writing and is struggling with undeveloped writing processes. A nondirected writer, he works by sitting down at a word-processor and typing whatever comes to mind. Then he edits for surface correctness directly on the computer. He finds it hard to generate and organize material, as he put it, “the right way—so it sounds good.” In writing the sample he produced for us he followed his usual procedure: “A couple of things popped into my head, so I just went ahead and started.” He wrote until “I thought that was all, and by then something else popped into my head.” Benjamin’s attitude toward many other aspects of writing is also very superficial. Generally, he tries to project an academic persona that is “fun, but smart.” Grammar, he thinks, is the most important aspect of writing. And when we asked how he would revise his papers, he responded: “Correct the spelling. That’s about it . . . maybe check the grammar.” Benjamin feels powerless in the face of what seems to him to be an oppressive educational system, yet he is unaware that the source of that powerlessness is the mismatch between his own meager writing resources and what is expected of him in college writing. While writers in the typical group struggle to “play the game,” weak writers like Benjamin have not yet learned the system at all.

**“Weak” Writers: Conclusions from the Cases**

In our study we found that weak writers generally are students who have had serious problems with writing at some point in school. Some, however, first encounter difficulties in college writing. Often their instructors’ assessment of the their work is so at variance with their own assessment that writers in this group become enraged and defensive. Other writers of the group, like two of the older
students, have a history of writing problems but are taking responsibility for their writing and working hard to improve. Many of the weak writers dislike writing. However, two of the weak writers who did enjoy writing were creative writers. Unlike the creative writers in the strong and typical groups, these writers have not yet begun to grasp fully the differences between creative and academic writing.

The weak writers often have a superficial view of writing processes. They work quickly, drafting without much thought and then returning to their drafts only to correct grammar and spelling. Surface correctness is often a problem and a preoccupation for them. In contrast with our diligent strong writers, who labor in order to meet their own high standards, and with typical writers, who often work hastily but express regrets about it, weak writers seem to feel that the little time and energy they expend on writing is sufficient. They think that the writing they produce by this method is actually quite good.

Weak writers seem almost unaware that they even have writing processes. Very little about their writing is under control, so correspondingly, we see little growth in their writing. In contrast with strong and typical writers who can articulate the writing strategies they have developed, weak writers language about their writing is strikingly passive. It is as if writing were something that happens to them, not something that they actually control themselves. For them, writing means spilling thoughts, not shaping them. Often this attitude crystallizes into the belief that academic writing requires unrestrained self-expression. They simply do not seem to recognize the constraints of writing in the academy. With this intense personal investment in their writing, an instructor’s rejection of their work is tantamount to a personal rejection of them. So at a basic level, weak writers, like our other writers, are struggling to own their work.

With so little under control internally, much of weak writers’ attention is focused on external problems. Weak writers seem beleaguered in the classroom. In contrast with strong writers, who set up their own games, and typical writers, who figure out the instructor’s games, weak writers cannot even understand what the game is. Their resources are inadequate for college writing. Unlike typical writers, who can at least repeat what they have been told about writing, weak writers seem not to have absorbed this information. They do not speak the language most other students have learned in writing classes. Academic writing constraints clash with their conviction that writing is self-expression. Unlike typical writers, who accept instructor comments unquestioningly, weak writers often reject them categorically—perhaps because many are negative. They become defensive in the face of instructor criticism and are quick to dismiss all comments as arbitrary. For these writers, just learning to enjoy writing on an interesting topic or grasping that writing can have a purpose other than reporting is real progress. With so many internal and external problems, growth is often slow or nonexistent for weak writers.
Chapter 4
General Conclusions from All Cases of “Strong,” “Typical,” and “Weak” Writers and Implications for Teaching

General Conclusions from All Cases

In comparing the three categories of writers, some general patterns appear. Often writers within each category show striking similarities in their approaches to both internal and external aspects of academic writing that contrasted those of other groups. “Strong” writers describe internal writing processes that are varied and well-developed. They are beyond figuring out basic strategies and are instead often dealing with sophisticated writing issues. In their interactions within the academic writing situation, strong writers are generally willing to listen to instructor comments, yet they are sure enough of themselves to listen critically. These writers are assertive in their approaches to both writing processes and instructor demands and thus balance ownership of their work with responsiveness to audience needs.

“Typical” writers, in contrast, seem to be actively engaged in a struggle with both their processes and meeting classroom demands. While they are coming to understand some aspects of their own processes, their ways of working are somehow more vague and undeveloped than those of strong writers. Typical writers are often just starting to pinpoint basic problems such as how to organize papers. They are struggling, too, with the academic writing situation. Often instructor comments are accepted and internalized uncritically—even those comments that are not always accurate. They try to give instructors what they think instructors want without really blending in their own purposes. Unlike strong writers, who balance ownership with audience awareness, typical writers feel conflict between what they “want” to write and what they are “supposed” to write.

“Weak” writers, in contrast with the other two groups, often feel overwhelmed by internal and external pressures. Often they are just beginning to develop a few basic strategies, such as ways to handle spelling problems or make an outline. While typical writers tend to believe all instructor comments, weak writers tend to reject all critical responses. For them, the conflict between ownership and accommodating the audience often means choosing to express themselves and rebelling against
audience demands. Strong writers tend to be confident, typical writers have somewhat shaky self-esteem, and weak writers seem to feel victimized.

While these distinct patterns emerged from the cases in ways that verified the categories chosen by instructors, not all the writers fit so neatly into them. Sometimes the perceptions writers have of themselves differ from those of the instructors. At times the holistic rating of writing samples is also incongruent with ratings of instructors. Interestingly, often when student self-assessments differed from those of instructors, the student assessments were borne out in their holistic scores. So the instructor ratings that we used are not definitive. These exceptions can reveal some of the ways instructors evaluate students in the academic context.

Among strong writers, for example, Jean rated herself as only “average” or “slightly above average.” She also scored a 4, within typical range, on her writing sample. Unlike most of the strong writers, Jean is anxious and does not like to write. Yet she has become competent through hard work even though she does not feel, as Greg said about himself, that writing is one of her “given talents.” Because of her diligence, it is easy to see why instructors would rate her highly. Randy, another strong writer, only scored 4 on his sample and seems more like a weak writer in his resentment of instructors. Yet he says he works for praise, so we can only guess that he is doing something exceptional to earn his high rating.

In the typical writers group, both Elizabeth and Paul see themselves as “below average.” Yet both score roughly within the typical holistic range—Paul at 3 and Elizabeth at 4. Significantly, both students are overcoming early writing problems. Paul feels held back by the nonstandard grammar used in his family and Elizabeth still suffers from harsh criticisms of previous instructors. Perhaps the negative self-images of these students are carried forward so that they see themselves as less capable than their instructors do.

On the other hand, Ethan and Lisa, both designated as typical writers by their instructors, see themselves as “well above average.” Both are experienced creative writers. Ethan, indeed, scored 6 on his writing sample and impressed us with his interest and ability in writing. Yet, as he told us, he prefers creative writing and is currently trying to find interfaces between creative and academic writing. So we can only guess that perhaps his efforts here are not always working. Lisa, however, only scored 2, within the weak range, on her writing sample. She is less willing than Ethan to accommodate an academic audience; she insists that writing should be self-expression. Thus these writers’ perceptions of themselves as writers seem to be based on their identity as creative writers, an identity that does not always transfer to the academic setting of instructor assessments.

Among the weak writers, Gena’s situation is similar to those of Ethan and Lisa. While her instructor considers her weak and her holistic score was only 2, Gena sees herself as a strong writer. Yet her self-assessment is based on her creative writing abilities. She came to the interview with
creative writing from the past ten years, including a novel. Like Lisa, she is only beginning to come
to terms with the differences between academic and creative writing.

Other weak writers are among those having problems with either their current instructor or with
their attitudes towards education in general. Dale is rated “weak,” yet scored 4 on the holistic rating
of his sample. As we found out, he had decided not to put much effort into his composition class.
Jessica, also rated weak, scored 5 on her sample, in the strong range. This writer told us that she once
thought she was an excellent writer, “10 out of 10,” but now feels like a “7” in her composition class.
Enraged at her instructor, Jessica defiantly insists that writing should be self-expression. Perhaps
she scored well on her sample since she was writing with few constraints to an audience other than
her current instructor. In all the categories of “strong,” “typical,” and “weak” writers, then, we find
some disparities in assessments of instructors and students.

**Implications for the Teaching of Writing**

The descriptions of student writing in these cases alert teachers to several issues about the writing
processes of college writers and their responses to the academic writing situation. “Strong,” “typical,”
and “weak” writers are discernibly in different stages with their internal processes. These differences
remind us as teachers to use our classroom assessments of writers to set reasonable goals for their
differing abilities. As instructors we also need to remember that individual writing processes are
different. The strong writing group in itself illustrates the variety of ways of working that can be
successful.

In some cases, we found students being penalized for using processes not to their instructors’
liking. We used the terms “directed” and “nondirected” to account for basic differences in the
processes of writers who plan carefully, consciously focusing on one point after the next, compared
with writers who discover ideas by working circuitously and ranging around many points that never
get to text. Students react differently when told to change processes that feel natural to them. Christine,
a directed writer, was told by her instructor that her rough drafts were too organized. In strong-writer
fashion, she simply resorted to subterfuge in order to make her writing look more disorganized than
it was. She accommodated her instructor but was confident in her directed way of working.

Tracey and Gena, both nondirected writers, were told their rough drafts were too disorganized.
Tracey, a typical writer, unquestioningly accepted the comment as true. It confirmed her feeling that
she was an inadequate writer, someone who wrote the “wrong” way. Gena, a weak writer, initially
rebelled and refused to change her rough drafts. Yet as nondirected writers, both Tracey and Gena
are likely to produce chaotic first drafts. Thus we need to be careful as instructors that we provide
process strategies for students while still respecting process differences. By presenting different
ways successful writers may work and by treating early versions of papers as process drafts rather than trial final drafts, we can avoid crossing the line into becoming prescriptive about processes.

In addition, the importance of the ownership-audience dilemma seen in all three groups reminds us as instructors to respect the tension students experience over this issue. Students react differently to instructor demands. Doug, a strong writer, demonstrates ways he retains his sense of purpose while meeting the needs of his audience. In response to the (perceived) demand that he change his stance in a paper, he constructed his own purpose by remarking philosophically that the experience taught him how to argue a position that he really did not hold. When told by his creative writing teacher not to include vulgarities in stories, he ingeniously figured out how to have his characters be the vulgarians. In both cases, he was able to assert ownership while still “playing the game.” In contrast, at the weak end of the spectrum writers tend to feel oppressed by instructor demands. Though they become enraged, these writers are less assertive. Rick, for example, raged helplessly about a low grade that he felt he had received because he had used sexist language in a paper. It is important that we realize that the development of writing abilities means that students must push against us at times in different ways.

Finally, as instructors we need to keep in mind that students are not just learning to write, but are, in fact, learning to write for the academic discourse community. John and Greg, both strong writers, are well on their way to adjusting. John is beginning to see similarities in creative and academic writing after previously perceiving them as diametrically opposed. Greg, a journalism student, mentions that he has begun using longer sentences in academic writing because it feel “natural” to do so. Ethan, a typical writer, and Gena, a weak writer, are struggling both to distinguish academic from creative writing and to find appropriate interfaces between the two. Other weak writers, such as Jessica and Benjamin, are bogged down in their refusal to see differences between personal writing that permits self-expression and academic writing that is more convention-bound. As these descriptions of “strong,” “typical,” and “weak” writers indicate, academic writing abilities are comprised of a combination of responses by students to their own internal writing processes and to the external academic writing situation. We still have much to learn about the complex ways in which students develop their writing abilities.
References


Appendix A
Thought-Sample Preparatory Materials
Thought-Samples

One way of studying the process of writers is to look at the thoughts that go through writers' minds as they compose. This short training procedure will give you a way of reporting your thoughts to me.

The Procedure

As you write, I will interrupt you a few times and ask you to report your thought just before you were stopped. If you remember any thoughts before that, just list them going backwards in time. Your task is first to mark an X on the spot in the text where you stopped. Then simply report what was going through your mind, first by writing down your thoughts in your own words, then by answering specific questions about your thoughts. These thoughts are fleeting so you need to begin reporting them on the questionnaire IMMEDIATELY after I signal you to stop writing. You will know you are to stop when I tell you to.

You do not need to use complete sentences or even be concerned if what you are writing down makes sense. Just get your thoughts down on paper as best you can. Use words, illustrations, graphs, or any combination that seems to describe what was going through your mind. Try to be as detailed and precise as possible.

You may find that you're tempted to add things that weren't really there in your thoughts. It's important to resist this temptation and simply describe those things you know you were aware of thinking.

After you complete the questionnaire (which takes about 3-4 minutes), you can resume writing on your topic.

REMEMBER:

1. At the sound of the word "STOP," stop writing on your topic and mark an X on the spot in the text where you were stopped.

2. IMMEDIATELY, turn to the questionnaire and report the last thought you had just before the interruption.

3. At my signal, turn again to your piece of writing, and begin writing again.
VISUAL PATTERNS THAT MEAN SOMETHING TO YOU

*Seeing a partial map of south Minneapolis: "How can I explain the fastest route to the airport? I just see that part of the city and somehow can relate distance and traffic conditions to time according to what I see."

*Connecting an abstract idea to something more concrete you've experienced: "Analogic watch equals children playing ring-around-the-rosy."

SPECIFIC AND VAGUE THOUGHTS

CAN BE SPECIFIC AND EASY TO DESCRIBE OR HARDER TO PINPOINT

*A sense of vague structural relations between thoughts: "I see ideas placed in visual parallel clumps--Some grouped by a bracket."

*A faint idea: "Physical sense in my chest . . . Hard to put into words though it holds everything I've said together."

RELATION OF THOUGHTS TO THE WRITING TASK

*Directly related thoughts: "I'll follow with an example."

*Indirectly related thoughts: "Finding my cat . . . connection . . . how I felt learning geometry . . . sudden insight."

*Not related at all: "I hear my stomach growling . . . I must be hungry . . . hmmm . . . a hamburger."
Kinds of Thoughts

WORDS AND PICTURES

What kinds of thoughts occur to you as you write? Generally, they are an interplay of words and images. Some are mainly verbal while others are mainly pictorial.

EXAMPLES OF THOUGHTS WITH WORDS

* An instruction we give ourselves: "I want to open with a statement about political views."

*A network of connections we want to make: "I have to relate this engineering project to the economics of energy to show why I'm improving it."

*An awareness of our purpose and audience in writing: Lost, lost, lost . . . explain my job . . . someone who knows nothing about computers."

*Comments to ourselves about the writing itself: "Retrace my last few steps . . . see if I can find my argument again."

EXAMPLES OF THOUGHTS WITH PICTURES

SIMPLE PICTURES:

* Seeing your audience scowling: "Scowl . . . I see Professor Morgan . . . he doesn't like this."

*Seeing an image related to your idea: "Vision . . . woman in her late youth ???. Connection to point I'm making about human development."

*Hearing an image: "This essay is all coming out in the key of C."

*A particular word (or word-image) strikes you as perfect: "I liked the sound of the two words—loon lake."
PRACTICE THOUGHT SAMPLE

Topic: Describe the worst job you ever had (paid or unpaid). What made it so bad?

Instructions: Begin writing on this topic on this page and on the back. You'll be stopped after a short time and asked to report your thoughts at the moment just before you were interrupted on the attached thought-sample questionnaire.
THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was your last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

B. What, if any connection do you think the thought had to your piece of writing?

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?
   1. mostly words
   2. mostly pictures
   3. both at the same time
   4. can't remember

B. How well detailed were the thoughts that were going through your mind?
   1. very detailed
   2. somewhat detailed
   3. somewhat vague
   4. very vague
C. Were the things going through your mind very picture-like? Could you see any shapes and forms?

1. picture-like elements throughout
2. some fairly prominent picture elements
3. just a trace of picture elements
4. no trace of anything picture-like

D. Were the things going through your mind very auditory?

1. very auditory
2. moderately auditory
3. just a little auditory
4. not at all auditory

E. If your thoughts were mostly words, did you hear them?

1. didn't really "hear" them; just thought them silently
2. heard an "interior monologue"; mentally talked to myself
3. heard someone else talking to me
4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e., you felt you were deliberately focusing your attention on your writing in order to achieve a goal)

1. it was all directed thought
2. it was mostly directed thought
3. a little directed thought
4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e., thoughts flowed through your mind without your direct control)

1. it was all non-directed thought.
2. it was mostly non-directed thought
3. a little non-directed thought
4. no non-directed thought
INTRODUCTORY QUESTIONNAIRE

NAME ____________________________ COURSE __________________

ADDRESS ____________________________ PHONE __________________

BEST TIME TO REACH YOU ____________________________

A. Sex
   1. Male
   2. Female

B. Age? _____

C. Major
   declared _______________ intended _______________

D. College
   1. College of Biological Sciences
   2. College of Liberal Arts
   3. Carlson School of Management
   4. School of Nursing
   5. Institute of Technology
   6. other _______________

E. Year
   1. freshman
   2. sophomore
   3. junior
   4. senior

F. College writing courses completed
   1. FRESHMAN WRITING PRACTICE (1011)
   2. FRESHMAN WRITING PRACTICE (1013)
   3. other _______________ (e.g., courses taken elsewhere or upper-division courses)

G. Writing experience outside usual college or school courses

________________________________________

H. Is English your main language?
   1. yes
   2. no
   If no, please state your main language _______________
I. Is it important for you to have any special methods or materials to help you read or learn?
   1. yes
   2. no

J. In general, how do you feel about writing?

Would you be interested in participating further in this study?

   1. yes
   2. no

Additional participation includes a meeting lasting about 1 1/2 hours for which you will be paid at the rate of $10 per hour. THIS SESSION CAN BE SCHEDULED AT YOUR CONVENIENCE. You will be asked to bring along two pieces of writing you have done along with you. During the meeting you’ll be asked to complete a questionnaire about your writing and to discuss your pieces of writing and the way you work as a writer. Your participation in the study will not affect your grade in any way. ALL INFORMATION YOU CHOOSE TO GIVE US WILL BE KEPT STRICTLY CONFIDENTIAL.

Thanks for your help.
You will be asked to write for 45 minutes on the following topic:

BACKGROUND: Many of you notice dramatic differences in the usefulness of the classes you take. Some ideas you work with at school can be applied to interests, concerns, and activities in the rest of your life—they may cause you to see things differently in some way. For example, suppose you discuss the concept of cultural and regional bias one day in a course you are taking, and the very next day a neighbor says to you: "You know, I just realized that not all of the children everywhere have blond hair and blue eyes." You notice that the comment takes on new significance for you because it exemplifies what you've talked about in class recently. It leads you to begin to identify your own regional biases and to see yourself in a different way.

In turn, you may find that you apply personal experiences to the ideas you are working with in a course in order to understand better or to make them more meaningful.

Sometimes, however, the ideas you work with in courses you are taking may not seem to connect with your personal experience at all. For example, the work I did in a biology lab course cutting up small animal parts didn't connect much for me at all—except to convince me that I wasn't suited to become a surgeon, which I already knew.

YOUR TASK: A team of academic researchers is interested in ways people learn. They wonder especially about the importance of these connections students make between academic work and personal experience. Your task is to reflect upon ways you do or don't make these connections. You might start by thinking of specific times you've learned something that struck you as significant in this way. (It can be any time since you've been in school, ranging from nursery school to yesterday.) Then use these significant examples in order to generalize about your own learning process and the way our educational system seems to approach learning. Does the education system encourage these applications? (What does it have to do with getting A's?) Should it?

When you write on this topic we'll ask about your process in two ways: First, we will interrupt you a few times as you write in order to ask for a "thought-sample," or a brief report of your thoughts. When you're interrupted, you'll complete a short questionnaire (3-4 minutes) asking you to report what was going through your mind at the moment you were stopped. Second, we will ask you to complete another brief questionnaire (15-20 minutes) immediately after the writing sample.

Your instructor will return copies of both your writing and the questionnaires to you. From them you should be able to learn more about your individual writing process, since it will provide you with a bird's-eye view of what goes on as you write.
Appendix B
Thought-Sample Questionnaire
THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was your last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

B. What, if any connection do you think the thought had to your piece of writing?

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

1. mostly words
2. mostly pictures
3. both at the same time
4. can't remember

B. How well detailed were the thoughts that were going through your mind?

1. very detailed
2. somewhat detailed
3. somewhat vague
4. very vague
C. Were the things going through your mind very picture-like? Could you see any shapes and forms?

1. picture-like elements throughout
2. some fairly prominent picture elements
3. just a trace of picture elements
4. no trace of anything picture-like

D. Were the things going through your mind very auditory?

1. very auditory
2. moderately auditory
3. just a little auditory
4. not at all auditory

E. If your thoughts were mostly words, did you hear them?

1. didn't really "hear" them; just thought them silently
2. heard an "interior monologue"; mentally talked to myself
3. heard someone else talking to me
4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e., you felt you were deliberately focusing your attention on your writing in order to achieve a goal)

1. it was all directed thought
2. it was mostly directed thought
3. a little directed thought
4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e., thoughts flowed through your mind without your direct control)

1. it was all non-directed thought.
2. it was mostly non-directed thought
3. a little non-directed thought
4. no non-directed thought
Appendix C
Post-Sample Questionnaire
Post-Sample Questionnaire

1. In general, how did you go about writing this piece? Think about how you arrived at insights, organized your writing, adjusted for your audience, and decided how to present yourself in the writing. Were you able to generate enough material to write for 45 minutes?

2. Were there any ideas that really stood out for you as you wrote? What were they? Were they mostly in the form of words or images?

3. Sometimes when people think, they connect abstract ideas to something more concrete (i.e., linking the way analogic watches work with a game of ring-around-the rosy). Did you do that?

4. A. Are you satisfied with what you wrote?
   1. very satisfied
   2. somewhat satisfied
   3. somewhat dissatisfied
   4. very dissatisfied

   B. What, if anything would you change?
5. Circle the item from each category that best describes your writing process in general.

A. 1. I prefer to think through carefully what I am going to say before I write, then write one main draft, returning only for minor changes.

2. I prefer to find my ideas by writing and rewriting extensively.

3. Other ____________________________

B. 1. When I write I usually think about only what directly pertains to what I'm going to say next.

2. When I write I often let my mind roam expansively over a lot of ideas.

3. Other ____________________________

C. 1. I really work carefully and deliberately to develop my ideas as I write.

2. I write intuitively. My best ideas usually come to me without my having to direct and control them.

3. Other ____________________________

D. 1. My ideas usually occur to me in words without pictures.

2. My ideas often occur in pictures, graphs, and things I hear.

3. Other ____________________________
Appendix D
Instructor Ratings of Student Writers
Appendix D
Instructor Ratings of Student Writers

<table>
<thead>
<tr>
<th>Ratings (n=148)</th>
<th>Frequency</th>
<th>Percentage</th>
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<tr>
<td>Strong</td>
<td>53</td>
<td>35.8%</td>
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<tr>
<td>Typical</td>
<td>70</td>
<td>47.3%</td>
</tr>
<tr>
<td>Weak</td>
<td>25</td>
<td>16.9%</td>
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Appendix E
Holistic Scores of Student Writers
and
Samples of Papers
Appendix E
Holistic Scores of Student Writers

### Holistic Scores of Student Writers

<table>
<thead>
<tr>
<th>Scores (n=148)</th>
<th>Range</th>
<th>Frequency</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>High</td>
<td>5-6</td>
<td>13</td>
<td>08.7%</td>
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<tr>
<td>Average</td>
<td>3-4</td>
<td>84</td>
<td>56.8%</td>
</tr>
<tr>
<td>Low</td>
<td>1-2</td>
<td>51</td>
<td>34.5%</td>
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</tbody>
</table>
Sample of Essay with the Holistic Score of 1

9-1

Sometimes I make connections. Something I read or hear goes "click" and I feel I understand with depth. The knowledge has meaning—I can feel it's right/know it's right. Or I recognize a specific example from my past that fits the general case I just heard about.

The feeling is one of revelation, but it seems hollow. Maybe, I expect a richer feeling and am disappointed.

Huh.
Hmmm........................1

It is rare for me to learn something and later have that "click".

When it happens, I fully realize the connection between the particular situation and the past, but the thought is in a way intruding on what's going down in that situation. It distracts me. The thought or connection in this case is not helpful.

add to paragraph 1: it does seem to help me learn that^2 particular section.

There is a third way I make connections, but it's more the "click" w/o the connection. It's when I study something like Calc. There is rarely a connection between my daily life and Calculus. Sometimes when I'm studying it, I feel understanding. It all is obvious/makes sense. The feeling I get when a connection happens. The understanding part, that is. I have not a feeling of connection. But the feeling of limited utility (the feeling that it doesn't do a hell of a lot for me) is the same.3
Sample of Essay with the Holistic Score of 2

Sometimes I can make a connection between my personal life and school. Like reasonly my dad and I were talking about the elections. I can't rember the details, but the next day in school the professor said the exact same thing my dad did. I felt that that was interesting, so I listened more to the profester. Because of that I got a better grade on the test.

This happened a lot in high school, because of our Spanish teacher. He would tell us what is going on in his old country and we could go home and see it on the news. He would also have a festa day in this day you could play games, etc. But the hole thing had to be done in spanish. He also helped us get invoied in the world he set up a program were kids could rais money\textsuperscript{1} for an ambelince to send down to people in Mexico. I think that making games out of things helps people learn because no one wants to pick up a history book and just read it.

In a night art course I have taken we had to see slides of difernt pieces of work. I found that listening to the teacher talk about difernt things was boring, and I did not think I could remember what was said about them. But seeing a picture of them and listening to her really did help. Because when I saw some of the pieces we had talked about I could remember almost all of what she said about them. The class was an Intro to Studio Arts, which tells a history. What I found the most intresting was that Minneapolis/St. Paul had alot of the works we saw, on display. Of course it was only a tour so they would leave but It was neat that we saw them.\textsuperscript{2}

My dad use to do flash cards with us. He would hold up a card which had numbers you should add together. We were to figure it out. I was always really good at it. I was so good Krista (my sister) could not answer most of the time. I'm really good in math I never made the conection to doing good at our little compotion and doing well in math. I guess it does have aconexion.

My snails I had, taught me about non-male female reprodution. The snails were nether male nor female but they had babies. So I found out young that not everything needs a mothe and father. I did not have to pay much attention\textsuperscript{3} to that part in Health.

\footnote{1}{money raised for charity}

\footnote{2}{excellent tour}

\footnote{3}{usually ignore things not related to exams}
Sample of Essay with the Holistic Score of 3

1-13

I feel connections are a part of every day life, whether it be conscious or subconscious. When asked to write about my connections, I find it hard to reflect upon them because it is such an everyday part of life.

When concerning the classroom connections to everyday life I find these less ---- I really hate this!!! It's not fun!!

Furthermore...

I took a Medieval European Studies course this past year and made quite a significant connection. I never realized what an important part religion plays in history and the present. The corruption and shameing of some of the Bishops, priests and etc. was tremendous. This was only to become rich and powerful. The unfortunate part is the power never sustained too long. I see in the church today. The shaming and quitting that was a result of our ancestors. 1

I would also like to include a non-connection example. Calculus is a course in which I find no connections, what so ever in the outside world. I couldn’t use the functions to produce images, it was very frustrating.

Learning is much more enjoyable if one can relate it to life. Just the other day I was reading about depressant drugs and how they effect your nervous system. The book discusses why some people believed alcohol to be a stimulating drug. Finally it all made sense to me. 2 Alcohol stunts your reactions. Thus, people feeling stressed relax and feel as if they can say and do what they normally wouldn't. Having no regrets, they have a goodtime. Somehow I can better understand so many people abuse alcohol.

Norwegian is another example of a non-connecting course. I can not use the language on the street and unfortunately not very many people learn the language either. Eventually I had a passion to know the language because it concerned my ancestors and past. Now I am impatient and feel a need to learn the language first hand from the natives themselves. I am taking care of this dilemma, I'm going to Norway this summer.

Making connections sometimes has to be forced, or brought up by other people and ideas. I feel as if it is like analyzing Shakespeare Sonnets. Making connects to what his metaphors might be, then relating them, as you please to certain life situations or getting old.

One particular Sonnet Stand out in my mind. It concerns getting old and age. 3 Shakespeare talks about the a rose and what is behind the intention of the flower. It shrivels and dies but that makes the life it had and the intention behind it any less real than when it was new.

3 Interstit of
poor mechanics
even of arguement
Sample of Essay with the Holistic Score of 4

1-11

"When are they going to teach us to read, Mom," I asked when I was in the first grade and had just about had it with the numerous ways we were made to recite the alphabet. I was looking so forward to learning to read and to be able to finally read my older sister's books. When the time did come I was elated and to this day that second grade class is still a favorite of all my classes.

Basically, I think my learning has gone through phases. In elementary school, not just in second grade, I was eager to learn and excited to understand the ways of the world. Reading, math, history and geography were my favorites, and the interest that I have now stems from my elementary classes. It was a combination of the fun games and methods the teachers used, and also an open mind eager for any challenge. Even today I still use little tricks and pointers that were told to me by my teachers. Of course not all the lessons taught in elementary school were valuable for me. I never understood why we had music class because I know no one improved or gained any musical skills. Art class also didn't make our school named "Honored Artists" each week and the same kids kept winning the title. But generally I enjoyed kindergarten through sixth grade, and learned a great deal from it. I was in a high-potential program, so I think being exposed to different lessons and different people added to my eagerness to learn.

In Junior High, however, I felt a little let down. A lot of the classes I had to take didn't seem to be important, and I certainly wasn't interested in them. Classes such as life science in which we dissected worms and shop classes which catered to the boys in the class were among my least favorites.

I continued to enjoy many of my classes and teachers, and some of them, such as Algebra have given me a sound base to build on. What I did find, in thinking back now, was a lot of teachers who didn't teach but instead assigned terms and readings. Nevertheless, I enjoyed my junior High a great deal, but the emphasis wasn't on academics. It was on friends, school dances, boys, and clothes.

In high school my learning took a very different approach. I was tired of school and was faced with more meaningless classes than ever before. I therefore fell into a type of system. If the classes were interesting and captured my attention - great! Otherwise I did what was required and not much more. I still got A's and B's, which shows the amount of unimportant things being taught in the class. I got very good at selective listening, note taking, and participating.

My first time ever to fall completely asleep in school happened about two days into fall quarter when I was a sophomore. I found that we were given a lot of useless information and shown films for time fillers. I enjoyed high school very much, and I think it was because I had a very laid back attitude about it, but yet I still did well. The only class throughout my whole three years that left any sort of impression on me was a world lit class I had as a Senior. Our teacher, Mr. Nasedick, had a great sense of students and their minds. He lead his class every day as a discussion, in which we would discuss RELigion, Knowledge, and other unanswerable questions.
Sample of Essay with the Holistic Score of 5

If I had to reflect upon all the classes I’ve taken so far, and organize them into groups based on how well I thought I learned in them, I would create only two categories: the broad and detailed. Both of these types are equally popular, and each has their own advantage.

“Detail” classes are those typically I.T. classes. The entire course seems concerned with formulas, complex derivations and results. There is a very good reason for this type of course: given raw data, a meaningful mathematical description of the information can be given, or new information can be extracted. Any of the sciences depends upon the ability to extrapolate, predict, and manipulate information in a concrete way.

The problem with detail courses is that their usefulness diminishes over time; when access to reference materials is not available. Physics illustrates this nicely. Everyday one sees phenomenon that could be described with physics.\(^1\)

Examples of this include temperature gradients, sound levels, velocities, etc. However, the data from such observations is useless unless one can remember the formulas. Most of the simpler ones can be derived with unit comparisons and calculus, but others are too complex. The mathematics of such systems also gets extremely complicated. In either case, if any part of the formula or procedure is forgotten, one may not be able to use any of the information that is, many people forget their physics and calculus if they don’t use it; all that remains is nightmarish memories of homework sets and midterms.

The other type of course, which I call “wide focus” is concept oriented. Liberal Arts courses tend to fall into this category, but some I.T. classes do too. The goal of these courses is not merely memorization. It presents a complex set of ideas but requires the student to be able to think in these terms. For instance, political sciences courses by their nature present ideas that part of the class will disagree with. In order to debate the topics and write effectively however, one must learn to think in terms of the topic, despite personal feelings on the subject. Thus the memorization a specific set of facts or formulas is not the goal of such a course, but to teach one to think in a certain way, or get him to understand a new topic or idea. So long after freshman physics has long passed from memory\(^2\), images from Dante’s Inferno, or A Caste of Amantiallolo by Poe or better yet, the totalitarian fears of George Orwell’s Brave New World Revisited will still be deeply locked into memory. There is a fundamental difference between the two ways of learning. “Details” is abstract and impersonal. Few people are ever able to think and respond at an intuitive level to these topics. Their profuse use requires very deliberate thought, control, and a good reference text. Ideas oriented classes are better integrated into memory because they are more relevant to our minds and daily experiences. Often their ideas can be remembered as feelings, smells, and emotions. The ideas in class become our experiences if they were well learned, not merely comfortable tools and implements.

Do courses that fall into the broad category always convey their messages better? Do people remember and use these ideas equally? No. I think the most important aspect of an ideas oriented class is validity. Feelings, emotions, are all nice, but they’re useless in an argument. If ideas and philosophies are to be remembered in a useful fashion, they must have a basis. The details of
I'm sitting in my Philosophy class. The class is entitled 3002, general history of Western Philosophy, and this particular course covers the Medieval philosophers. They are quite an interesting group: St. Thomas Aquinas, St. Augustine, Nicholas of Cusa, St. Anselm; all Religious, all attempting, in their small study in some dark tower, 'to explain the existence of God, to state that in this external world it is o.k. to believe in God, it is important to have faith, faith in something that will lead a person, through rough times, will lend hope when all seems doomed; just this faith, this belief in something to help one through' the Many turmoils in life. I listen to the professor, take all these theories in like they are absolute truths, study them know them, can recite them. We take a test, i can write down such things as "only must believe in order to understand," or "Reason inspires faith and faith inspires further reason." It all sounds so correct; the professor grades my test, i get an "A", Thus i know these things.

One year later, I was hired as an intern in the county attorney's office. My job is to organize the witnesses for all cases (we prosecute all Criminal cases in Hennepin County) and make sure they know when they are are supposed to testify. Additionally, I go down to the actual courtcases and watch these witnesses testify! While doing this, i sit with the family of the victims and help them through these rough times. This is incredibly difficult; on each occasion that i have done this, the case had been a murder trial. So there i sit with these parents of a man who has been killed and try and help, well actually, just listen to them. I feel like a person with his hands tied behind his back; i am helpless, i cannot do anything for these people except listen to their stories, listen to their cries, and shake my head in mutual disbelief. I can never know how they feel, no matter how hard i try to put myself in their place, i can't; i end up still listening, still feeling, but still saying Nothing. When they talk to me, they attempt to find some kind of understanding, some way of putting this terrible happening in perspective and deal with it as such. And they all, every single one of them, says and does the same thing; puts their faith in something greater, something that will distill a Much greater justice that will find them the victor this time. I don't consider myself a preacher or zealot of any kind, but it all Makes sense Now. The old woman, who has lost her son, lost her other son before that, has lost all who are close to her, is able to get up and live every day because the faith inspires her to do so. When all is lost, she with those deep, sullen eyes and skeletal frame, is still able to say yes there is something to live for. She believes in this greater justice, believes in it despite all she has endured, and uses it to carry her from one day to the Next. To this i say, what is wrong with Faith, what is wrong with believing in this greater justice, this one single concept that Makes people live when there seems to be Nothing to live for. I Now understand these lectures of those great Men, now that i believe i am able to understand Now that i have seen the strong guise of Faith actually working and assisting am i able to fully understand what these men were obviously talking about.

It all seems somewhat strange, i'm sure, but i don't see how something one learns in school or class can not help but effect how one leads their life on a daily basis. I feel that one must learn to bring all things within, and then sort them and determine the significance of each thing. The life of school and the personal life are constantly working together in order to enrichen concepts, to shape judgments and
to influence basic daily decisions. In this class, I am currently learning how to evaluate Narratives, how to define and differentiate difficult narratives from one another. In doing so, I test my newfound abilities out on the real world: I listen to the stories people tell, to how they tell them and why they tell them. I listen, to Myself talking to people and then try to understand why I told them what I just did, I understand what Makes My Roommate such a great story teller, how he is able to Relate to the entire audience. I am constantly learning all of these things and attempting to use them in ordinary day to day occurrences.

In Reviewing Most of the courses I have taken in college, it seems that professors try and do either one of two things: either present the Material and let you decide on its Validity, or present the Material along with their own criticism of it. Thus, it seems that the educational process is either to present you with specific ideas and concepts, and then allowing you to decide their individual level of importance, or mold them according to their own criticism or interpretation.
Appendix F
Jean, "Strong" Writer
Sample Materials
Jean: Background Questionnaire

Background Questionnaire

Name: 
Date: 5/15/89

1. Your GPA
   a. 3.5 or higher
   b. 3.0-3.4
   c. 2.5-2.9
   d. 2.0-2.4

2. Typical core curriculum grades
   a. A's
   b. B's
   c. A's and B's
   d. C's
   e. B's and C's
   d. D's
   e. C's and D's

3. High school graduation date: June 1985

4. Average hours of non-college work you do per week (paid employment, child rearing, volunteer work)?
   a. 10 or less
   b. 11 to 15
   c. 16 to 20
   d. 21 or more

5. Education level of parent/s or guardian/s who raised you:
   Person #1. State relationship: father
      a. less than high school
      b. high school diploma
      c. 1 or more years of college
      d. college undergraduate degree
      e. post graduate study
      f. post graduate degree

   Person #2. State relationship: mother
      a. less than high school
      b. high school diploma
      c. 1 or more years of college
      d. college undergraduate degree
      e. post graduate study
      f. post graduate degree

6. How much do you read?
   a. When I have time, I read a lot.
   b. I read some, but not a great deal.
   c. I read when I have to.
7. How much do you write?
   a. When I have time, I write a lot.
   b. I write some, but not a great deal.
   c. I write when I have to.

8. Where do you usually write? at home - sitting on my bed or at my desk.
Jean: Introductory Questionnaire

THE STATUS OF THE WRITING ABILITIES OF STUDENTS
INTRODUCTORY QUESTIONNAIRE

NAME ________________________ COURSE (Emp 301)

ADDRESS ________________________ PHONE ________________________

BEST TIME TO REACH YOU ________________________

A. Sex
   1. male
   2. female

B. Age? ______

C. Major
   declared ________ intended ________

D. College
   1. College of Biological Sciences
   2. College of Liberal Arts
   3. Carlson School of Management
   4. School of Nursing
   5. Institute of Technology
   6. other ________

E. Year
   1. freshman
   2. sophomore
   3. junior
   4. senior

F. College writing courses completed
   1. FRESHMAN WRITING PRACTICE (1011)
   2. FRESHMAN WRITING PRACTICE (1013)
   3. other ________ (e.g. courses taken elsewhere or upper division courses)

G. Writing experience outside usual college or school courses ________

H. Is English your main language?
   1. yes
   2. no
   If no, please state your main language ________
Jean: Introductory Questionnaire, continued

I. Is it important for you to have any special methods or materials to help you read or learn?
   1. yes
   2. no

J. In general, how do you feel about writing?
   I like to write letters and informal things
   but I hate to write papers for classes.

Would you be interested in participating further in this study?
   1. yes
   2. no

Additional participation includes a meeting lasting about 1 1/2 hours for which you will be paid at the rate of $10 per hour. THIS SESSION CAN BE SCHEDULED AT YOUR CONVENIENCE. You will be asked to bring two pieces of writing you have done along with you. During the meeting you'll be asked to complete a questionnaire about your writing and to discuss your pieces of writing and the way you work as a writer. Your participation in the study will not affect your grade in any way. ALL INFORMATION YOU CHOOSE TO GIVE US WILL BE KEPT STRICTLY CONFIDENTIAL.

Thanks for your help.
Jean: Introductory Questionnaire, continued

Below are several aspects of composing that writers think about as they write. For each feature please answer the following questions:

a. How much importance do you place on this particular feature as you write?
   1. A GREAT DEAL   2. SOME   3. ALMOST NONE

b. Would you say you have problems with this feature?
   1. A GREAT MANY   2. SOME   3. ALMOST NONE

FEATURES OF GOOD WRITING

1. I try to reach my audience by adjusting the content, tone, and style to meet its needs.

2. I try to adapt the writing to suit its purpose (i.e. to inform, persuade, etc.)

3. I manipulate the content of my writing by:
   a. abstracting or synthesizing ideas.
   b. analyzing critically or evaluating material or data
   c. Ordering ideas most effectively
   d. Making it convincing within the constraints of audience and purpose

4. I try to develop a persona (an appropriate voice and style).

5. I work on surface correctness, eliminating problems of grammar and the mechanics of punctuation and spelling.

6. I try to be aware of concepts and vocabulary specific to my major field.

7. I use citations and documentation appropriately both in my rhetorical choices and in its technical correctness.

8. What other criteria guide you as you write?
Jean: Writing Sample

psychology
- always connects w/ real life
- myself & friends' problems
  connecting w/ other classes
  - psychology & French lit.
  - psychology & comp
  - Grice

Until recently, within the past year or so I don't think that I made many generalizations connections between things learned in class and things in my life. It seems though that as one gets takes more and more specific classes, there is more and more overlap between classes. Being a Making these types of connections between life and classes or between classes can, I think, provide a better make the things learned more interesting, or more important, and maybe in this way, improve grades.

Being a psychology major
Certain classes or domains may be more relevant to real life
Jean: Writing Sample, continued

than others. As a psychology major, it seems that things I learn in class often are often relevant to my life - if not immediately, they may be important later. While reading my book for my Abnormal Psych class for instance, I'm constantly analysing myself and my friends hoping that in the book I can find some answers to the problems we face.

Making connections between things learned in different classes (which is making connections with life if you are a full time student) is also very helpful in making things memorable. As one takes more and more classes in my major I find that there is a lot of overlap. I think that this is helpful because I learn and re-learn the concepts. I think I have sometimes made connections between classes in different domains. Recently in comp class we talked about Grice's maxims which I had learned about in
my Psychology of Language class. When I learned them, I learned them in reference to speaking but in my Comp class they were used in reference to writing. This gave me a whole different view of thes maxims; that they could be used consciously to help me with the writing process. Learning this new facet made the information more important; now there are more connections to these maxims in my "network" representation of the concept. Having more connections tend to make things more memorable and easier to retrieve from memory.

All classes and professors are different in respect to trying to get the students to relate their studies to things in their lives. However, I think all students do eventually
Until recently, within the past year or so, I don't think that I made many connections between things learned in class and things in my life or in other classes. It seems though that as one takes more and more specific classes, there is more and more overlap between classes. Making these types of connections between life and classes or between classes can make the things learned more interesting, important or memorable and maybe in this way, improve grades.

Certain classes or domains may be more relevant to real life than others. As a psychology major it seems that things I learn in class are often relevant to my life - if not immediately, they may be important later. While reading my book for my Abnormal Psych class for instance, I'm constantly analyzing myself and my friends hoping that in the book I can find some answers to the problems we face.

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All classes and professors are different in respect to trying to get the students to relate their studies to things in their lives. However, I think all students do eventually
Jean: Sample Paper, "Age Differences"

AGE DIFFERENCES IN LONGITUDINAL STABILITY
OF PERSONALITY TRAITS

University of Minnesota

Submitted to

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Psychology 5135
AGE DIFFERENCES IN LONGITUDINAL STABILITY
OF PERSONALITY TRAITS

In order to study personality we first must have a definition. Willerman (1979) gives a definition that makes us ask questions, starts us thinking about personality: "... personality refers to consistent individual differences in either style of content of behavior." (Willerman, 1979, pg. 201) The key word in this definition is consistent. Is there such a thing as a consistent personality? Certain traits that an individual possesses that guide their behavior? If this is true then why do people behave differently in different situations? Why do the same people behave differently in very similar situations as adults than they did as children? Do we find cross-situational consistency in personality traits? Do we find longitudinal stability?

Many studies have been done on cross-situational stability of personality traits. I am not going to look at that issue in this paper. For my purposes I am going to assume that a change in behavior in different situations is due either to the situations or to a change in personality due to growth. I would not expect someone to act the same in different situations, even situations in which the same trait is involved. For example we were to measure extraversion as the number of words a subject said to others in a room in which he was told to wait for an experiment to begin. Suppose in the room
there are three friendly looking people, we would expect the subject to be relatively talkative if he was extraverted and relatively quiet if he was more introverted. Now suppose that in the room there are three very large individuals each holding a knife and looking strangely at the subject, would we still expect the extraverted subject to talk a lot? I am going to assume that change in behavior is due to the circumstances or if it is due to an actual change in personality the change can be explained in terms of longitudinal change of personality. Therefore I am going to focus my attention on the longitudinal aspects of personality and the test reliabilities in this respect.

So, the question at hand is: can longitudinal stability be expected in personality traits? First, what exactly is stability? Although, a straightforward definition of stability or consistency would be that of "no change," and researchers do view consistency in this way (Clarke & Clarke, 1984; Gjerde, 1985), there is also another important definition of consistency, that is of "an individuals ranking within a group" (Bloom, 1964; Clarke & Clarke, 1984; Gjerde, 1985). Consistency needs to be viewed in both of these respects. Some researchers make a distinction in terms between these two definitions (Gjerde, 1985) but not all researchers use the same terms for the same definition. Secondly, how will stability be measured? Stability is measured by correlation coefficients which measure the "ranking within a group" definition (Stein, Newcomb & Bentler, 1986). Therefore, the focus will be on the second definition of stability.

One question in respect to the expected stability of personality traits over time is; what causes the change? Since studies have shown
Jean: Sample Paper, "Age Differences," continued

that the test-retest reliabilities are not 1.00, what are the causes of this discrepancy? McFarland & Sparks (1985) state, "Personality researchers usually think of the consistency of a personality scale as a property of the scale rather than as a characteristic of the individuals responding to it. Yet, logically, it is both." It should no be assumed that all of the discrepancy lies in the test. This again would be to say that an individual's personality traits never change. However, even if a person is expected to change over time it's not likely that this change takes place quickly. Therefore the immediate test-retest reliability comes into play (Huesmann, Eron, & Yarmel, 1987). The longitudinal consistency could not be expected to be higher than the immediate test-retest reliability. McFarland and Sparks (1985) also state that "...internal consistency in responding to personality scales is, itself, a consistent individual difference." This implies the somewhat obvious, although sometimes overlooked, fact that some individuals are going to be more consistent than others. This stability is to some extent measured in the E scale (emotional stability) of the Guilford-Zimmerman Temperament Survey, in which a high score on the E scale can to some extent predict stability in personality (Guilford, Zimmerman, & Guilford, 1976).

There have been many important studies done in personality consistency in adulthood and in childhood. There is controversy over whether or not children should be used to study stability in personality. One researcher states "...the dominant use of young subjects in personality research may contribute to generally low predictive power of personality scales." (McFarland & Sparks, 1985) However, some researchers have found consistency in personality even in the early years (Bloom, 1964). This paper will focus on the reliabilities in childhood versus those in adulthood found in various studies. Thus,
first the childhood studies will be reviewed, then the adult studies, followed by studies which have covered both childhood and adulthood. Then, an attempt will be made to make sense of the data in terms of periods, in the lifetime of individuals, in which personality is more stable, and to distinguish any differences in the traits which are more consistent.

Studies of Children

The initial aim of this research was to study longitudinal stability of personality inventories (i.e. self-report measures of personality.) However with studies of children it is often impossible to use this type of measure. Therefore, some of the studies cited used ratings by psychologists or other individuals competent in this task. Some of the studies used ratings for the initial personality measure and an inventory at the later testings.

Bloom (1964) has put together some data on personality studies, and a very extensive study by Kagan and Moss (1962) is cited. Kagan and Moss (1962) had case studies rated for consistency. Data from ages 2,5 and 8 are correlated with data at age 12 for various kinds of aggression and data on various indicies of dependency. Among these data indirect aggression to peers (N= 44 males and 45 females) has the highest overall correlations (.53-.60 for females and .64-.71 for males.) The correlations tend to be higher when the interval is shorter (for example; indirect aggression to peers correlating age 5 to age 12 is .64 and for age 8 correlated with age 12 is .71) The other types of aggression have lower correlations and even some negative correlations (most of the negative correlations are for females.) The data on dependency generally show smaller correlations and a great
deal of variability (Bloom 1964 pg. 148-153).

In a study by Stein et al. (1986) 654 subjects (193 males and 461 females) were tested on the Bentler Psychological Inventory three times at 4-year intervals. The age of the subjects at the first testing was 13-15. Correlations were calculated for each trait for all possible intervals (year 1 with 5, year 5 with 9, and year 1 with 9.) In general higher correlations were found between years 5 and 9 than years 1 and 5, indicating greater stability in the young adult period than in adolescence. The three traits with the highest overall stabilities were extraversion (year 1-5 = .43, year 5-9 = .64 & year 1-9 = .41), objectivity (year 1-5 = .46, year 5-9 = .57, & year 1-9 = .40), and religious commitment (year 1-5 = .55, year 5-9 = .71, & year 5-9 = .51). Correlations for extraversion and religious commitment were higher for males while those for objectivity were higher for females.

A longitudinal study of latency and error scores on the Matching Familiar Figures Test (MFFT) was done by Gjerde (1985). The MFFT is considered a measure of reflection-impulsivity. Fifty-nine subjects (30 males and 29 females) were given the test at ages 3, 4, 5 and 11. For females the means of the across-time coefficients are .17 for latency and .30 for error. For males the mean across-time correlations are .19 for latency and .34 for error. Across-time correlations of MFFT error scores tended to be higher than correlations for latency and tended to be larger when the time between tests was shorter.

Studies of Adults

Of the personality studies reported in this paper all but one
Jean: Sample Paper, "Age Differences," continued

used personality inventories, and moreover the same inventory was used for all testings. The other study used self-ratings and ratings by friends or relatives.

A four year study of college students was done by Nichols (1967) using the Sixteen Personality Factor Questionnaire (16PF) Form A. The subjects were National Merit Finalists and therefore of above average intelligence. The number of subjects at final testing was 432 males, and 204 females. The four year retest reliabilities found in this study are rather high. For the females the correlations run from .21 to .64 for the various subtests and for the males from .28 to .63. Although there are large differences between the stabilities of the subtests for males and females, three of the subtests seem to stand out in general as more highly correlated: sociability, adventurousness, and femininity with correlations of .49 for males and .62 for females for sociability, .49 for males and .64 for females for adventurousness and .63 for males and .53 for females for femininity.

The Guilford-Zimmerman Temperament Survey (GZTS) was used in a study of adult males (Costa, McCrae, & Arenberg, 1980). The subjects were tested three times at 6-year intervals. The subjects ranged in age at first testing from 17-85. One hundred fourteen subjects completed all three tests. Data of the two 6-year periods do not differ highly in their correlations and the twelve year period has, on average, only slightly smaller correlations. The three traits with the highest 12-year reliabilities are: general activity (.80), ascendance (.85) and friendliness (.77). Costa et al. (1980) also classified the subjects into three age groups to test the hypothesis that stability would be greater in older groups. The statistics done on the data appear
inconclusive in this respect.

Men participating in the Cardiovascular Disease Project (CVD) at the University of Minnesota were the subjects of a study by Leon, Gillum, Gillum, and Gouze (1979). The MMPI was given to these men in 1947, 1953, 1960 and 1977. At the time of the first testing the group consisted of 281 men with a mean age of 49. Seventy one subjects completed all the tests and this group had a mean age of 77 at the final testing in 1977. These men were of above average intelligence and upper-middle class and upper-class SES groups. The data suggest that social introversion was very consistent, having a correlation of .736 over the 30-year interval. Masculinity-femininity and hypomania were both very stable also with 30-year correlations of .584 and .524 respectively. In general, the correlations tended to decrease over time.

Another study was done concerning the same CVD group over the 30-year interval. Finn (1986) tested the hypothesis of greater stability in later adulthood. Finn (1986) divided the subjects into two cohorts; Cohort 1 aged 43-53 at the outset of the study in 1947 and Cohort 2 aged 17-25 at the outset. From Cohort 1, 78 men completed all four testings, and 96 men from Cohort 2 completed all tests. Overall 30-year correlations in Cohort 1 ranged from .10 to .88 while correlations for Cohort 2 ranged from -.05 to .58. The two cohorts differed on relative order of the traits, however two traits had high correlations ($r$ corrected $\geq .70$) for both cohorts: delinquency and religious fundamentals. These were the only highly stable ($r$ corrected $\geq .70$) traits for Cohort 2 but Cohort 1 had many more traits with this high stability level.
Jean: Sample Paper, "Age Differences," continued

Conley (1985) proposed a new technique for the study of personality stability, that is of multitrait-multimethod-multioccasion analyses. Conley states, "...the stability of self-reported personality characteristics is not sufficient evidence to prove the longitudinal stability of personality." since it is possible that what is really being measured is how stable one perceives oneself. Conley used the data from the Kelly Longitudinal Study. At the outset of the study in 1935-38, 300 engaged couples aged 18-35 completed the Personality Rating Scale for themselves and their partner and acquaintances also completed this scale about them. The subjects also completed the Bernreuter Personality Inventory. In 1954-55 the Bernreuter Personality Inventory and the Personality Rating Scale were used to collect data (subjects filled out the rating scale for themselves and their partner.) At a third testing in 1980-1 a questionnaire consisting of the Cornell Medical Index and questions regarding health, activities, marital satisfaction, etc. Of the 300 original couples, 189 couples participated in the third follow up (these individuals were not necessarily the same ones who participated in the second testing.) Results comparing the first and second testings showed neuroticism, social extraversion and impulse control to have high stabilities. Correlations for neuroticism range from .17 to .39 when comparing the personality rating from Time 1 to the Bernreuter Personality Inventory Scales for Times 1 and 2. When comparing social extraversion (personality rating) to social introversion (Bernreuter scale) correlations range from -.23 to -.54. The Time 3 data support the data for Times 1 and 2 concerning neuroticism and social extraversion.
A Study between Childhood and Adulthood

A study by Huesmann et al. (1987) looks at aggression at age 8 and at age 30. In 1960 at age 8 the subjects were rated for aggression by a peer-nominated technique. Aggression was defined by the percent of time the individual was nominated on 10 aggressive acts out of the number of times he or she could have been nominated. This measure of aggression has a 1-month test-retest reliability of .91. At age 30 the subjects took the MMPI. Scales F, 4, and 9 were used to figure the overt aggression scores. This measure has a retest reliability of .87. The correlations found over the 22-year period between age 8 and 30 are .30 for males and .16 for females.

A Synthesis of the Data

A table of the studies was put together to make this synthesis easier to see and understand. In studying Table 1 one can depict

four traits that seem to stand out as being highly correlated in more than one study; aggression, extraversion (sociability, social introversion, social extraversion), religious commitment (religious fundamentals), and reflection-impulsivity (impulse control).

Aggression was found to be highly correlated in the childhood years by Kagan and Moss (1962) with correlations ranging from .53-.60 for girls and .64-.71 for boys. However, Huesman et al. (1987) found fairly low correlations for a 22-year interval starting at age 8. This indicates that aggression may be highly correlated for childhood but childhood aggression may not be highly correlated with adult aggression. Another interpretation may be that adult aggression cannot be compared with childhood aggression, or that the different
Jean: Sample Paper, "Age Differences," continued

types of measurement used by huesmann et al. at age 8 and age 30, cannot by compared for aggression. Having only two studies to compare on aggression and given that the data from Kagan and Moss (1962) cited in Bloom (1964), was on one specific type of aggression one cannot be sure about a certain pattern of aggression consistency over periods in a lifetime.

The data on reflection-impulsivity by Gjerde (1985) shows only moderate correlations in childhood, .17-.30 for girls and .19-.34 for boys. However, Conley (1985) depicts impulse control as one of the three traits with the highest correlations in his multitrait-multimethod-multioccasion analysis of adults aged 18-35 over a 19-year interval, with corrected correlations of .3-.5. This may indicate a higher correlation of impulse control in adulthood. However Gjerde (1985) shows higher correlations when corrected for attenuation, closer to the range of Conley’s corrected corrected correlations. Therefore, we find moderate to high correlations for reflection-impulsivity in childhood and adulthood.

Two studies found high correlations for religious commitment and religious fundamentals. Stein et al. (1986) found correlations ranging from .51 to .71 in adolescence and early adulthood for religious commitment. Finn (1986) found corrected correlations .70 for both Cohort 1 and Cohort 2 for religious fundamentals. This data suggests that religious commitment (fundamentals) have high stability from about age 13 on, if one can assume that these traits are the same. Yet, even if religious commitment and religious fundamentals as assessed by these tests are not the same, one can still say that the tendency for religious thought and/or action appears stable from
approximately age 13 on.

The data on extraversion seems to leave little doubt that this trait is highly correlated from at least age 13 on and over long periods of time. Four of the studies cited found extraversion to be one of the three traits of highest stability in that study. Stein et al. (1986) found correlations for two four-year intervals and one eight-year interval (covering the two 4-year intervals) ranging from .41 to .63 for adolescents and young adults. Nichols (1967) found correlations of .49 for males and .62 for females covering the four year period in which these individuals attended college (a time, virtually anyone who has attended college will say, of great change.) Over a 30-year period a group of males having mean age 49 at first testing were found to have a correlation on .736 (Leon et al. 1979). And Conley (1985) found a range of .23-.54 over a 19-year interval for adults.

Therefore, there is ample evidence for moderate to high stability of extraversion, even over periods of great change; some evidence for moderate to high stability of religious commitment and reflection-impulsivity; and uncertain evidence for aggression, possibly aggression in childhood is highly correlated with aggression in later childhood but has a much lower correlation when being correlated with adulthood aggression (this seems the most plausible of the explanations and is not at all improbable: There will be more change over a longer interval (Clarke & Clarke 1984).

Conclusion

Studies of longitudinal stability of personality traits have found a good deal of consistency. Bloom (1964) found consistency
in many traits in compiling data for children. Kagan and Moss (1962) as cited by Clarke & Clarke (1984), found that personality traits between the ages of 6 and 10 correlate significantly with adult traits. Stein et al. (1986) found, in a study of adolescents and young adults, that stability was greater in the young adult stage. Finn (1986) found greater stability in an older group of adult males than a younger group of adult males. Consistency has been found to be higher on particular traits.

In this compiling and synthesis of data four traits have been found to be very stable over time: extraversion, reflection-impulsivity, aggression, and religious commitment. Extraversion seemed to be stable over much of a lifetime, from at least age 13 on. The data show that extraversion is stable over the college years, which are often years of great change. Clarke and Clarke (1984) state that environmental change often causes personality change, yet extraversion has been shown to have a moderate to high amount of stability despite this.

The traits of religious commitment and reflection-impulsivity also show moderate to high stability over a lifetime. Aggression seems to show high stability in childhood but less stability from childhood to adulthood as would be expected because of the longer interval. In general, there is less stability over longer intervals and greater stability as an individual gets older.
References


Jean: Sample Paper, "Age Differences," continued

References cont.


References cont.


<table>
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<th>Studies</th>
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* These are corrected correlations. All other correlations are raw correlations.
Final Draft Paper 1

I once worked with a woman who always had interesting stories to tell about doing her laundry. I often wondered why her laundry was so much more interesting than my own and what I was doing wrong. Could it be that the little things that happened while she was doing her laundry were more exciting because of the way she told about them? Sociolinguist William Labov studied these kinds of stories, which he called natural narratives, and found six basic elements in them. In comparing these structures in two natural narratives, one that I collected from a friend Debbi and one that Labov collected from Larry, I will show how these can be used to captivate the interest of the listener.

Often natural narratives begin with an abstract which serves to catch the listener's attention and interest by giving an overview of the story. Larry's story has a distinct abstract, "An' then, three weeks ago I had a fight with this other dude outside. He got mad 'cause I wouldn't give him a cigarette." Larry's abstract peaks the listeners interest because it points out the oddity of the story. The listener may be unbelieving or simply awed and ask himself, "A fight over a cigarette?" Although Debbi's story lacks a distinct abstract the orientation in the first three sentences doubles as an abstract. Since I had asked Debbi to, "tell me a story" she may have felt that she didn't need to try to "catch" my attention.

Although both stories take place mainly in one location Larry gave the listener all the necessary background information right at the beginning, "Yeah, you know, I was sittin' on the corner an' shit, smokin'
my cigarette, you know. I was high an' shit." In this orientation Larry gives the setting - "the corner", the main character - "I", and the state of things - that he was high. Debbi gives some orientation in the first three sentences, then later in the story there is more orientation such as, "I'm sure the guys were like smoking dope." and, "we were all freezing because, it's like December and we're out in the woods..." It is sometimes necessary for certain orienting information to be held back until it is needed, as Debbi does. If she had said at the beginning that the guys were, "smoking dope" the listener may not have found this information important because it's not related to what Debbi is saying at the time, therefore they may not keep this in mind and would be confused when Debbi came to the part of the story in which this information was necessary: when the car is stuck and, "they're (the guys) all fucked up, they can't do anything." Often it's necessary to orient and re-orient the listener to keep their interest.

Complicating actions make up the base of natural narratives. In both Debbi's and Larry's stories complicating actions are strewn throughout. Complicating actions can be something that is keeping a character or characters from a goal as in Debbi's story; "So, o.k. fine, we're gonna leave. So we start the car, and the car is stuck." Here, leaving is the goal and being stuck is the complicating action. Complicating actions can also involve a conflict between characters as in Larry's story; "Eh, man, I can't get a cigarette, man? I mean- I mean we supposed to be brothers, an' shit." Generally, during a natural narrative the complicating actions will add up one after another, building up suspense in the listener until the result or resolution near the end of the story.
In Debbi's story there are the actions of, (1) going to the zoo on a back road, (2) the guys smoking dope, (3) the car being stuck, (4) the guys being unable to help, (5) not having a shovel, (6) having to walk back down the road, then finally the result that leads to the goal.

Another element that is found throughout the stories is evaluation. Evaluation expresses the importance and relevance of the story. One type of evaluation used by Debbi is external; the narrator makes comments about the experience, "It was really hilarious." Another type is internal; Larry uses this when he explains the situation to the guy who wants a cigarette (lines 28-31.) Repetition of certain phrases is also evaluation. Debbi evaluates with repeating the word, "o.k." while Larry has a whole phrase, "Ain't that a bitch?" With evaluation the teller makes the listener see that the story is odd, funny, scary or interesting but in some way relevant and worth listening to.

The result of an anecdote is, naturally, the outcome; what the listener has been waiting to find out. The coda, however, is sometimes more difficult to discern. It can be a "wrapping up" of the story, that is to say, reaching the goal or bringing the listener back to the present. In both Debbi's and Larry's stories the coda follows directly after the result. However, in Debbi's narrative it is difficult to find the distinction between the result and the coda. Debbi says, "And he dug us out, and then we went home. (pause) It was really hilarious." The first narrative clause is definitely the result. The second clause is part of the result yet it could also be seen as the coda in that it wraps up the story - the goal is reached. The third clause could possibly be considered coda in that it brings the listener back to the present.
Larry's story results in the teacher pulling him off the other boy.

What follows this line is the coda. The result and coda give the listener a feeling of satisfaction; all the complicating actions have been resolved and the goal has been attained.

I think that the next time I tell a story I'll pay attention to the way that I use these elements. Maybe I can learn to tell interesting stories about doing laundry too.
THOUGHT SAMPLES #1

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.
   
   how connections can make the things you learn more important so that you remember them better and maybe help your grades.

B. What, if any, connection do you think the thought had to your piece of writing?

   it was the thought I was trying to get across.

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

   1. mostly words
   2. mostly pictures
   3. both at the same time
   4. can't remember
Jean: Thought Samples #1, continued

B. How well detailed were the thoughts that were going through your mind?
   1. very detailed
   2. somewhat detailed
   3. somewhat vague
   4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?
   1. picture-like elements throughout
   2. some fairly prominent picture elements
   3. just a trace of picture elements
   4. no trace of anything picture-like

D. Were the things going through your mind very auditory?
   1. very auditory
   2. moderately auditory
   3. just a little auditory
   4. not at all auditory

E. If your thoughts were mostly words, did you hear them?
   1. didn't really "hear" them; just thought them silently
   2. heard an "interior monologue"; mentally talked to myself
   3. heard someone else talking to me
   4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).
   1. it was all directed thought
   2. it was mostly directed thought
   3. a little directed thought
   4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).
   1. it was all non-directed thought
   2. it was mostly non-directed thought
   3. a little non-directed thought
   4. no non-directed thought
THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

I was about to put into words that making connections helps form a network of information. Connect everything in your brain. The better things are connected the easier they are to remember.

B. What, if any, connection do you think the thought had to your piece of writing?

It was what I was about to write.

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

1. mostly words
2. mostly pictures
3. both at the same time
4. can't remember
Jean: Thought Samples #2, continued

B. How well detailed were the thoughts that were going through your mind?

1. very detailed
2. somewhat detailed
3. somewhat vague
4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?

1. picture-like elements throughout
2. some fairly prominent picture elements
3. just a trace of picture elements
4. no trace of anything picture-like

D. Were the things going through your mind very auditory?

1. very auditory
2. moderately auditory
3. just a little auditory
4. not at all auditory

E. If your thoughts were mostly words, did you hear them?

1. didn't really "hear" them; just thought them silently
2. heard an "interior monologue"; mentally talked to myself
3. heard someone else talking to me
4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).

1. it was all directed thought
2. it was mostly directed thought
3. a little directed thought
4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).

1. it was all non-directed thought
2. it was mostly non-directed thought
3. a little non-directed thought
4. no non-directed thought
Jean: Thought Samples #3

THOUGHT SAMPLES #3

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

whether or not to add stuff about the educational system; how much to say

B. What, if any, connection do you think the thought had to your piece of writing?

what to write next

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

1. mostly words
2. mostly pictures
3. both at the same time
4. can't remember
Jean: Thought Samples #3, continued

B. How well detailed were the thoughts that were going through your mind?
   1. very detailed
   2. somewhat detailed
   3. somewhat vague
   4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?
   1. picture-like elements throughout
   2. some fairly prominent picture elements
   3. just a trace of picture elements
   4. no trace of anything picture-like

D. Were the things going through your mind very auditory?
   1. very auditory
   2. moderately auditory
   3. just a little auditory
   4. not at all auditory

E. If your thoughts were mostly words, did you hear them?
   1. didn't really "hear" them; just thought them silently
   2. heard an "interior monologue"; mentally talked to myself
   3. heard someone else talking to me
   4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).
   1. it was all directed thought
   2. it was mostly directed thought
   3. a little directed thought
   4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).
   1. it was all non-directed thought
   2. it was mostly non-directed thought
   3. a little non-directed thought
   4. no non-directed thought
Jean: Post-Sample Questionnaire

POST-SAMPLE QUESTIONNAIRE

1. In general, how did you go about writing this piece? Think about how you arrived at insights, organized your writing, adjusted for your audience, and decided how to present yourself in the writing. Were you able to generate enough material to write for 45 minutes?

   I first jotted down a few thoughts about it and then started to write. As I was writing I tried to add to these thoughts & fill them out. Yes, I had enough material although at first I didn’t think that I would.

2. Were there any ideas that really stood out for you as you wrote? What were they? Were they mostly in the form of words or images?

   There were both words and images - a lot of the images were of classes & or teachers, classes that I had taken. An idea that really stood out was the network idea - I had sort of a vague picture of it in my mind.

4. Sometimes when people think, they connect abstract ideas to something more concrete (i.e. linking the way analogic watches work with a game of ring-around-the-rosy). Did you do that?

   No, I don’t think so.
Jean: Post-Sample Questionnaire, continued

5. A. Are you satisfied with what you wrote?
   1. very satisfied
   2. somewhat satisfied
   3. somewhat dissatisfied
   4. very dissatisfied

B. What, if anything, would you change?
   I'd have more focus and address the question more specifically

6. Circle the item from each category that best describes your writing process in general.

A. 1. I prefer to think through carefully what I am going to say before I write, then write one main draft, returning only for minor changes.
   
2. I prefer to find my ideas by writing and rewriting extensively.
   3. Other I think as I write but don't rewrite extensively

B. 1. When I write I usually think about only what directly pertains to what I'm going to say next.
   
2. When I write I often let my mind roam expansively over a lot of ideas.
   3. Other in between 1 & 2

C. 1. I really work carefully and deliberately to develop my ideas as I write.
   2. I write intuitively. My best ideas usually come to me without my having to direct and control them.
   3. Other

D. 1. My ideas usually occur to me in words without pictures.
   2. My ideas often occur in pictures, graphs, and things I hear.
   3. Other
Appendix G
Ethan, “Typical” Writer
Sample Materials
Background Questionnaire

Name: ____________________________  Mailing Address: ____________________________
Date: 15-10-89

1. Your GPA
   a. 3.5 or higher
   b. 3.0-3.4
   c. 2.5-2.9
   d. 2.0-2.4

2. Typical core curriculum grades
   a. A's
   b. B's
   c. A's and B's
   d. C's
   e. B's and C's
   f. D's
   g. C's and D's

3. High school graduation date: Spring '85

4. Average hours of non-college work you do per week (paid employment, child rearing, volunteer work)?
   a. 10 or less
   b. 11 to 15
   c. 16 to 20
   d. 21 or more

5. Education level of parent/s or guardian/s who raised you:
   Person #1. State relationship: Father
      a. less than high school
      b. high school diploma
      c. 1 or more years of college
      d. college undergraduate degree
      e. post graduate study
      f. post graduate degree

   Person #2. State relationship: Mother
      a. less than high school
      b. high school diploma
      c. 1 or more years of college
      d. college undergraduate degree
      e. post graduate study
      f. post graduate degree

6. How much do you read?
   a. When I have time, I read a lot.
   b. I read some, but not a great deal.
   c. I read when I have to.
7. How much do you write?
   a. When I have time, I write a lot.
   b. I write some, but not a great deal.
   c. I write when I have to.

8. Where do you usually write? Room, outside, always in left-handed
THE STATUS OF THE WRITING ABILITIES OF STUDENTS
INTRODUCTORY QUESTIONNAIRE

NAME
ADDRESS

COURSE
COM 301

PHONE

BEST TIME TO REACH YOU between 3:00 - 6:00 p.m.
or after 12 a.m.

A. Sex
1. male
2. female

B. Age? 21

C. Major
declared Eng Lit, philosophy intended

D. College
1. College of Biological Sciences
2. College of Liberal Arts
3. Carlson School of Management
4. School of Nursing
5. Institute of Technology
6. other

E. Year
1. freshman
2. sophomore
3. junior
4. senior

F. College writing courses completed
1. FRESHMAN WRITING PRACTICE (1011)
2. FRESHMAN WRITING PRACTICE (1013)
3. other (e.g. courses taken elsewhere or upper division courses

G. Writing experience outside usual college or school courses
journal, free writing, high school paper, Daily-Union

H. Is English your main language?
1. yes
2. no
If no, please state your main language
I. Is it important for you to have any special methods or materials to help you read or learn?
   1. yes
   2. no

J. In general, how do you feel about writing?
   I think it's great.

Would you be interested in participating further in this study?
   1. yes
   2. no

Additional participation includes a meeting lasting about 1 1/2 hours for which you will be paid at the rate of $10 per hour. THIS SESSION CAN BE SCHEDULED AT YOUR CONVENIENCE. You will be asked to bring two pieces of writing you have done along with you. During the meeting you'll be asked to complete a questionnaire about your writing and to discuss your pieces of writing and the way you work as a writer. Your participation in the study will not affect your grade in any way. ALL INFORMATION YOU CHOOSE TO GIVE US WILL BE KEPT STRICTLY CONFIDENTIAL.

Thanks for your help.
Below are several aspects of composing that writers think about as they write. For each feature please answer the following questions:

a. How much importance do you place on this particular feature as you write?
   1. A GREAT DEAL  2. SOME  3. ALMOST NONE

b. Would you say you have problems with this feature?
   1. A GREAT MANY  2. SOME  3. ALMOST NONE

FEATURES OF GOOD WRITING

1. I try to reach my audience by adjusting the content, tone, and style to meet its needs.

2. I try to adapt the writing to suit its purpose (i.e. to inform, persuade, etc.)

3. I manipulate the content of my writing by:
   a. abstracting or synthesizing ideas.
   b. analyzing critically or evaluating material or data
   c. Ordering ideas most effectively
   d. Making it convincing within the constraints of audience and purpose

4. I try to develop a persona (an appropriate voice and style).

5. I work on surface correctness, eliminating problems of grammar and the mechanics of punctuation and spelling.

6. I try to be aware of concepts and vocabulary specific to my major field.

7. I use citations and documentation appropriately both in my rhetorical choices and in its technical correctness.

8. What other criteria guide you as you write?

     (Examples: and ideas that help to convey...
Ethan: Writing Sample

I'm sitting in a philosophy class. The class is entitled 300C, General History of Western Philosophy, and this particular course covers the Medieval philosophers. They are quite an interesting group: St. Thomas Aquinas, St. Augustine, Nicholas of Cusa, St. Anselm, all Religious, all attempting, in their small study in some dark tower to explain the existence of God, to state that in this external world it is OK to believe in God, it is important to have faith, faith in something that will lead a person through tough times, will give them hope whereas all seems doomed; just have faith, this belief in something to help one through the many turmoils in life. I listen to the professor, take all these theories like they are absolute truths, study them, know them, can recite them. We take a test, I can write down such things as "one must believe in order to understand," or "faith inspires faith and faith inspires further reason." I get an 'A'.

One year later, I became an intern in the county attorney's office. My job is to organize the witnesses for all cases we prosecute all Criminal cases in Henry County and make sure they know when they are supposed to testify. Additionally, I go down to the actual court cases and watch these witnesses testify. While doing this, I sit with the family of the victims and help them through the tough times. This is incredibly difficult, on each occasion that I have done this, the case has been a murder trial. So there I sit with these parents of a man who has been killed and try and help, we all actually just listen to them. I feel like a person with his hands tied behind his back; I am helpless, I can't do anything for these people except listen, listen to their stories, listen to their cries, and shake my head in mutual disbelief. I can never know how they feel, no
Matter how hard i try to put myself in their place, i can't; i end up still listening, still feeling, but still saying Nothing. When they talk to me, they attempt to find some kind of understanding, some way of putting this terrible happening in perspective and deal with it as such. And they all, every single one of them, says, kind does the same thing: put their faith in something greater, something that will distill a much greater justice that will find them the victor this time. I don't consider myself a preacher or zealot of any kind, but it all makes sense now. The old woman, who has lost her son, lost her other son before that, has lost all who are close to her, is able to get up and live every day because this faith inspires her to do so. When all is lost, she with those deep, hollow eyes and skeletal frame, is still able to say yes there is something to live for. She believes in this greater justice, believes in it despite all she has endured, and sits it be carrying her from one day to the next. To this i say, what is wrong with Faith, what is wrong with believing in this greater justice, is our simple concept that makes people live when there seems to be Nothing to live for. I don't understand these lectures of these great men from Men that i believe i'm able to understand. No- that i have seen the strange quire of faith actually working and assisting am i able to fully understand what these men were obviously talking about.

It all seems somewhat strange, i'm sure, but i don't see how something one learns in school or class can not help but effect how one leads their life on a daily basis. I feel that one must learn to bring all things within, and then sort them and determine the significance of each thing. The life of school and the personal life are constantly working together in order to enmesh concepts, to shape judgments and to...
Ethan: Writing Sample, continued

Basic daily decisions. In this class, I am currently learning how to evaluate Narratives, how to define and differentiate different Narratives from one another. I'm doing so by using my new found abilities out in the real world; I listen to the stories people tell, to know they tell them and why they tell them. I listen to Myself talking to people and then try to understand why I told them what I just did. I understand what Makes My Roommate such a good story teller, how he is able to Relate to all the entire audience. I am constantly learning all of these things and attempting to use them in everyday day to day occurrences.

In reviewing Most of the courses I have taken in college, it seems that professors try and do either one of two things, either present the Material and let you decide on its Validity, or present the Material along with their own criticism of it. Thus, it seems that the educational process is either to present you with specific ideas and concepts, and then allowing you to decide their individual level of importance, or to mold them according to their own criticism or interpretation.
I'm sitting in my Philosophy class. The class is entitled 3002, general history of Western Philosophy, and this particular course covers the Medieval philosophers. They are quite an interesting group: St. Thomas Aquinas, St. Augustine, Nicholas of Cusa, St. Anselm; all religious, all attempting, in their small study in some dark tower, to explain the existence of God, to state that in this external world it is o.k. to believe in God; it is important to have faith, faith in something that will lead a person, through rough times, will lend hope when all seems doomed; just this faith, this belief in something to help one through' the many turmoils in life. I listen to the professor, take all these theories in like they are absolute truths, study them, can recite them. We take a test, i can write down such things as "only must believe in order to understand," or "Reason inspires faith and faith inspires further reason." It all sounds so correct; the professor grades My test, i get an "A", Thus i know these things.

One year later, I was hired as an intern in the county attorney's office. My job is to organize the witnesses for all cases (we prosecute all Criminal cases in Hennepin County) and make sure they know when they are supposed to testify. Additionally, i go down to the actual court cases and watch these witnesses testify! While doing this, i sit with the family of the victims and help them through these rough times. This is incredibly difficult; on each occasion that i have done this, the case had been a murder trial. So there i sit with these parents of a man who has been killed and try and help, well actually, just listen to them. I Feel like a person with his hands tied behind his back; i am helpless, i cannot do anything for these people except listen to their stories, listen to their cries, and shake my head in mutual disbelief. I can never know how they feel, no matter how hard i try to put myself in their place, i can't; i end up still listening, still feeling, but still saying Nothing. When they talk to Me, they attempt to find some kind of understanding, some way of putting this terrible happening in perspective and deal with it as such. And they all, every single one of them, says and does the same thing; puts their faith in something greater, something that will distill a Much greater justice that will find them the victor this time. I don't consider Myself a preacher or zealot of any kind, but it all Makes sense Now. The old woman, who has lost her son, lost her other son before that, has lost all who are close to her, is able to get up and live every day because the faith inspires her to do so. When all is lost, she with those deep, sullen eyes and skeletal frame, is still able to say yes there is something to live for. She believes in this greater justice, believes in it despite all she has endured, and uses it to carry her from one day to the Next. To this i say, what is wrong with Faith, what is wrong with believing in this greater justice, this one single concept that Makes people live when there seems to be Nothing to live for. I Now understand these lectures of those great Men, now that i believe i am able to understand Now that i have seen the strong guise of Faith actually working and assisting am i able to fully understand what these men were obviously talking about.

It all seems somewhat strange, i'm sure, but i don't see how something one learns in school or class can not help but effect how one leads their life on a daily basis. I feel that one must learn to bring all things within, and then sort them and determine the significance of each thing. The life of school and the personal life are constantly working together in order to enrichen concepts, to shape judgments and
to influence basic daily decisions. In this class, I am currently learning how to evaluate Narratives, how to define and differentiate difficult narratives from one another. In doing so, I test my newfound abilities out on the real world; I listen to the stories people tell, to how they tell them and why they tell them. I listen, to Myself talking to people and then try to understand why I told them what I just did, I understand what Makes My Roommate such a great story teller, how he is able to Relate to the entire audience. I am constantly learning all of these things and attempting to use them in ordinary day to day occurrences.

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LEBOR GABALA
An Explication of the Invasion of the Milesians

CSDS 5711

3/13/8

Undergraduate
Ethan: Sample Paper, "Lebor Gabala," continued

The epic history of Ireland, of the land and the people, can be found within the pages of the Lebor Gabala. The Lebor Gabala chronicles the history of the people of Ireland, beginning with the first man and woman, Adam and Eve, and ending with the sons of Mil and their succession of kings. The sons of Mil, or the Milesians, by sailing from Spain to Ireland and defeating the Tuatha De Danann, were the final group of foreigners to defeat the present inhabitants of the island and assume rule. Although the Lebor Gabala traces the roots of the Milesians all the way back to Noah and his sons, we shall, for the purpose of clarity and precision, only go as far back as Breoghan in order to explain the events of this particular myth. One of the most interesting and important stories of the Lebor Gabala concerns the conquering of the Tuatha De Danann by the Milesians. However, it would be impossible to explicate the entire myth in its completeness, so I will attempt to concentrate upon the events and circumstances that surround the son of Bregnon's (1th) coming to Ireland, his death at the hands of the Tuatha De Danann, and the eventual revenge of his murder by Amorgen, et. al.

Through the means of these main events, the story of the final conquering of Ireland will unfold, along with the story of the people called the Milesians.

The chiefs of the expedition oversea,
When the sons of Mil came,
their names and their fates
shall be a memory with me for many days.

THE SIGHTING OF IRELAND AND THE MURDER OF 1TH

The story of the Milesians conquering of Ireland begins when Bregnon climbed to the top of his tower on a "clear winter's evening" in Spain, and saw out to the Northeast the country of Ireland. However, Bregnon did not
want his son, Ith, to go and try to sail for Ireland, so he tried to hinder him
by saying that what he saw was not land at all, but actually a "cloud of the
sky." This image of a cloud is important in portraying the characteristics of
the Tuatha De Danann (which will be done later) and is repeated in several
passages throughout the epic. For instance, when the Tuatha De Danann first
conquered Ireland from the Fir Bolgs, they did so by coming "in dark clouds
over the air, by might of druidy," and brought about a darkness over the sun
for three days and three nights. Ith did not listen to this, and instead
gathered one hundred and fifty men to sail to Ireland. When the ships
landed on the Northern "Fetid Shore", the rule of the land was in conflict.
The three kings, Mac Cuill, Mac Cecht, and Mac Geine, were arguing over the
disbursement of treasures and cattle. Ith, who "surpasses the judges of
Ireland in cunning and argument," listened to the three brothers, and then
settled the dispute with the following speech:

It is right for you to maintain good brotherhood, it is fitting
for you to be of good disposition. Good is your island, plenteous
its honey, its harvest, and its wheat, its fish and its corn. Moderate
is it in heat and in cold. Within it is all ye need.

Then, Ith said goodbye and headed for his ship. However, because of his
eloquence in speech when speaking of the beauties of the land, the Tuatha
de Danann feared that he was going to try to conquer Ireland, so they sent
out a troop to slay Ith. The troop inflicted Ith with a "death wound," but he
still made his way to the ship and died out at sea. Thus, his people carried
his body back to Spain, and set the stage so that the sons of Mil could
return and revenge the death of Ith. Therefore, the murder of Ith
completes the first part of the myth of the invasion by the sons of Mil.

Note how the narrative is constructed in such
a way as to depict invasion + conquest as
justified. It needs to be stressed that those who
had been taken understand themselves.
This particular series of events contains a great deal of information concerning the characteristics of the Tuatha De Danann at the time of the Milesian invasions. In particular, those who wrote down these myths wanted the Tuatha De Danann to be portrayed as being deceitful, overly envious, excessively proud, and believers in dark magic. These traits are used in comparison with the Milesians, who, differ greatly from the Tuatha De Danann, and thus should be the rightful ruler of the land. First, although being brothers, the kings of the Tuatha De Danann are shown as arguing over money and cattle. They are viewed as being overly concerned with such matters, and unable to realize the their lack of emphasis on family relations and love of the land. As verse seven of the Tuatha de Danann states;

Though Ireland was multitudes of thousands, 
they divided her land into thirds; 
great chieftains of deeds of pride; 
Mac Cuil, Mac Cecht, Mac Greine.

Furthermore, the Tuatha de Danann are shown to be dishonest and untrustworthy through their dealing with Ith. When Ith arrives on the island, he settles the debate between the kings with a speech about the love of plenteous land and the praising of its redeeming qualities. This is contradicted by the kings overemphasis on power, wealth and possession. Additionally, the kings react to Ith’s goodness with thoughts of envy, jealousy and murder. By killing Ith, the kings have reacted to his goodness by producing the opposite emotion, hatred and envy. Thus, the kings of the Tuatha De Danann view Ith and his followers only in negative ways, and see their goodness only as being deceitful. By killing Ith, the kings have expressed their fears of his abilities, and mistaken his apparent goodness as a want for possession and control. If the Milesians represent truth, reason,
integrity and familial respect, then the Tuatha De Danann must represent the opposite of this. Also, if the Milesians were to represent those qualities aimable to God (Christian God), then the Tuatha De Danann also must represent the contradiction to this. Thus, the dark cloud that shrouded the Ireland of the Tuatha De Danann from the Milesians also must have shrouded it from above.

THE SECOND VOYAGE TO IRELAND

The myth continues to describe the actions which lead up to the revenge of the death of Ith. When the Milesians arrive back in Spain, they immediately bring together a group to return to Ireland. This group included forty chieftains, ten sons of Bregnon, eight sons of Mil, five sons of Erimon, four sons of Eber Finn and the ten champions. This group also included twenty-four servitors and numerous sub-servitors. Thus, altogether the second invasion by the Milesians consisted of one hundred and fifty men on thirty ships.

The events of the odyssey-like voyage are also important because they relate several characteristics of the Milesians which show their values they place of family bonds, and the strength of these bonds. The first mishap of the journey was the death of Eranann, the youngest of the eight sons of Mil. Eranann died when he went up to the mast to spy out Ireland and fell from the mast into the sea. The second downfall of the journey as the death of Ir, a son of Mil. This happened because he had rowed ahead of Lugain, the son of Ith, and would have reached Ireland before him. However, Eber Donn, the eldest of the family became envious and said, "It is not lucky that Ir leapeth beyond Ith (Lugaid). Then, the oar that Ir was holding broke, and he tumbled backwards and died. Because of this, the sons of Mil did not include Eber Finn in sharing the land because he was
Ethan: Sample Paper, "Lebor Gabala," continued

envious of his brother. Lastly, Scene, the wife of Amorgen died somewhere at sea.

The grief shown by the brothers of Mil, and their actions after these deaths symbolize their emphasis upon the importance of family and the strength of their kinship bonds. When the ships landed on Ireland, the first act of the sons of Mil was to bury Scene and erann and name the spot after them. As the Lebor Gabala states, "They two were both buried; their mounds and their graves are still there, side by side." Further, although the death of Ir does display the jealousy of Eber Donn, it also exhibits the Sons of Mils' belief in the importance of justice and righteousness. Since Eber Donn was envious towards his brother and caused his death, he was not to be included in the dispersal of the land. In addition, although Eber Donn's action is wrong because it is rooted in jealous and envy, it does reveal another interesting belief of the Milesians. Since it is Lugaid's father who was murdered by the Tuatha de Danann, Lugaid should be the first to reach and land upon Ireland. Thus, this belief also expresses the importance of kinship and family bonds, and that justice should be given to those who have been wronged.

THE POEMS OF AMORGEN

After the Milesians buried their people in the land of Ireland, and thus securing their rightful ownership of it, Amorgen, the "poet of the men" and leader of the invasion recited two very important poems dealing with the conquering of Ireland and the Milesians relationship with the land itself. It is interesting to note that Amorgen, the leader of the Milesians, is not a king but a poet. This signifies the aesthetic quality of the life of the Milesians, and their emphasis on the arts and other intellectual occupations. This is in direct contrast to the life of the Tuatha De Danann whose leaders...
possess materialistic, not spiritual qualities. The first poem that Amorgen recited was a praisal of Brennan and Scene, and the second one was an invocation to the powers of man and the Gods of Ireland. This poem stated:

I am Wind on sea
I am Ocean wave,
I am roar of sea,
I am bull of seven fights,
I am vulture on cliff,
I am dewdrop,
I am fairest of flowers
I am boar of boldness,
I am salmon in pool,
I am lake on plain,
I am mountain in a man,
I am word of skill,
I am the point of a weapon (that poureth forth combat),
I am God who fashioneth fire for a head,
Who smootheth the ruggedness of a mountain?
Who is he who announceth the ages of the moon?
And who, the place where falleth the sunset?
Who calleth the cattle from the house of Tethys?
On whom do the cattle of Tethys smile?
Who is the troop, who the God who fashioneth edge
in a fortress of gangrene
Enchantments about a spear? Enchantments of wind?

The intrinsic beauty of this poem lies in its rich symbolism and reliance upon the images of land, air and water. In examining the lines of the poem, it seems that the poet is continually going from symbols of water to symbols of earth to symbols of air. After this cycle is repeated several times, the poet them moves to man and finally to God, a God who lies in "the place where falleth the sunset." This poem and its cyclic nature are extremely important because they represent another main belief of the Milesians, that life is a cycle and that all things are interconnected. Further, it exhibits the
Milexians feeling of oneness with the land of Ireland, and their ability to see God in all things. When speaking of Man, Amorgen talks of the mountain within a man, and then when speaking of God, he refers to Him as being able to "smootheth the ruggedness of a mountain." Thus, God, who is found where the sun sets, is capable of smoothing the ruggedness of man; of replacing the rugged Tuatha de Danann with the smooth Milesians. The lines which deal with weaponry and with God "who fashioneth fire for a head" seem to be calling to God for inspiration in battle, and in the eventual conquering of the island of Ireland. The final three lines seem to refer to spells for the healing of poisoned wounds and for securing favorable winds. The poisoned wounds mentioned could either symbolize the righting of the wrongful death to Ith, or could also be a prayer for success in future battles. Therefore, the power of Amoergen not only invokes a God for assistance, but also unites the Milesians with the land, the sea, and the air, and recognizes their permanent fixture in this life cycle.

THE CONFRONTATION WITH THE TUATHA DE DANANN

After three days and three nights passed since the Milesians landed, the sons of Mil began their battle with the Tuatha De Danann, and are now referred to in the text as demons. The Lebor Gabala describes the battle in this way:

The sons of Mil fought the battle of life; there were monsters in shapes of giants which the Tuatha De Danann had summoned to themselves by druidry. The sons of Mil fought the battle valiantly. They came thereafter till they were in the mountain over against Loch Dergderrc.
After victorious in battle, the Milesians come across Banba in Sliab Mis, Fatla in Eblinne, and Eriu in Usinech. All three are women and seem to be a sort of oracle or prophet. Each one granted the island of Ireland to the Milesians with a promise that the island would be named after them.

The sons of Mil then continued on until they met with the three kings of Ireland, Mac Cuill, Mac Cecht, and Mac Greine. The three kings pronounced judgement against the sons of Mil so that they should have the island for three days, free from assault, and for the invader to go back to sea and then return later. When Amorgen agreed to this, it marked his first judgement upon the new lands, an act considered sacred by the Milesians, and an act that only further strengthened the Milesians bond to the land.

Again, from this passage, the goodness and righteousness of the Milesians is contrasted with the misguided declination of the Tuatha De Danann. The three oracles that the Milesians meet all declare the coming of the Milesians as a fulfillment of a divine prophecy, or an act of "necessity," thus further proving the rightful claims of Ireland by the Milesians. As Eriu states, "Long have soothsayers known of your coming. Yours shall be the island forever." Further, Amorgen's acceptance of the judgement of the three kings also portrays the Milesians as being just and fair, even against the obvious ill-guided plans of the Tuatha De Danann. Additionally, the fact that Amorgen has passed judgement on Ireland only further strengthens the Milesians unity with the land. Their emphasis on natural law is contained in this passage, as well as their want of justice. This natural law is now secured by Amorgen, because he has already begun to disperse actual law on the land. The judgement reads as follows:

Men, seeking a Possession!
Over nine-great green-shouldered waves,
Ye shall not go, unless with powerful Gods!
Be it settled swiftly! Be battle permitted.

I adjust the possession
Of the land to which ye have come;
If ye like it, adjudge the right,
If ye like it not, adjudge it not-
I say it to you, except with your good will.

This poem, the judgement by Amorgen, expresses the poets concern for justice and his belief that the Milesians have the "powerful Gods" on their side. Amorgen also seems to be proclaiming his rightful rulership over the land, and views this judgement as the first of many. Further, he also exhibits his trustworthiness by relying merely upon the "good will" of the Tuatha De Danann to not trick the Milesians once they have gone to sea. Again, this speech is seen as ironic because is mocks the deceitfulness of the three kings and people of the Tuatha De Danann.

THE THIRD INVASION OF IRELAND BY THE SONS OF MIL

Thus, the Milesians went out to sea past nine waves, and then the druids of the Tuatha de Danann cast a spell behind them, so that the ships were carried far out to sea. Also, the druids cast a spell on the entire island of Ireland, making it invisible to the Milesians. The wicked wind caused the boats of five of the sons of Mil to sink, and all the men were drowned. Because of this, Amorgen, once again, invoked the winds and the Gods, and hence, a calming of the winds came to them. The speech by Amorgen states:

I seek the land of Ireland,
coursed be the fruitful sea,
fruitful the ranked highland
ranked the showery wood,
showery the river of cataracts,
of cataracts the lake of pools,
of pools the hill of a well,
of a well, of a people of assemblies,
of assemblies of the king of Temair;
Temair, hill of peoples,
peoples of the sons of Mil,
of Mil, os ships, of barks;
The high ship Eriu,
Eriu lofty, very green,
an incantation very cunning,
the great cunning of the wives of Buaigne,
the mighty lady Eriu,
Erimon harried her-
I seek the land of Ireland.

Both the structure and symbolism of this poem are united in order to further characterize the Milesians oneness with the land Ireland, the interconnectedness of all things, and the importance of their ruling with Ireland. The structure of the poem is important because the last word of one line always is the beginning of the next line, thus giving the poem a cyclic form. Further, the poem begins with Amorgen seeking the land of Ireland, then moves to the sea then to land, then to man, then to the prophets and finally back to himself. What Amorgen is saying in this poem is that the land of Ireland, in its complete cyclic environment and wholeness is calling for him to conquer it. Amorgen sees this compliance in the sea, in the land, in the people, and even in the prophets of the Tuatha De Danann. He believes there to be inherent powers in all things, and believes that all of these powers are complying with his rule. Further, when he speaks of the greeness of Eriu, the prophet, he is implying that he prophecy did not only come from her, but represented the whole land itself. This is why the poem both begins with Amorgen and ends with him; because it expresses the connection of all elements, and his rightful place among them.

Not just this: his mystery over them.
Ethan: Sample Paper, "Lebor Gabala," continued

After the wind settles, and Amorgen gives his speech, the remaining sons of Mil land on the Island, and existence as we know it comes into being. Thereafter, the *Lebor Gabala* lists each son of Mil and goes through their list of descendants, and then chronicles the life of the Milesian kings.

The myth of the conquest of the Milesians and their eventual conquering of the false Gods of the Tuatha De Danann, then, is transformed into a symbolic war between good and evil, true Gods and false idols and paganism and Christianity. The Milesians, by properly honouring the Gods are shown as being purveyors of truth, justice, reason and law. The first glimpse that Ith has of Ireland is one of conflict. He sees the three kings of Tuatha De Danann fighting over monetary possession and materialistic goods, whereas he believes in the inherent beauty of the land and the strength of brotherhood. Therefore, Ireland before the Milesians is shown as being in conflict, falsely ruled, and, literally, shrouded from God and the rest of the world by a dark cloud. However, the Milesians contradict these principles and represent goodness, natural law and reason, all attributes of a Christian God. As one passage of the *Lebor Gabala* states, concerning the conquest of the Amorgen and the Milesians:

He swept the clean from their land, 
did the son of God, from the royal plain which I make manifest; 
For all the valour of the deeds, of their clear division, 
their seed is not over Ireland.

Numerous parallels can also be made between the story of the Milesians and of the Exodus of the Israelites out of Egypt. Moses, like Bregnon, viewed the promise/land from a tower in Egypt, then led his people
across the land and sea to Israel. Amorgen also led his people to this "promise land," and there discovered, like the Israelites, inhabitants who worshipped false idols and were ruled by kings. The Milesians, like the Israelites, did not have kings, and divided the land up between families or tribes. Both the Israelites and the Milesians held dear kinship relations as well as reliance upon justice and right and wrong. Furthermore, the people of Mile are shown as descending from Noah, thus connecting them with the people who Moses led out of Egypt.

The Lebor Gabala also contains elements that were used by early christian Irish monks to exhibit the victory of christianity over Irish Paganism. The Irish monks translated the text around the fifth century A.D., when christianity was beginning to take over Ireland and St. Patrick was gaining prominence. Their presence as scribes of the epic is found throughout the saga. In one verse, the text reads:

Christ (who art) above the clans, remember
the grandson of Flann from heroic Luigne;
King of Adornments and of judgements,
Thou art the abbot, thou art the chief.

Thus, the influence of these monks on the story of the Milesians is quite significant. The scribes utilized the historical occurrence of the milesians in order to symbolize the collapse of the pagan past and the rise of christianity. The importance of this interpretation for the period was quite great. The monks realized the need for a common nationalistic bond to tie in with the growing of christianity, so they looked to the past and reinterpreted Irish history in a christian context. Hence, by showing the Milesians, the fathers of modern Ireland, as upright, God fearing people, they are using them to strengthen their cause of christianity. Therefore, the battles
between the Tuatha De Danann and the Milesians no longer merely represent wars between two tribes, but now symbolize the Christian God vs. the pagan Gods, right vs. wrong, and just vs. unjust.
Dreams, Faith and Footprints

Three stages of development in Robinson Crusoe
Man in isolation is forced to set up dialogue with himself or else suffer from no dialogue at all. The importance of this constant interaction with the self is strongly apparent in *Robinson Crusoe*, and divides the movement of the book into three distinctive stages or phases, each dealing with a form of this essential soliloquizing. The first stage which Crusoe reaches is the process of man talking to himself, represented in this story by the two dreams. The second stage can be defined as man talking to God, an act which leads Crusoe to the discovery of an individual, personal faith to follow. The third stage is man talking to man, initiated by the appearance of the footprint on Crusoe's seemingly deserted island. These three stages and their interrelation with one another provide a vehicle in which the plot of *Robinson Crusoe* can flow smoothly and logically.

Dreams and their relation to Crusoe play a very interesting and important role in the development of the themes in this novel. Crusoe's dreams are centralized in two main passages, one coming before the main confrontation of the plot and the other one coming afterwards. In the first dream, which actually is a nightmare, Crusoe has a vision of a "man descend from a great black cloud in a flame of fire," and then lifts his spear in order to kill Crusoe. The reason behind this is that Crusoe has not been brought to repentance by the merciful and forgiving acts of the hands of the divine providence. This dream has a clear and sudden effect on Crusoe, and he vows to look upon this new light with reverence and sincere belief. Thus, the first dream sequence, which takes place before the central confrontation, is
concerned with Crusoe's religious conversion.

The second dream sequence, which takes place after the main confrontation, also focuses on this same process of conversion. In the second dream, the intended victim of a cannibalistic feast runs away from his supposed murder and seeks the safety of Crusoe's fortification. This dream, which completely foreshadows an event which eventually takes place, also entails a form of conversion, this time the conversion of Friday from a cannibalistic savage to a God-rearing Christian. Additionally, this dream sets the stage for Crusoe's fated confrontation with the savages. Thus, the dream sequences are significant in two important ways; first, they both have the notion of conversion, religious and natural as a focal point, and secondly, they both set up major themes of the novel. The first leads the way to Crusoe's spiritual awakening, and the second leads to his physical confrontation with the savages.

The second development of the theme of discourse deals with man talking to God, which is a central issue in Robinson Crusoe. This stage is set up by the first stage and thus follows it logically and rationally. Once man finds where he relates to his immediate surroundings, he looks higher and farther to see where he fits in to a "greater scheme of things." In this novel, the discourse with God can be traced by Crusoe's perpetual concern with his own spiritual awakening and enlightenment. After the first dream, Crusoe becomes increasingly submerged in searching out the true meaning of providence and the reasons for his own apparent, temporal salvation. He states, "God has appointed all
this to befall me: that I was brought to this miserable
circumstance by his direction, he having the sole power, not of
me only, but of every thing that happen'd in the world... Why has
God done this to me? What have I done to be thus us'd?" Crusoe
laments on his condition only long enough to remind himself of
the actual goodness of his situation, and goes so far as to make
a list exhibiting that the good of his unusual predicament
actually outweigh the bad by far. Moreover, because of the
impact of this dream on his spiritual awakening, Crusoe begins to
read the Bible, and marvels at the passages which he decided were
pre-chosen for him to read. The spiritual rebirth that Crusoe
undergoes leads to the development of an individual faith or
belief for him to follow, which becomes one of the central themes
of *Robinson Crusoe*. Thus, the second development of the plot, of
man conversing with God, is propelled by the first stage and then
carries the weight of the plot afterwards.

The third stage is the culmination of the first two and
leads to the final confrontation of the story. This stage, man
talking to man, is symbolized initially in *Robinson Crusoe* by the
appearance of one footprint. Until this appearance, Crusoe lives
without fear of anything in his natural surrounding, and
completely trusting of his own personal safety and security.
However, once the footprint emerges, Crusoe's world is knocked
astray, and he hides in his fortification, in constant fear of
the presence of another man on the island. This fear is counter-
balanced by Crusoe's desire to actually speak to another person.
The effect of this ambivalence—desire contradiction can be seen
in two distinguishable passages. The fear of man and confronting
man is apparent in Crusoe's discovery of the site of a
cannibalistic feast and his "horror... at seeing the shore spread
with skulls, hands, feet and other bones of human bodies." The
desire is apparent in Crusoe's wish for one survivor from the
wreck of the Spanish ship. Thus, the third stage, man talking to
man, poses a duality in the theme. Crusoe, at the same time,
desires and fears to speak with another soul. However, this sets
up the final confrontation of Crusoe with the savages, and more
importantly, with his own fears.

In examining this duality, the central line of reasoning can
be broken down into one dominant theme; to get enough to eat and
to avoid being eaten. Crusoe fears the confrontation with the
savages because he is repulsed by their carnal rituals and bloody
feasts. Similarly, Friday fears that the cannibals will "cut
him in pieces and eat him," and Xury, the Spanish boy, says
during his escape, "if wild mans come, they eat me." Therefore,
Defoe seems to be stating that this basic primitive concern is
actually the root of all concerns for the man in isolation. In
the three stages of this paper, Man conversing with himself, with
God and with man, there is a logical and systematical development
of the theme which culminates in this one basic statement. When
man is in isolation, his worries and beliefs are led by the
desire to get enough to eat and the fear of being eaten in the
process.

In the novel, Robinson Crusoe, the theme of discourse
provides the main current in the development of the plot and the
discovery of the ideas in the story. First, Crusoe talks to himself, through his dreams, and is led to a religious conversion. This religious conversion is the second stage of development, and becomes the theme of spiritual rebirth or the emergence of a personal faith, which leads to the want of another being to talk to. This stage, of man talking to man, is actually one of contradictory feelings, of ambivalence and desire. And, finally, this duality leads to the uncovering of the true theme, the aboriginal concern of eating and not being eaten. Thus, the three stages of discourse provide a circular structure in which the themes of Defoe's novel eventually surface, with each stage giving credibility to the next.

Well written. Also contains some interesting ideas. Too precise at times. Would not feel ready in 3 stgs.
SLIDES OF THE EARLY 20TH CENTURY

The early 1920's were a transitional period for many modern American families. Although many families exhibited an urge to lead a more provocative and sensual life, they were still deeply rooted in the beliefs of Victorian America. Women of the age were beginning to let go from their stereotypic homemaker role, and becoming more concerned with finding jobs, and new entertainment sources. Men, on the other hand, were also pressured by the rise of an elevated interest in entertainment, and, therefore, were given a new financial burden. Men were afflicted with the notion that they were still the "breadwinners" of the family, and any lack of economic strength on their part would lead to the demise of the family. Therefore, the 1920's was a period of transition. A period when old moral codes directly interacted with a new carefree lifestyle, and the result was many confused and troubled marriages. The poster series which we viewed was issued in order to allow each individual of the time the ability to see through this confusion, and lay down some concrete and definite gender roles.

The men of the time were again pressured by the Victorian belief to lead a clean and efficient life. The men were urged to be healthy, clear-minded individuals who were well aware of the poisons of "Loose women"; gambling; and
laziness; and did not succumb to these corruptions of the Victoria code. The importance of physical fitness in the poster series reveals many popular notions held at the time. Men were to possess "muscular strength, endurance, energy, will-power, courage and self-control." The notion of sound body/sound mind was the underlying philosophy in this portion of the slides, and was supposed to convey the image of the ideal father figure. This "ideal" man, in actuality, was portrayed as someone who found time to work eight hours a day, uphold a respectable job, jog three miles every morning, and still find time to take place in many family events. The inability to reach this "Utopia" of manhood and fatherhood created immense pressure on many husbands, which resulted in some men leaving the marriage due to overpowering feelings of guilt and neglect.

As for the younger men of the generation, the slides dealt mostly with the themes of moral fitness and sexual cleanliness. Young men were urged to ignore common and natural maturation of their own sexuality, and were advised to learn how to turn their sexual drive into a positive and constructive source of power. The sex drive of a young man was even metaphorically compared to a spirited horse. "A spirited horse is a great prize. It is a joy to ride him, to feel his strength and boundless energy under one's control. The sex instinct, when directed, is the source of power and of a richer, fuller life." This somewhat exaggerated comparison also tell the young man that his sexual instincts
Ethan: Sample Paper, "Slides," continued

should not be wasted on petty and unimportant things early in their lives. Instead, they should learn to control this instinct, and convert it into a source of strength and power. The young men were further urged to display a great deal of self-control. Furthermore, they were not encouraged to interact with immoral girls, and if they did so, they were highly susceptible to various forms of venereal diseases. Somehow, if a man was to submit to these desires, he would ruin the life of the woman he will marry, and even the children that she will bare. These beliefs associated all that was only pure and innocent with the good things in life, and anything which deviated from this norm was considered evil. This strong Victorian belief was also supposed to set a clear and defined belief for the young men of society: "In order to insure a clean and healthy life for your children, you must lead a clean, healthy life on the road to becoming a man."

Women and young ladies also received the same amount of pressure to lead a productive life based on high values and clean morals. The young girl, it was believed, "will need brains, vitality, and sound training if she is to take her place in the world as a mother and a useful citizen." This statement exemplifies the two most commonly held beliefs of the time, when it comes to the role of the mother. She is to be brought up and molded into a good mother -- one who is intelligent, unselfish, caring and devoted. The ideal woman is also supposed to be a "useful citizen." This term,
Although somewhat general, seems to mean a person who contributes to the community on a various number of social levels. Sexually, young ladies were to remain naive and innocent to their desires, yet full aware of their own sexual maturation process.

Equal to that of the young men, a positive sex instinct of a young lady leads to "Beauty of body, vivacity and charm of matter." This sex or "creative impulse" was suppose to bring some specific feeling of natural purification to the female. Through this purification, the young lady was to be instructed on the ways of womanhood -- the warmth given to a child, a longin to accomplish great things, and the molding of her energy into all of humanity's. This ideal female, then, was not only to be auseful citizen and a good mother, but she was also advised to contribute to humanity to the arts, sciences and the culture of all civilization.

The young woman was also supposed to arrange an ideal home in which she was to bring up her children. This ideal home was to be based upon trust, love, knowledge and faith. The home became increasingly important to the woman, because it was here where the children were to be raised and also molede into "clean" citizens, just like their parents. The children learned how to lead this kind of life from their early lives at home, when the parent thoughtfully and carefully shaped their accepting minds. This Victorian belief of the role of the woman in society can be summed up by the following quotation: "such a woman gives richly to
the world and its future through her work and her personality as well as through her children."

In conclusion, the role for both men and women in the early 20th century were very rigid, and made very evident. The men were expected to "provide the necessities of life, treat their wives with courtesy and protection, and exercise sexual and moral restraint." The wives main duty was to set up a home with pleasant surroundings, take care of the children and household chores, and provide the morality in the raising of the child. she was supposed to remain faithful, take pride in her accomplishments at home, and remain untouched by the greediness and lecherousness which plagued the society. Together, the man and woman were to raise healthy, morally fit children by providing an environment with the same atmosphere, and contribute to the true spirit of the community which stems from the true spirit of the family. In essence the poster series' underlying purpose was to bring forth the message that "healthy, happy children are born of fathers and mothers who have kept their bodies vigorous and free from disease, their minds eager and interested, and their aspirations high."
THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

I was just about to finish giving my job description. I listen to the court cases, and sit with the victims' family while they hear the case. I was telling this in order to set up something that I observed in these meetings.

B. What, if any, connection do you think the thought had to your piece of writing?

It was somewhere along the lines of an introduction.

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

1. mostly words
2. mostly pictures
3. both at the same time
4. can't remember
B. How well detailed were the thoughts that were going through your mind?

1. very detailed
2. somewhat detailed
3. somewhat vague
4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?

1. picture-like elements throughout
2. some fairly prominent picture elements
3. just a trace of picture elements
4. no trace of anything picture-like

D. Were the things going through your mind very auditory?

1. very auditory
2. moderately auditory
3. just a little auditory
4. not at all auditory

E. If your thoughts were mostly words, did you hear them?

1. didn't really "hear" them; just thought them silently
2. heard an "interior monologue"; mentally talked to myself
3. heard someone else talking to me
4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).

1. it was all directed thought
2. it was mostly directed thought
3. a little directed thought
4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).

1. it was all non-directed thought
2. it was mostly non-directed thought
3. a little non-directed thought
4. no non-directed thought
THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

I'm beginning to explain how this relates to what I have shelled, and how it helps me understand what I learned before how concepts can be seen as truths and how what one studies can actually affect how one lives.

B. What, if any, connection do you think the thought had to your piece of writing?

It is helping to give relevance to the story and tie it together.

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

1. mostly words
2. mostly pictures
3. both at the same time
4. can't remember
B. How well detailed were the thoughts that were going through your mind?

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1. it was all non-directed thought
2. it was mostly non-directed thought
3. a little non-directed thought
4. no non-directed thought
THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

   I was trying to explain how the educational process affects your learning either by merely presenting you with information or presenting you with information & criticism of it.

B. What, if any, connection do you think the thought had to your piece of writing?

   I was trying to relate what I said before onto Mark. Marc general sense.

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

   1. mostly words
   2. mostly pictures
   3. both at the same time
   4. can't remember
B. How well detailed were the thoughts that were going through your mind?
   1. very detailed
   2. somewhat detailed
   3. somewhat vague
   4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?
   1. picture-like elements throughout
   2. some fairly prominent picture elements
   3. just a trace of picture elements
   4. no trace of anything picture-like

D. Were the things going through your mind very auditory?
   1. very auditory
   2. moderately auditory
   3. just a little auditory
   4. not at all auditory

E. If your thoughts were mostly words, did you hear them?
   1. didn't really "hear" them; just thought them silently
   2. heard an "interior monologue"; mentally talked to myself
   3. heard someone else talking to me
   4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).
   1. it was all directed thought
   2. it was mostly directed thought
   3. a little directed thought
   4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).
   1. it was all non-directed thought
   2. it was mostly non-directed thought
   3. a little non-directed thought
   4. no non-directed thought
POST-SAMPLE QUESTIONNAIRE

1. In general, how did you go about writing this piece? Think about how you arrived at insights, organized your writing, adjusted for your audience, and decided how to present yourself in the writing. Were you able to generate enough material to write for 45 minutes?

I first thought of a particular instance where I had school on my mind, and then attempted to use that as the model. I then tried to relate how this particular experience affected me personally and how it allowed me to fully understand some concepts I had studied in class. After this, I began to tell how school life de mix an a general level and how each event help this mixture. Generally, I went to the specific to the general, from pictures to thoughts and from directive thoughts to evaluative interpretations. I tried to relate the effect this had on my personally but this was difficult, so I think that I did a lot of explaining (I know what I meant but my reader probbably didn't) at the beginning.

2. Were there any ideas that really stood out for you as you wrote? What were they? Were they mostly in the form of words or images?

Yes, the ideas about what I was trying to convey about faith were very important and highly personalized. These thoughts came from mostly images rather than words.

3. Sometimes when people think, they connect abstract ideas to something more concrete (i.e. linking the way analogic matches work with a game of ring-around-the-rosy). Did you do that?

Yes, I started with quite abstract concepts, and then tried to move to more concrete, evaluative statements about things in general.
5. A. Are you satisfied with what you wrote?
   1. very satisfied
   2. somewhat satisfied
   3. somewhat dissatisfied
   4. very dissatisfied

   B. What, if anything, would you change?
   I don't know. I explained the bell feeling of the first part well enough.

6. Circle the item from each category that best describes your writing process in general.

   A. 1. I prefer to think through carefully what I am going to say before I write, then write one main draft, returning only for minor changes.
        2. I prefer to find my ideas by writing and rewriting extensively.
        3. Other

   B. 1. When I write I usually think about only what directly pertains to what I'm going to say next.
        2. When I write I often let my mind roam expansively over a lot of ideas.
        3. Other

   C. 1. I really work carefully and deliberately to develop my ideas as I write.
        2. I write intuitively. My best ideas usually come to me without my having to direct and control them.
        3. Other

   D. 1. My ideas usually occur to me in words without pictures.
        2. My ideas often occur in pictures, graphs, and things I hear.
        3. Other
Dave: Background Questionnaire

Background Questionnaire

Name
Date 5-26-89

1. Your GPA
   a. 3.5 or higher
   b. 3.0-3.4
   c. 2.5-2.95
   d. 2.0-2.4

2. Typical core curriculum grades
   a. A’s
   b. B’s
   c. A’s and B’s
   d. C’s
   e. B’s and C’s
   f. D’s
   g. C’s and D’s

3. High school graduation date 1979

4. Average hours of non-college work you do per week (paid employment, child rearing, volunteer work)?
   a. 10 or less
   b. 11 to 15
   c. 16 to 20
   d. 21 or more

5. Education level of parent/s or guardian/s who raised you:
   Person #1. State relationship Parents (Father)
   a. less than high school
   b. high school diploma
   c. 1 or more years of college
   d. college undergraduate degree
   e. post graduate study
   f. post graduate degree

   Person #2. State relationship Parents (Mother)
   a. less than high school
   b. high school diploma
   c. 1 or more years of college
   d. college undergraduate degree
   e. post graduate study
   f. post graduate degree

6. How much do you read?
   a. When I have time, I read a lot.
   b. I read some, but not a great deal.
   c. I read when I have to.
Dave: Background Questionnaire, continued

7. How much do you write?
   a. When I have time, I write a lot.
   b. I write some, but not a great deal.
   c. I write when I have to.

8. Where do you usually write? At home, in bed.
THE STATUS OF THE WRITING ABILITIES OF STUDENTS

INTRODUCTORY QUESTIONNAIRE

NAME ____________________________ COURSE Comd 3015
ADDRESS __________________________ PHONE __________________________

BEST TIME TO REACH YOU 12 AM - 6 AM

A. Sex
1. male
2. female

B. Age? __28____

C. Major
declared ________ physiology ________ intended ________

D. College
1. College of Biological Sciences
2. College of Liberal Arts
3. Carlson School of Management
4. School of Nursing
5. Institute of Technology
6. other ________

E. Year
1. freshman
2. sophomore
3. junior
4. senior

F. College writing courses completed
1. FRESHMAN WRITING PRACTICE (1011)
2. FRESHMAN WRITING PRACTICE (1013)
3. other FRESHMAN LEVEL (e.g. courses taken elsewhere or upper division courses)

G. Writing experience outside usual college or school courses ________

H. Is English your main language?
1. yes
2. no
If no, please state your main language ________
Dave: Introductory Questionnaire, continued

I. Is it important for you to have any special methods or materials to help you read or learn?
   1. yes
   2. no

J. In general, how do you feel about writing?
   I write like I speak - poorly
   I misspell everything because I mispronounce everything

Would you be interested in participating further in this study?
   1. yes
   2. no

Additional participation includes a meeting lasting about 1 1/2 hours for which you will be paid at the rate of $10 per hour. THIS SESSION CAN BE SCHEDULED AT YOUR CONVENIENCE. You will be asked to bring two pieces of writing you have done along with you. During the meeting you'll be asked to complete a questionnaire about your writing and to discuss your pieces of writing and the way you work as a writer. Your participation in the study will not affect your grade in any way. ALL INFORMATION YOU CHOOSE TO GIVE US WILL BE KEPT STRICTLY CONFIDENTIAL.

Thanks for your help.
Below are several aspects of composing that writers think about as they write. For each feature please answer the following questions:

a. How much importance do you place on this particular feature as you write?
   1. A GREAT DEAL  2. SOME  3. ALMOST NONE

b. Would you say you have problems with this feature?
   1. A GREAT MANY  2. SOME  3. ALMOST NONE

---

FEATURES OF GOOD WRITING

1. I try to reach my audience by adjusting the content, tone, and style to meet its needs.
   a. abstracting or synthesizing ideas.
   b. analyzing critically or evaluating material or data
   c. Ordering ideas most effectively
   d. Making it convincing within the constraints of audience and purpose

2. I try to adapt the writing to suit its purpose (i.e. to inform, persuade, etc.)

3. I manipulate the content of my writing by:
   a. abstracting or synthesizing ideas.
   b. analyzing critically or evaluating material or data
   c. Ordering ideas most effectively
   d. Making it convincing within the constraints of audience and purpose

4. I try to develop a persona (an appropriate voice and style).

5. I work on surface correctness, eliminating problems of grammar and the mechanics of punctuation and spelling.

6. I try to be aware of concepts and vocabulary specific to my major field.

7. I use citations and documentation appropriately both in my rhetorical choices and in its technical correctness.

8. What other criteria guide you as you write?
   My knowledge of the topic
Dave: Writing Sample

When I was a young child I was playing out in our gravel driveway. I don't remember why but I picked up a wet rock. I wiped the rock off dry and somehow made the connection that if I'm thorough, I can dry myself off also. From that day on, my mother did not have to dry me off after I took my bath.

I think in pictures. If I really understand something, I can close my eyes and visualize the whole thing. Being a science major this made things very tough. Try to visualize calculus. It does not work very well. This is why I think I always did poorly in math. In physiology I understood the processes because I had a little "movie" in my head. If I was stuck on a problem I would just set back and play the "movie." The hard part is translating text material into this form. If we had time I could do it. If it was like last quarter, where we covered 1000 pages of biochemistry I cannot, thus I did poorly.

I am good at making mental pictures. I can draw anything I
Dave: Writing Sample, continued

does, or imagine. I could do this at a very young age. Over the years I just developed better hand coordination.

(I had 3 hours of sleep last night and cannot remember where I was heading after we stopped.)

When I was taking math courses it was like I was always forcing my mind to work in a way that was not natural. I always did well in my classes until we got into describing things with math.

When writing I'm a very poor speller. It might be that I mispronounce my words. I can see when they do not look right because I'm good with patterns. I was writing a paper the other day and could not find the proper spelling for "seathed". I was looking up the spelling like how I pronounced it sc-a-v-e-d. I have trouble keeping my b's and d's straight when I'm this tired.

I don't think the education system encourages my way of thinking, at least the sciences don't. I do well with hands on work. It makes it easy
to make mental pictures. I just “record” what I’m seeing for playback. But hands on is the chemistry lab where we are just working with clear liquids does not help.

Another thing that seems to help is when an instructor uses an application that applies to everyday life. It is easier to associate it with something I have already put down in memory, when I have to design a totally new memory tract or pattern.
Dave: Writing Sample, continued

5-3

When I was a young child I was playing out in our gravel driveway. I don't remember why but I picked up a wet rock. I wiped the rock off dry, and somehow made the connections that if I'm thorough (sp), I can dry myself off also. From that day on, my mother, did not have to dry me off after I took my bath.

I think in pictures. If I really understand something, I can close my eyes and visualize the whole things. Being a science major this made things very tough. Try to visualize calculus. It does not work very well. This is why I think I always did poorly in math. In physiology I understood the processes because I had a little "movie" in my head. If I was stuck on a problem I would just set back and play the "movie". The hard part is translating text material into this form. If we had time I could do it. If it was like last quarter, where we covered 1000 pages of biochemistry I cannot, thus I did poorly.

I am good at making mental pictures. I can draw anything I can see, or imagine. I could do this at a very young age. Over the years I just developed better hand\(^1\) coordination. (I had 3 hours of sleep last night and cannot remember where I was heading after we stopped.)

When I was taking math courses it was like I was always forcing my mind to work. In a way that was not natural. I always did well in my classes until we got into dissecting things with math.

When writing I'm a very poor speller. It might be that I mispronounce my words. I can see when they do not look right because I'm good with patterns. I was writing a paper the other day and could not find the proper spelling for "scathed". I was looking up the spelling like how I pronounced it s-c-a-v-e-d. I have trouble\(^2\) keeping my b's and d's straight when I'm this tired.

I don't think the education system encourages my way of thinking, at least the sciences don't. I do well with hands on work. It makes it easy to make mental pictures. I just "record" what I'm seeing for playback. But hands on in the chemistry lab where we are just working with clear liquids does not help.

Another thing that seems to help is when an Instructor uses an application that applies to everyday life. It is easier to associate it with something I have already put down in memory. When I have to design a totally new memory tract or pattern\(^3\).
Dave: Sample Paper, "Journal Entry"

Sure, your grammar, punctuation, modifiers, split infinitives, dangling modifiers. I don't like these terms. I could not underline these in a sentence. I just write, I just basically tell if a sentence is written correctly. I am not a morning person and I may not do well. I'm a free writer, I write like I speak. I mis-spell everything mainly because I mis-pronounce everything. I'm dyslexic, I think, because I always write my letters backwards. Not so much anymore but when I'm tired it really shows. I'm not a morning person. It takes time to get my mind going at peak performance. And lately I'm not as sharp as I used to be. I think my mind is tired after six years of college. I remember a instructor once said that the mind is preprogrammed to do everything poorly, as we grow and learn we develop memory tracts. Ideas are placed into long term memory. But is the mind preprogrammed for ideas? I can see this for survival, like the cat or standing, walking, eating. But what if a cat did not see the parents standing would it ever stand? Maybe it would stand only when reaching for food. Like a bear. Different muscle groups would become more developed. Physical changes could
happen that might be passed down genetically to its offspring. Really, why does man stand? When the person is in the standing position they are really topsy-turvy. The center of gravity is not in an optimal plane. The anti-gravitational muscles are constantly working and wasting energy just to keep him standing. I don’t know if evolution would do this. Right now I cannot think of too many advantages why we stand. I think of running, but we really are slow compared to four legged animals.

Ideas are probably associated with memory. School programs us to think in different ways. In high school I was very interested in art. I still can draw anything I can see or imagine. College has taught me to think logically, problem solve. Creativity hurt my mind. I’m not as creative as I used to be. It is like forcing something. I have this natural talent on one hand and my brain is forced to do something it is not good at. (Math, I never did good in these classes) on the other. Maybe I should have taken a comp class on writing about art.

I’m just sound like I was forced to go into the sciences. I was not. Before I declared a major, I took a basic physiology class. I looked upon the
human body as an extremely beautiful work of art. All the intricate nerves working together. When I draw I am a perfectionist. I love to put down as much detail as possible. Every tiny intricate detail. My pencil was never sharp enough.

As I took more and more advanced physiology classes there was more detail but they started defining things with math. I started doing poorer and poorer.

Good thing I'm done. I don't know how good the teaching system is. It opens one up to many new things but it more or less forces a person to think in the prescribed way. Math is one way of describing things and it seems that all the sciences are caught up in it. I'm not saying that it is bad, some things in this essential for. I just feel for me that this is limiting my creativity. We keep no making major advances in science because of math and super-computers that can do more and more math. But what if there is a really unique way of looking at these things. Something that no one even imagined. Is our teaching system totally suppressing these ways of thinking? How could anything break out? Einstein could have broke out. He did not have the math or technology in his day. We are still proving
his ideas. Most (that I know of) are being proven right. I still feel that his thinking was just the tip of the iceberg in that direction. I feel that there are an infinite number of directions of thought. Science scorns ideas such as religion and magic because they cannot be described in a logical, mathematical way. But these are also caught in their own ruts. I wonder if it is too late for me. I suppose at least I'm aware that there could be other ways of thinking, and won't shut them out without examining them first.

I was raised a Christian and my father was a Baptist minister. I have a good basic understanding of the Bible and have good constructive discussions with friends. My best friend and I always came up with questions such as, "Why would some one in India who is not a Christian and was raised in their religions beliefs, taught Christianity was wrong, have to go to hell if they did not believe in Jesus?" I know that my dad thinks hard on questions like this, but my mother and many people just rely on faith and never think about it again. I cannot imagine going through life, working, eating, sleeping, without trying to assemble a "big picture" just to satisfy the question of "who am
I?, "Why am I here?... I really hope it is not just to increase the size of the species and die. This is what is so unattractive about evolution for me. If this were the case, I should just start having a lot of fun, ignoring God given laws and doing totally what I please. These religions would have been created by some genius for the control of a massive population. People without morals and fear of eternal punishment could easily overcome any man enforced laws or control. A world gone mad. But probably there would be a world with a main dictator, who would run things with a huge army. The Bible tells of this in the book of Revelations after the church is removed from earth. I wish I knew more about other religions so I could work on other theories.

I stated earlier that I did not like evolution. I have studied many aspects of it and much of it makes sense. Christians and evolutionists have been fighting for years. Both are so hard headed they won't give an inch. I feel they could coexist.

One thing that most people do not realize is that man, not God created the animal of time. God is not on a time table. Why couldn't he have taken a couple million years to create man. We might not even be to the stage in evolution he wanted to achieve yet. This theory may not be right but it is another way of looking at things. I would never tell anyone that
Their theory is wrong or make them believe mine. Another big question is the creation of the universe. Science has many theories. Particle Physics has many sound arguments of how atoms are built from subatomic particles, which themselves consist of smaller particles. The bottom line is that scientists feel they know what has happened back to about one-quadrillionths of a second after the "Big Bang." But have no idea before that. This is where the theories get tricky, there are many. But God could have initiated this whole thing. Maybe by splitting the smallest particle. From here, atoms to molecules, molecules to amino acids, and amino acids to proteins, proteins to DNA. One does not have to go past atoms to make planets or past subatomic particles to make light. Many people think that when everything was "created," boom it was here, the way things are now. But this is just another way of thinking about things.

Does it really matter? The more I learn the more revisions I can make.

I really don't ponder these problems.

I must just really be in a weird mood. I've never written any of this down before.
This is the only thing I ever drew anymore. Just in case I cannot get a job. —Just kidding—

It is kind of depressing to think that this can be duplicated by copy machines. Is there really any use to spending so much time on something that can be done quicker by another method? "Sure I draw, I think," I usually think aloud to myself. "I'm drawing. I started drawing because I did not know what to write. I must have thought about a hundred things while I was drawing this.

It is 2:35 am. I've been home from work for 1 hour. I got so wired up from work. I work at the University Hospital on a pediatric station. Tonight we had a kid. He was eleven. He was all sorts of problems. He had broken fingers, and a gash. This is not good for a person who had heart surgery two days ago. If she was stern, we would have hit him. Kids are so clever and their bone's breaking back. I've seen kids walking tomorrow and after 2 weeks you can hardly see. I've seen some really strange things. One kid is a baby, who had heart surgery —had an infection in his sternum. So he did not bother closing the area.
Dave: Sample Paper, "Extreme Altitude"

EXTREME ALTITUDE AND MAN

PHYSIOLOGY 3056
The sport of mountain climbing is looked upon by many people as man challenging death. If one climbs long enough, the mountain will always win the game. But many climbers continue to climb, unscathed, until their goals are reached. Sometimes it is luck, avoiding inevitable storms, avalanches, rockfall, but mainly it is the climbers' knowledge from experience and studies that help them survive.

To be taken from sea level and rapidly placed at an altitude of 13,000 feet would disable or even kill a person. Though there are millions of people who survive and even thrive at these altitudes, the body has to make certain physiological adjustments to compensate for the lack of oxygen and extreme climate changes.

At 5000 feet and above, the decrement in max. $V_o_2$ is 3 to 3.5 percent for every 1000 feet ascended. For the unacclimatized person, additional oxygen is essential above 18,000 feet (5486 meters). At extreme altitude, say Mount Everest, 29,028 feet (8848 meters), max $V_o_2$ is reduced by more than 60 percent.

Above 20,000 feet, mountaineers face several potentially killer hazards. Lack of oxygen, cold, dehydration, and exhaustion are the most subtle and the most dangerous. Even though the known dangers, several climbers have summited Everest without supplemental oxygen. These climbers pay a heavy toll for such a feat.
A climber at the summit of Mount Everest can only do between 10 and 20 percent of the work that he can do at sea level, not an easy task considering all the gear they have to carry. Just to summit, this low maximum work rate is directly related to the fact that the barometric pressure is so low (253 mm Hg), and the pressure of oxygen in the air is greatly reduced. The oxygen moves from the lungs to the blood by a process of passive diffusion, and the body cannot transfer oxygen rapidly enough into the exercising muscles. The summit of Mount Everest is very near the limit of human tolerance. If Everest were a few hundred feet higher or at a more northerly latitude, barometric pressure decreases at higher latitudes (barometric pressure decreases with altitude). Humans would have to use supplemental oxygen. Ideally, climbers would have to use supplemental oxygen, but not practically. A climber on Everest should choose a day with a high barometric pressure, warm and clear weather. A climber on Everest could also choose a day with a high barometric pressure, warm and clear weather.

Not everyone reacts to altitude in the same way. All climbers experience one or more forms of illness, which symptoms consist of headache, shortness of breath, periodic breathing at night, difficulty sleeping, poor appetite, nausea, dry cough, so
on. AMS generally occurs at 14,000 feet or higher. When a climber is suffering from the symptoms of AMS, their judgment may be hindered and they could make a fatal mistake. Recognizing altitude illness has become extremely important. This is done with an ear oximeter. A normal saturation at sea level is 98 percent, while at 14,000 feet on Denali (Mount McKinley), the normal value is about 78 to 82 percent. Climbers who developed AMS had saturations averaging 74.2 percent when measured at 14,000 feet before the climb. Those who remained well averaged 81.5 percent. Those who had the low oxygen levels were encouraged to acclimatize more before ascending.

There are two reasons for a lower than normal oxygen level. One is an inadequate amount of breathing, the second is a low grade pulmonary edema.

High Altitude Pulmonary Edema (HAPE) is a life-threatening altitude illness. Important risk factors included rapid ascent, the use of sleeping pills (to alleviate sleepless symptoms of AMS), and perhaps, extreme cold. Early diagnosis is a sudden onset of fatigue and weakness, a dry cough, increased breathlessness, increased heart rate, and grayish or dark fingernails. HAPE often develops during the night. Pulmonary edema is the accumulation of fluid in the alveoli, when the alveoli are full of fluid they cannot exchange air...
Exactly what causes the blood vessels of the lung to leak fluid into the alveoli is under study. The fluid was analyzed and the protein level was 60 times that of the control group. Further analysis found chemicals called leukotrienes and thromboxane that cause increased pressure and leakiness of the blood vessels and also cause small blood clots. Red blood cells cause the pinkish color of the sputum. The clinical observations and the lung fluid analysis taken together point to a rapidly reversible stretching of the thin cellular walls of the blood vessels. The leak is probably triggered by high vascular pressures in the lung generated during periods of extreme hypoxia such as occurs during sleep. A well climber would do much better to consciously increase breathing during exercise without “grunting” breathing, and thereby raise his blood oxygen level without increasing the work of breathing. They also found that climbers with HAPE had very low hypoxic ventilation response (HVR). HAPE develops with people with low HVR values. Since the HVR can be measured, high risk climbers can be identified prior to ascent and thus take extra precautions to avoid pulmonary edema.

High Altitude Cerebral Edema (HACE) is a very severe high altitude illness that occurs in two clinical settings. HACE of acclimatisation is the commoner form rarely occurring below 4000 meters.
when the climber first arrives at high altitude they usually have some symptoms of Acute Mountain Sickness for several days before developing a severe headache. It is worse when coughing, stooping and straining (three major activities in mountaineering). Psychological changes may occur in the early stages, including hallucinations (it is common to read about world-class climbers speaking about hallucinations when they are recalling their climb) and confusion, clouding of consciousness with stupor and coma following. Recovery (get the patient down in altitude) may occur at any stage, but once coma ensues the mortality is over 60 percent.

Other high altitude illnesses are Peripheral Edema (related to AMS) which is the swelling of the limbs or face, usually commonly seen at an altitude of 4500-5000 meters. Also high Altitude Retinal Haemorrhages (HARM) is seen in some 50 percent of visitors to 5000 meters. The retinal haemorrhages and tortuosity of retina vessels in extreme cases leads to irreversible blindness.

By February 1986, 280 people had lost their lives on the 8000 meter peaks. 60 percent of the fatalities were due to what are conventionally termed as objective dangers, that is those outside the control of the climber.
Fatalities by cause.  

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avalanche</td>
<td>40%</td>
</tr>
<tr>
<td>Falls</td>
<td>15%</td>
</tr>
<tr>
<td>Seracs</td>
<td>12%</td>
</tr>
<tr>
<td>Disappeared</td>
<td>7%</td>
</tr>
<tr>
<td>Exposure</td>
<td>5%</td>
</tr>
<tr>
<td>Storms</td>
<td>4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>4%</td>
</tr>
<tr>
<td>Oedema</td>
<td>3%</td>
</tr>
<tr>
<td>Illness</td>
<td>3%</td>
</tr>
<tr>
<td>Crevasses</td>
<td>3%</td>
</tr>
<tr>
<td>Rockfall</td>
<td>1%</td>
</tr>
<tr>
<td>Exhaustion</td>
<td>1%</td>
</tr>
<tr>
<td>Frost-bite</td>
<td>1%</td>
</tr>
</tbody>
</table>

One in thirty climbers fail to return from the eight-thousanders. Deaths from edema seem to be a fairly rare cause of death.

Self-care of one's physical well-being is apparently important. Dehydration is a major problem among climbers. The thin dry air sucks moisture from the lungs and skin. Dehydration thickens the blood so it flows sluggishly, and red cells stack together, surrendering their release of oxygen less readily. The blood tends to form clots which obstruct blood flow in the legs and arms and may migrate to the lungs, fatally. Without adequate water, the kidneys cannot function well.

At higher altitude a greater volume of air is breathed, but every breath of the cold (often -20°F) dry air drains water and heat from the body—first to warm the inflowing air to body temperature and second by evaporating water from the mucous membrane to saturate the air. So much heat is lost that it may be difficult or impossible to keep warm no matter what one wears. The importance
of "Brewing-up" is almost a matter of life and death. The problem is when suffering from altitude illness one loses the appetite and ambition to even motivate enough to melt the snow to make tea or soup.

There are many drugs that seem to show some promise in relieving altitude illness. Diamox (acetazolamide) is found to be very effective in preventing and treating AMS. It makes the blood more acidic, increases breathing, eliminates periodic breathing during sleep, increases urination and decreases the formation of cerebral spinal fluid. It turns out that the blood of climbers at extreme altitudes is very alkaline (high pH) and this apparently accelerates loading of oxygen by the blood in the lung. The alkalinity is caused by the tremendous increase of breathing (hyperventilation) which blows off large amounts of acidic carbon dioxide. Normally the kidneys compensate for this and thus reduce the alkalinity but the compensation process is slow at high altitudes. Diamox buffers the high alkalinity and helps the kidneys. Modern world-class climbers such as Messner and Habeler exploit the alkalinity of the blood that helps transfer oxygen for the final fast summit bid. However if the climbers would be caught in a storm at high altitude (8000 meters or above) for several days they would "deteriorate" because of the action of
Many of the world-class climbers feel that acclimatization with drugs is like climbing with supplemental oxygen—unnatural. Are these world-class climbers physiologically better suited than the sea-level native for these high-altitude climbs?

Dr. West's American Medical Research Expedition took a look at this question. Reinhold Messner, who has climbed all 14 8000-meter mountains, most (including Everest) without oxygen was found to have static and dynamic lung volumes at the lowest limits of normal. Among the climbers the maximal oxygen uptake (the functional capacity of the cardiovascular system to transport oxygen to the tissue) fell within the range of amateur marathoners but was well below the values of elite long-distance runners. The mean value for the whole group was 60 ml oxygen per kg per min. Compared to the world-class runners reaching values higher than 80 ml, ventilation at rest was higher in the world-class climbers. In muscles there was an increased content of certain slow-twitch, fatigue-resistant fibers in the climbers. There was also changes in the fiber size leading to better condition for tissue oxygenation plus the fact that the number of blood capillaries per area was greater in the climbers.
It was found that the main feature of a successful extreme altitude climber is a high capacity to oxidize fat in the muscle, a favorable geometry for blood-tissue gas exchange and respiratory control centers with immediate and sensitive reaction to hypoxia.¹

Neurological examinations showed that most of the changes from altitude illness seem to rapidly reverse upon return to low altitude, although climbers have reported defective short-term memory for months after an expedition. Clinical examinations showed that most of these world-class climbers had an higher I.Q. than a control population. When testing concentration, however, the majority performed irregularly and with a high error score. The subtle changes which are most likely a consequence of repetitive hypoxic stress to the brain can only be detected in certain tests.²

The world-class climbers who climb these 8000 plus meter peaks, mostly oxygenless, are not that much physiologically superior but actually possess a strong motivation and exceptional drive.


6. Reinhold Messner. All fourteen eight-thousanders. Cloudcap Seattle 1988: 244-245

EXPERIMENT Z,a,b,c
PARTIAL PURIFICATION AND CHARACTERIZATION OF YEAST INVERTASE

BioChem 5025

LAB PARTNER: 
INTRODUCTION:

The enzyme invertase (β-D-fructofuranoside) catalyzes the hydrolysis of the disaccharide sucrose giving rise to equivalent amounts of glucose and fructose;

\[
\text{Sucrose} \xrightarrow{\text{invertase}} \text{Glucose} + \text{Fructose}
\]

For one molecule sucrose hydrolyzed, two molecules of reducing sugar are formed.

In this experiment we will go through a series of different methods to isolate and purify the invertase enzyme. Then we will characterize the invertase activity and protein content.

The first step is the extraction of the invertase from yeast. Through a series of steps, we will extract the invertase from the cell wall. This involves breaking down the cell wall both chemically and manually (with abrasives) to release the desirable components (proteins, nucleic acids and small proteins), discarding the precipitate, (cell matter e.g. cell walls, lipids and membranes). Next we will use heat extraction to purify the invertase extract, this will give the dilute invertase. To concentrate this extract we will conduct an 'alcohol fractionation'.
the next step we will purify the invertase using (column) chromatography. We used the ion exchange technique. Proteins consist of a variety of ionizable groups. We chose a resin that would pick-up the proteins with a net positive ionic charge. This cation exchanger, CM-cellulose holds the desirable proteins while the others get flushed through the column.

\[ \text{CM-cellulose} \]

After the unwanted proteins are discarded, we want to release the bound proteins. To do this we increase the salt concentration which minimizes the interactions between the cation exchanger and the protein. We used a step gradient of NaCl to release proteins of different bond strengths. We also changed the pH.

After collecting the proteins, we assayed the fractions with absorbance and "clinitix", which is a diagnostic strip that measures
(3)

e glucose concentration. We did this to test for invertase. We added sucrose to each of our fractions. If invertase is present, it will break down the sucrose to glucose and fructose. The clinistix changes color according to the amount of glucose present. When graphed, this let us determine which fractions had protein and invertase enzymatic activity and which fractions had protein but no invertase activity.

From this point we assayed our samples for invertase activity. We did this by using the Nelson's assay for assaying enzymatic activity and dye-binding assay to look at protein concentration. In the Nelson assay we quantitatively measure the amount of product (glucose and fructose) formed upon the hydrolysis of sucrose by the invertase in a specified length of time. The free reducing groups in the sugar reduce Cu^{2+} to Cu^{+}. In the alkaline solution the sugar is oxidized, and the Cu^{+} precipitates out as the rust-colored Cu_{2}O. The amount of Cu_{2}O present is determined by adding
(5) Ads with the proteins present. The air change is measured by spectrophotometry. The concentration was determined by plotting against the standard curve that was established using known amounts of a reference protein (BSA).

II. METHODS

less detail is better - refer to manual for details

To obtain the invertase we started with 5 grams of baking yeast and added approximately 4 grams of sand and ground in a mortar for 20 min. We added 10 ml of toluene and ground it until we had a thick paste. We added 16 ml of deionized water (2 ml every 3 min.) and continued to grind the paste. Thinned, we transferred this mixture into a toluene resistant centrifuge tube and centrifuged in a Beckman refrigerated centrifuge (5°C) at 15,000 rpm for 15 min. The mixture separated into 4 distinct layers. When trying to remove the aqueous layer we accidently mixed the layers. We centrifuged again, this time at 13,500 rpm, and successfully removed
The aqueous layer was saved 1 ml of a aliquot in a 1.5 ml epipodophin tube for later activity and protein determinations (labeled tracion I). Of the remaining solution we adjusted to pH 5 by the dropwise addition of 1N acetic acid.

To conduct the heat extraction, we rapidly brought the extract to 50°C in a heated water bath, and we maintained this temperature for 20 minutes. We cooled this extract in an ice bath and extracted the supernatant by centrifugation for 15 min at 15,000 rpm. We measured the volume and removed and labeled (fraction II), 1 ml for later activity and protein determination.

Next we did an alcohol fractionation. Over 20 minutes we slowly added cold 95% ethanol in equal volume to the remaining heat extract in a ice water jacket. This was stirred on a magnetic stirrer for 10 minutes. We centrifuged the resulting precipitate for 20 minutes at 15,000 rpm. We decanted the supernatant, and stored it in the refrigerator.
When we were ready to do the chromatography, we dissolved the pellet in 5 ml of 0.8 M Tris- HCl (pH 7.3) buffer. This took about 10 minutes. We centrifuged this mixture at 15,000 rpm for 10 minutes, and discarded the pellet. We then measured out 3 ml to use for the chromatography and saved the remaining amount for later activity and protein determination (labeled as Fraction III).

For the actual chromatography, we packed a column as shown below.

We washed the column with 5 ml of starting buffer. We applied the 3 ml of Fraction III to the top of the column bed, and began collecting 2 ml fractions in separate tubes. We rinsed the sides of the column with 6 ml of buffer and allowed it to pass through. Then we added 9 ml of elution buffer (0.2 M NaCl, 10 mM Tris-HCl, pH 7.3). After collecting 9 fractions we took absorbance readings at 280 nm of them all.
sitting with the buffer as a blank.
Next we took 2 drops from each tube and placed them separately on para film. To each of the nine samples we added 2 drops of 0.2M acetate buffer (pH 4.8) and 2 drops of 0.5M sucrose. We allowed this to set for 5 minutes and tested each sample with clinistix. We recorded the color development at 10 seconds. From this test we pooled the tubes which contained protein but not invertase activity (labeled fraction IV) and the tubes which contained protein and invertase enzymatic activity (labeled fraction V).
To assay the samples for invertase activity (and part II), we prepared 26 tubes as directed on part I, page 21, in our laboratory manual. We added 0.2 ml of 0.5M sucrose to tubes 11-26 at 1/2 minute intervals and allowed to set for 10 minutes, then we added 1 ml of Nelson's reagent to all 26 tubes. We placed all the tubes in an boiling water bath for 13 minutes. We cooled the tubes to room temperature and added 1.0 ml of arsenomolybdoate reagent. We mixed
The tubes were let stand for 10 minutes. I added 7 ml of deionized water to each tube and mixed well. Then using tube 1 as a blank, we took the absorbance reading of tubes 2-10 at 510 nm. Using tube 11 as a blank, we took the absorbance reading of tubes 12-26, also at 510 nm. Recording all the values.

To determine the protein concentration with the dye method, we set up tubes as directed in the protocol on page 24 of our laboratory manual. We added Coomassie blue-G-250, allowing the tubes to sit for five minutes and took absorbance readings at 595 nm.

III RESULTS

We found that the grinding of the yeast sand mixture should be carried out as long as possible before adding the toluene. Once this is added, the mixture becomes almost unbearable to mix. After we centrifuged the mixture, we accidentally mixed the layers. We centrifuged again.
and succeeded to remove the aqueous layer. We obtained 7.8 ml.
we had no problem adjusting the pH, though many others at our lab table
did. From the heat extraction we came up with 6.0 ml of supernatant.

We had no problems with the chromatography and obtained nine 2 ml samples. It helps to mark off 2 ml levels on the test tubes before beginning.

We took the absorbance at 280 nm and plotted it against the fraction number. Since proteins absorb at 280 nm, the y-axis indicates total protein content. The right of the graph shows the results obtained from the "Clinitest," +++ indicating a high glucose presence.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Absorbance Readings (280 nm)</th>
<th>Clinitest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.074</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.1017</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.092</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.875</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.828</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>0.289</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>0.962</td>
<td>+++</td>
</tr>
<tr>
<td></td>
<td>1.070</td>
<td>+++</td>
</tr>
<tr>
<td></td>
<td>0.280</td>
<td>++</td>
</tr>
</tbody>
</table>
In the assay of samples we measured the protein content and the enzymatic activity of the samples from each purification step. In the Nelson's assay where we examined the enzymatic activity we found that the samples changed color after boiling. The orange (rust?) color indicates that there was a hydrolysis of sucrose by the invertase. The Cu⁺ precipitated out at the following samples.

<table>
<thead>
<tr>
<th>Tube</th>
<th>Color</th>
<th>Tube</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blue</td>
<td>15</td>
<td>very light brown</td>
</tr>
<tr>
<td></td>
<td>Blue</td>
<td>16</td>
<td>orange</td>
</tr>
<tr>
<td></td>
<td>light blue</td>
<td>17</td>
<td>orange</td>
</tr>
<tr>
<td></td>
<td>very light blue</td>
<td>18</td>
<td>orange</td>
</tr>
<tr>
<td></td>
<td>very light brown</td>
<td>19</td>
<td>brownish/orange</td>
</tr>
<tr>
<td></td>
<td>light brown</td>
<td>20</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>light brown</td>
<td>21</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>very light brown</td>
<td>22</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>brownish/orange</td>
<td>23</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>Blue</td>
<td>24</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>very light blue</td>
<td>25</td>
<td>light blue</td>
</tr>
<tr>
<td></td>
<td>orange</td>
<td>26</td>
<td>orange</td>
</tr>
<tr>
<td></td>
<td>orange</td>
<td>26</td>
<td>orange</td>
</tr>
</tbody>
</table>

When we added the arsenomolybdate reagent the samples turned various shades of blue, from light to very dark. Taking the absorbance at 560nm and plotting against moles of reducing sugar figuring moles from the known reducing sugar...
Dave: Sample Paper, "Experiment," continued

<table>
<thead>
<tr>
<th>Tube #</th>
<th>4 mm glucose</th>
<th>( \frac{1 \text{ M}}{\times 10^3 \text{mm}} \times \frac{1 \times 10^6 \text{mm}}{1 \text{ M}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0.02 (4 mm)</td>
<td>( \frac{0.08 \text{ mm}}{\text{ml}} \times \frac{1 \times 10^6 \text{mm}}{1 \times 10^3 \text{mm}} = 80 \text{mm} )</td>
</tr>
<tr>
<td>3</td>
<td>0.05 (4 mm)</td>
<td>( \frac{0.2 \text{ mm}}{\text{ml}} \times \frac{1 \times 10^6 \text{mm}}{1 \times 10^3 \text{mm}} = 200 \text{mm} )</td>
</tr>
<tr>
<td>4</td>
<td>0.10 (4 mm)</td>
<td>( \frac{0.4 \text{ mm}}{\text{ml}} \times \frac{1 \times 10^6 \text{mm}}{1 \times 10^3 \text{mm}} = 400 \text{mm} )</td>
</tr>
<tr>
<td>5</td>
<td>0.15 (4 mm)</td>
<td>( \frac{0.6 \text{ mm}}{\text{ml}} \times \frac{1 \times 10^6 \text{mm}}{1 \times 10^3 \text{mm}} = 600 \text{mm} )</td>
</tr>
<tr>
<td>6</td>
<td>0.20 (4 mm)</td>
<td>( \frac{0.8 \text{ mm}}{\text{ml}} \times \frac{1 \times 10^6 \text{mm}}{1 \times 10^3 \text{mm}} = 800 \text{mm} )</td>
</tr>
<tr>
<td>7</td>
<td>0.25 (4 mm)</td>
<td>( \frac{1 \text{ mm}}{\text{ml}} \times \frac{1 \times 10^6 \text{mm}}{1 \times 10^3 \text{mm}} = 1000 \text{mm} )</td>
</tr>
<tr>
<td>8</td>
<td>0.30 (4 mm)</td>
<td>( \frac{1.2 \text{ mm}}{\text{ml}} \times \frac{1 \times 10^6 \text{mm}}{1 \times 10^3 \text{mm}} = 1200 \text{mm} )</td>
</tr>
</tbody>
</table>

For the following standard curve we can determine the mm of reducing sugar present in the optimal tube of each fraction.

Please excuse but I discovered a mistake and wanted to change it before I handed in my paper. Thanks. -D
Enzyme yield is determined from total units from step X divided by the total units of crude mixture.

Crude \( \frac{1154400}{1154400} \times 100 = 100\% \)

Heat \( \frac{1107600}{1154400} \times 100 = 95.9\% \)

Alcohol \( \frac{1019100}{1154400} \times 100 = 88.2\% \)

Column \( \frac{380550}{1154400} \times 100 = 33\% \)

\( \frac{25960}{1154400} \times 100 = 2.2\% \)

Discussion
I had trouble with some of the results. First on page 11, we got "clinistix" activity around fraction 4-5 and we should not have so the samples must have been contaminated. Also when figuring moles (page 13) I don't know if I was doing it right because in later equations, like on page 15 I got
Rather large results. This canceled out in later equations because we were using ratios and it did not matter where the decimal point is.

On my graph showing protein (mg) vs. Absorbance 595 nm, the standard curve started bending over fairly early. In fact, about .400, I compensated for this by using low values for the optimal tubes of our fractions so they would land on the straight line.

I'm still confused a bit from this corrected volume stuff. I'm not sure if I did the right thing for fractions IV, V.

Enzyme yields look good. We are getting less and less invertase because there is less to do this.

I did not know if you wanted all the data on a table like in the manual or if it is ok. In this form.

What about specific activity? Expected trend?
Dave: Thought Samples #1

THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.
   I was trying to get the point across that I am a visual thinker. I did not know how to show this with an example. I have to look back to remember just where I was at. I was thinking about what I was going to say in the next sentence, that is why I misspelled hand.

B. What, if any, connection do you think the thought had to your piece of writing?
   Very much. I was going to be my concluding sentence of that thought. I'm worried that I won't remember what I was going to say.

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?
   1. mostly words
   2. mostly pictures
   3. both at the same time
   4. can't remember
B. How well detailed were the thoughts that were going through your mind?
   1. very detailed
   2. somewhat detailed
   3. somewhat vague
   4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?
   1. picture-like elements throughout
   2. some fairly prominent picture elements
   3. just a trace of picture elements
   4. no trace of anything picture-like

D. Were the things going through your mind very auditory?
   1. very auditory
   2. moderately auditory
   3. just a little auditory
   4. not at all auditory

E. If your thoughts were mostly words, did you hear them?
   1. didn't really "hear" them; just thought them silently
   2. heard an "interior monologue"; mentally talked to myself
   3. heard someone else talking to me
   4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).
   1. it was all directed thought
   2. it was mostly directed thought
   3. a little directed thought
   4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).
   1. it was all non-directed thought
   2. it was mostly non-directed thought
   3. a little non-directed thought
   4. no non-directed thought
Dave: Thought Samples #2

THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

I was thinking ahead again about how to describe what I keep making my b's and d's backwards when I'm tired. Though way back in my head I was trying to think about my total objective of this paper.

B. What, if any, connection do you think the thought had to your piece of writing?

Very much, I want to finish the seminar. So I don't lose my thought again

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

1. mostly words
2. mostly pictures
3. both at the same time
4. can't remember
Dave: Thought Samples #2, continued

B. How well detailed were the thoughts that were going through your mind?

1. very detailed
2. somewhat detailed
3. somewhat vague
4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?

1. picture-like elements throughout
2. some fairly prominent picture elements
3. just a trace of picture elements
4. no trace of anything picture-like

D. Were the things going through your mind very auditory?

1. very auditory
2. moderately auditory
3. just a little auditory
4. not at all auditory

E. If your thoughts were mostly words, did you hear them?

1. didn't really "hear" them; just thought them silently
2. heard an "interior monologue"; mentally talked to myself
3. heard someone else talking to me
4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).

1. it was all directed thought
2. it was mostly directed thought
3. a little directed thought
4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).

1. it was all non-directed thought
2. it was mostly non-directed thought
3. a little non-directed thought
4. no non-directed thought
Dave: Thought Samples #3

THOUGHT SAMPLES

I. Please answer the following questions briefly.

A. What was the last thought you had in your mind just before you were interrupted? Be as detailed and accurate as you can; work backwards to other thoughts if you want to.

I was thinking that I'm running out of things to say while I was writing the last sentence. I'm not really sure what I was going to say in that sentence.

B. What, if any, connection do you think the thought had to your piece of writing? That I was falling apart and I would not be able to continue much longer.

II. For each question that follows, circle the feature which best describes the thought you had just before you were stopped.

A. What kinds of thoughts were going through your mind just before you were interrupted?

1. mostly words
2. mostly pictures
3. both at the same time
4. can't remember
Dave: Thought Samples #3, continued

B. How well detailed were the thoughts that were going through your mind?
   1. very detailed
   2. somewhat detailed
   3. somewhat vague
   4. very vague

C. Were the things going through your mind very picture-like? Could you see any shapes and forms?
   1. picture-like elements throughout
   2. some fairly prominent picture elements
   3. just a trace of picture elements
   4. no trace of anything picture-like

D. Were the things going through your mind very auditory?
   1. very auditory
   2. moderately auditory
   3. just a little auditory
   4. not at all auditory

E. If your thoughts were mostly words, did you hear them?
   1. didn't really "hear" them; just thought them silently
   2. heard an "interior monologue"; mentally talked to myself
   3. heard someone else talking to me
   4. heard some sounds, but they weren't really words

F. Were your thoughts before being interrupted directed thoughts? (i.e. you felt you were deliberately focusing your attention on your writing in order to achieve a goal).
   1. it was all directed thought
   2. it was mostly directed thought
   3. a little directed thought
   4. no directed thought

G. Were your thoughts before being interrupted non-directed? (i.e. thoughts flowed through your mind without your direct control).
   1. it was all non-directed thought
   2. it was mostly non-directed thought
   3. a little non-directed thought
   4. no non-directed thought
Dave: Post-Sample Questionnaire

POST-SAMPLE QUESTIONNAIRE

1. In general, how did you go about writing this piece? Think about how you arrived at insights, organized your writing, adjusted for your audience, and decided how to present yourself in the writing. Were you able to generate enough material to write for 45 minutes?

I was running out of things to say, I was battered by having to stop and losing my thoughts, when I started I knew which direction I was going to go because I had thought about the topic a little. Organization fell apart. I started reaching for things to say.

2. Were there any ideas that really stood out for you as you wrote? What were they? Were they mostly in the form of words or images?

What really stood out was my initial statement. This was something that I think about most of the time when I think of learning.

4. Sometimes when people think, they connect abstract ideas to something more concrete (i.e. linking the way analogic watches work with a game of ring-around-the-rosy). Did you do that?

No I don’t think so—maybe your example throws me—though I know what you want.
5. A. Are you satisfied with what you wrote?
   1. very satisfied
   2. somewhat satisfied
   3. somewhat dissatisfied
   4. very dissatisfied

   B. What, if anything, would you change?
   Spelling, organization, things that I have thought about since we stopped that would work better.

6. Circle the item from each category that best describes your writing process in general.

   A. 1. I prefer to think through carefully what I am going to say before I write, then write one main draft, returning only for minor changes.
   2. I prefer to find my ideas by writing and rewriting extensively.
   3. Other

   B. 1. When I write I usually think about only what directly pertains to what I'm going to say next.
   2. When I write I often let my mind roam expansively over a lot of ideas.
   3. Other

   C. 1. I really work carefully and deliberately to develop my ideas as I write.
   2. I write intuitively. My best ideas usually come to me without my having to direct and control them.
   3. Other

   D. 1. My ideas usually occur to me in words without pictures.
   2. My ideas often occur in pictures, graphs, and things I hear.
   3. Other