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THE COMPOSING PROCESSES OF BLIND WRITERS

DISSERTATION

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North Texas State University in Partial  
Fulfillment of the Requirements

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By

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An examination of the composing processes of blind writers was conducted to determine the strategies used by these composers. Two individuals blind from birth and two persons blinded later in life participated in the study.

Using participant observation and stimulated recall, the researcher examined the composing processes of these subjects. Each individual participated in four writing sessions and used the compose-aloud technique whereby the composer repeats orally any thoughts that occur during writing. In addition, an interview was conducted with each participant which provided a writing history, attitude toward writing, and composing strategies.

Results of the research indicated that blind writers use the same basic processes of writing as reported for sighted writers. Blind writers in this study did not make written plans prior to writing and spent between one and four minutes in prewriting. Planning was an ongoing feature of the composing process. The writers in this study demonstrated the recursive feature of composing. Rescanning was a continual part of their composing sessions. Three of the

subjects reported using rescanning for planning and editing. One individual reported using rescanning for editing only.

Some differences were found in the blind writers as compared to the research on sighted composers. First, blind writers averaged 39 rescansions per essay, while research on the sighted reported approximately six rescansions in each session. The difference in the number of rescansions between these two groups may be a result of the blind writer's need to locate position on the page or from a difference in short-term memory in the sighted and nonsighted.

Writers blind from birth demonstrated a difference in the ability to organize an essay in the extensive mode. These composers made no global plans. Rather they allowed the writings to unfold as they wrote. This research would indicate that sight may have a role in composing.

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## CHAPTER I

### INTRODUCTION

Various theories have been proposed to explain how individuals write. Linguistics has provided a view of the composing process as a "psycholinguistic guessing game" whereby the composers examine what they know and determine what they need to know to exchange "intention(s) and responses(s)" between themselves and the audience (Augustine, 1981, p. 228). Augustine posits that all writers work in two dimensions at the same moment, "the surface representation and the underlying form" (Augustine, 1981, p. 223). Linguistics, however, does not provide a description of the composing process as it occurs.

A number of researchers have examined writers as they compose to provide a description of the process (Emig, 1971; Graves, 1973; Mischel, 1974; Stallard, 1974; Pianko, 1977; Perl, 1979). Emig (1971) found that the writing process itself is recursive; the composer writes and then rereads and revises, going back in the text to move forward. Writers ranging in age from young children through college students have been studied to determine their composing strategies; however, the handicapped writer has not been the subject of composing process research. Writers who have specific

disabilities may provide insight into the importance of the senses in composing. Emig suggested this course of inquiry as a natural one, for she explains, "Attempting to infer the whole from the fragmented, the normal from the aberrant, the functional from the dysfunctional, is a classic research approach" (Emig, 1978, p. 60).

Thus, the description of the composing processes of blind persons should provide an indication of the importance of sight in the writing process. Through an examination of blind composers, a better understanding of this complex cognitive activity should result.

#### Statement of the Problem

The problem for this study was an examination of the composing processes of blind writers.

#### Purpose of the Study

The purposes of this study were to describe the composing processes of persons blind since birth and persons who became blind later in life and to compare and to contrast these composing processes with the writing processes of the sighted to determine differences and similarities.

#### Research Questions

The following research questions were addressed in this study.

- 1) How do persons blind since birth compose?
- 2) How do persons blinded after birth compose?
- 3) How does the information gained from the blind writers compare with the information known about sighted writers?

#### Background and Significance of the Study

The composing process is a little understood cognitive activity. For many years, research on writing focused on what Cooper and Odell (1978) labeled as "pedagogical research" which centered on ways to improve writing. This kind of research was based on the assumption that educators and researchers understood the components of writing. Until the 1970's, however, most research on composing examined the written product, not the writing process. Therefore, how an individual composed was not fully understood.

In 1969, Emig used a case study approach to examine twelfth graders as they wrote. Turning from the writing product to the writing process, Emig set the mold for further research studies on the composing process. Using case study approaches, other researchers have collected vivid descriptions of how a person composes (Graves, 1973; Mischel, 1974; Stallard, 1974; Pianko, 1977; Perl, 1979). Through each study, more knowledge has been added to further an understanding of this complex internal process.

Researchers have examined the writing processes of twelfth graders (Emig, 1971), seven year olds (Graves, 1973), college freshmen (Pianko, 1977), unskilled college writers (Perl, 1979), young children (Lamme and Childers, 1983), and good high school writers (Stallard, 1974). All of these studies have focused on writers with no known physical or mental handicaps. As a next step in understanding more about how a person composes, researchers need to study writers who have deficiencies to determine if their writing processes differ from normal writers (Emig, 1978).

Blind writers may provide some interesting answers to questions about the importance of the eye in writing.

Is seeing the sensory mode in which most prewriting is conducted? Do we literally examine a subject or experience visually? If so, what constitutes prewriting for the blind or partially sighted? What obviously is needed is direct observation of such subjects engaged in the writing process, from perception of stimulus through "contemplation" of product, as well as detailed interviews with skilled and unskilled writers, both those congenitally blind and those who become blind later in life (Emig, 1978, p. 65).

Sight could prove to be a necessary component of the writing process. Although several noted writers became blind at an early age, no congenitally blind person has become a writer of renown (Roberts, 1982). An examination, then, of the composing processes of persons blind since birth and persons blinded later in life should reveal the importance of the eye's role in the composing process.

### Definitions of Terms

The following terms are defined here as they are used in the present study.

- 1) Writing--A complex cognitive activity whereby thoughts are translated into a language which is recorded on paper. For this study, the terms "writing" and "composing" will be used interchangeably. Further writing is synonymous with brailleing.
- 2) Compose-aloud--A technique which requires a subject to think aloud while writing.
- 3) Stimulated recall--A technique in which a subject is shown a videotape or listens to a recording of a past happening and is asked to recall orally what thoughts were occurring at the moment of that happening.
- 4) Prewriting--A stage of writing which is the time between the moment the assignment is given and the writing of the first words on paper.
- 5) Pause--An interval that occurs after the physical act of writing in which no writing or reading is being done.
- 6) Rescanning--The process of rereading any portion of the written product with the exception of the entire piece.

- 7) Rate of composing--The figure which represents the mean number of words written per minute and includes time spent in rescanning, rereading, and revising.
- 8) Revision--The process of rewriting a word or a larger portion of a written product.
- 9) Planning--An element of composing in which the subject thinks about what the sentence, paragraph, or essay will say.
- 10) Audience--The person or persons for whom the writing is intended.

#### Limitations

Since the writing process is a cognitive activity, research conducted while a person is composing should reveal something about the process itself; however, no neurological testing was conducted on the subjects. Therefore, the results of the composing aloud may be attributed in part to neurological impairment. Another possible weakness occurs as a result of the laboratory setting. Since the environment is an artificial one, findings cannot be generalized to regular writing sessions. Although the researcher cannot view the brain's internal workings, the researcher can record the subject's oral musings and examine physical manifestations of the process such as the number of pauses and rescannings and prewriting and writing time. Thus, a case study approach

will allow the one-to-one contact required for these detailed descriptions. The findings, however, cannot be generalized to broad populations. The case study approach cannot negate researcher bias; therefore, results may be colored by personal perceptions. This study requires each subject to report his or her internal thoughts verbally. These reports can only be viewed as close approximations of the internal process at best and cannot be seen as holding true for all other persons. Finally, the conclusions drawn by the researcher cannot be considered conclusive or exhaustive.

#### Procedures for Data Collection

The case study approach, a detailed description of a subject (Stake, 1978), was used for this research. The topic of the study, an examination of the composing process of the blind, necessitated this research procedure. Data collection included interviews with the subjects, participant observation, tape-recording of the composing episodes, and the subjects' written products. The interview ascertained the subject's attitudes toward writing and his or her writing history and was conducted prior to the four writing sessions.

Each subject used the process of "composing aloud" whereby the subject verbalized all thoughts as they occurred during the four writing sessions. After each writing session, the researcher used the stimulated recall technique

to get the subjects to discuss what occurred during the composing sessions. In addition, the writing products were also analyzed.

### Procedures for Data Analysis

Interviews were transcribed and evaluated for writing experiences, including both school-sponsored and self-sponsored writing and writer attitudes toward writing. The tape-recorded think-aloud sessions were transcribed. All comments by the writer and the researcher were included. The researcher maintained an inventory of the subject's writing behaviors which was also used in the analysis. The data were then examined to provide a description of the subject's composing processes. The researcher then searched through the data and made tentative explanations. This process required repeated reviews of the original transcripts to allow a complete description of the composing process of the blind writers. In addition, the number of pauses and rescannings and the prewriting time, composing time, and composing rate were analyzed.

Products were then examined to determine if the mode assigned was the mode chosen by the writer. When subjects composed in the assigned modes, comparisons were made between composing behaviors associated with the reflexive mode which focuses on the writer's thoughts and feelings and the

extensive mode which centers on the transmittal of a specific message to another. The researcher checked the written products to determine whether the composer addressed the topic assigned. For example, the first writing session's topic was the description of a process. Larry, one of the subjects, chose to describe how to play a guitar. Thus, the topic assigned and the subject chosen matched for this composer. The text was also used to make comparisons between what the writer stated during the think-aloud session and what was actually written.

The compose-aloud transcripts were then coded for various composing behaviors, and a detailed description of each writer's composing process was developed. Prewriting considerations, planning strategies, and reviewing techniques were described. For example, none of the subjects made written plans during the composing sessions. Each used the prewriting time to decide on a topic, and sometimes the subjects would plan the initial sentence or two of the essays. Occasionally, a composer made broad plans during prewriting. In addition, the number of pauses and rescannings, prewriting time, composing time, and composing rate were compared among the subjects. These results revealed a difference in the speed of composing for the subjects. The prewriting times, however, were consistently between one to four minutes for the subjects.

The results of the study were then compared to the results of the composing process studies of sighted writers. A set of statements were then posited concerning the composing processes of blind writers.

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## CHAPTER II

### REVIEW OF RELATED LITERATURE

Research in composition generally falls into two categories: that which examines the writing product and that which looks at the composing process. These two views are discussed in Cooper and Odell's Research on Composing: Points of Departure (1978) and are described as "pedagogical research" which is concerned with "finding out exactly what information and skills teachers and researchers ought to be concerned with" (p. 73).

In addition to pedagogical research and writing process research, discourse theory offers an understanding of the different kinds of writing as well as the relationships among author, audience, and subject matter. Linguistics, another area of language study, describes theories of how language is stored in the mind and then how that stored information is brought to speech. Finally, research on the blind describes the blind person's language abilities.

#### Research on Composing

##### Pedagogical Research

The role of grammar in composition classrooms is a highly debated issue. Smelstor defined grammar as "the

structure of a language" which included "mechanics (punctuation, capitalization) and usage (common acceptable use of language, or what we call standard English)" (Smelstor, 1978, p. 43). Elley et.al. (1976) began their study of the effect of grammar instruction on student writing with this quotation from Gordon (1947), "Grammar not merely has a use in the English classroom, but is indispensable. It is not, and never should be taught as an end to itself. Its value is that it provides part of the technique for good writing" (Gordon, 1947, p. 5).

Research does not support this view of the purpose of grammar instruction in the classroom (Holbrook, 1983). Harris (1962) reported that a two-year longitudinal study on the effectiveness of grammar instruction showed "a negligible or even harmful effect on the student's correctness" (p. 83). Haley-James (1981) summarized recent research on the study of grammar by reporting that the study of grammar should not be conducted prior to the seventh grade since the student's ability for abstraction is not developed sufficiently prior to this age. Strom (1960) published a summary of approximately fifty studies concerned with the effect of formal grammar study on a student's writing and concluded that an understanding of traditional grammar did not improve composing skills.

Writing frequency has been viewed as a means of improving writing. A study in 1948 (Lokke and Wykoff) found

that doubling the amount of writing in a class did in fact improve student writing. Recent research, however, has not confirmed these findings even when groups wrote four times as much as the control group (Dressel et. al., 1952; Burton and Arnold, 1963; McColly and Remstad, 1963; Christiansen, 1965; Wolf, 1966). The majority of studies conducted on writing frequency revealed no significant difference in writing improvement when individuals simply wrote more often.

A third means of writing improvement is intensive correction. Thorough evaluation has not been found to be more effective than moderate evaluation in improving writing (Burton and Arnold, 1963; Arnold, 1964; Hillocks, 1982). Neither adding an evaluative comment at the end of an essay (Buxton, 1958) or providing immediate feedback tutoring (McColly and Remstad, 1963) had a significant effect on student writing. Extensive marking and a discussion of the essays did not offer a means of improving writing (Dieterich, 1972). The effect of positive comments and negative comments on student writing quality was not significant (Taylor and Hoedt, 1966; Stevens, 1973; Hausner, 1975). Thus, some studies tend to show that extensive corrections do not seem to offer an immediate way of improving student composition.

Teacher comments on student compositions have led to mixed results. Gee (1972) studied the effects of praise, negative criticism, and no comment and found no difference in

the quality of the compositions. Placement of comments on the composition had no effect on the quality of student writing (Stiff, 1967; Bata, 1972).

Some research, however, does show promise for writing improvement. Maize (1952) used teacher and peer evaluation coupled with increased writing assignments and found significant results. McColly and Remstad (1963) have also found that teacher and peer evaluation significantly affected writing quality. Karegianes et.al. (1980) reported that students who had received peer editing performed significantly higher on a writing proficiency assessment than students who had received teacher editing. Wolter and Lamberg (1977) reported significant gains in the writing performance of students who evaluated their own writing as well as significant gains from student groups who received teacher feedback, which is defined as information on performances. Finally, Hillocks found significant improvement in writing quality in the use of revision and pre-writing activities (1982).

In addition, sentence combining activities have produced positive effects in writing. Sentence combining is the technique of producing one sentence by combining several short sentences. Significant gains have been reported using sentence combining (Mellon, 1969; O'Hare, 1973; Combs, 1976). Stotsky (1975) stated that sentence combining

exercises are a "highly structured kind of writing activity which singularly contains the child's attention to the mastery of complex grammatical structures and, in so doing, may facilitate cognitive growth as well" (p. 59).

Although most writing research has had as its purpose writing improvement, results have been disappointing. Consistent improvement has only come as a result of intensive teacher and peer evaluation and sentence combining. Several reasons may account for the lack of a positive change in student writing. Some of the studies tested the effects of a particular technique after one year. Perhaps writing requires a longer time to be changed significantly. Another explanation may lie in a lack of understanding of the writing process. Until more is discovered about how an individual composes, attempts at writing improvement may be met with less than satisfactory results.

#### Writing Process Research

A trend began in the early seventies which transferred the focus in writing research from the product to the process. Basic questions were raised as to how individuals transmit their thoughts to paper. This area of research has been a source of important discoveries about how a person composes.

The first investigator to attempt to describe what happens when a person composes was Emig in 1969. Since that

research was completed, many others have examined the writing process. Various case studies (Emig, 1971; Graves, 1973; Mischel, 1974; Stallard, 1974; Pianko, 1977; Perl, 1979) have determined that the composing process is recursive, not linear, in nature. In other words, rather than progressing from one point to the next, individuals write a few words or a sentence or two, and then read back over what they have written. This review then spurs them on to write more, but again they pause to collect their thoughts, read back over what has been written, and then write more. In Emig's study, eight twelfth graders composed aloud in an attempt to capture what was occurring cognitively during the writing process. Only one student in the eight made any written plans before writing, yet composition texts such as Warriner's English Grammar and Composition (Warriner et.al., 1977) stress that good writers make outlines. Emig's finding has been replicated in several other studies (Stallard, 1974; Pianko, 1977; Perl, 1979).

Case study research on composing has discovered some information on the writing process. The first stage of the writing process, which is called prewriting, requires relatively little time, with the writer spending from one to three minutes thinking and planning before he or she begins writing (Emig, 1971; Mischel, 1974; Pianko, 1977). The majority of writers observed seem to begin with no formal

plans drawn up but proceed apparently hoping that the act of composing will unravel what needs to be said (Emig, 1971; Mischel, 1974; Pianko, 1977). Pianko stated that students begin writing "without a complete conception of what will be written" (1977, p. 20).

Instead, it appears that composers formulate plans as they write. One indication of planning is the pause time individuals engage in during composing (Flower and Hayes, 1981c). Matsushashi in her research held that pauses are "observable clues to the covert cognition processes which contribute to discourse production" (1981, p. 114). Her research found that in the discourse types of reporting, persuading, and generalizing, composers had significantly different pause times. These results indicated that generalizing and persuading were more time-consuming than reporting. Pauses before beginning a paragraph were longer than other pauses during composing which led Matsushashi to conclude that planning for paragraphs is an integral part of writing (1981). Pause research also has indicated that highly abstract sentences (Matsushashi, 1981) and global planning (Flower and Hayes, 1981c) require more planning time than sentences which added details. Thus, pause research has provided insight into the planning strategies of composers.

Revision is another facet of the composing process and occurs throughout the writing of a paper (Sommers, 1980;

Faigley and Witte, 1981). Some basic differences exist in the way inexperienced and experienced writers revise. Inexperienced writers appear to see the revision process as simple rewording and only make changes at the word or sentence level (Sommers, 1980). These writers can only view their work from their own perspectives. Sommers found that they were not equipped with "strategies to help them identify the 'something larger' that they sensed was wrong" (p.383). The inexperienced composers also relied on "inspiration" which meant to them the ease or difficulty that occurred as they wrote. If the essay was not hard to write and words came easily, they saw no reason to revise, for the words were not a struggle. These writers did not see revision as a means of developing or exploring ideas but simply as an editing function (Sommers, 1980; Faigley and Witte, 1981).

Experienced writers approach revision in a different way. They view revision as a continual process that "can go on forever" (Sommers, 1980, p. 384). They are concerned about the form of their argument and want to ensure that the design of their line of reasoning is clear. Too, they are concerned about the reader and even imagine what that reader will think about the paper (Sommers, 1980). The viewpoint of the reader provides the experienced writer with a different perspective from which to judge the paper. The experienced writers "seek to discover (to create) meaning in the

engagement with their writing, in revision" (Sommers, 1980, p. 386). These composers make the most changes at the sentence level. The changes of addition and deletion are made most often; however, the experienced writers make changes at the phrase and theme level using all other revision strategies, including substitution and rewording (Sommers, 1980).

Other basic differences exist between good writers and remedial writers. Good writers spend more time prewriting (Stallard, 1974; Pianko, 1977). They also rescan their work more often, and they write longer papers. The remedial writer does not use pauses in the same manner as the good writer. The remedial writer uses his or her pauses looking around the room or staring into space. These writers do not examine their own texts for answers, for "perhaps they did not feel they could find the answers there" (Pianko, 1977, p. 14). Remedial writers are overly concerned with mechanics (Stallard, 1974; Pianko, 1977). The need for editing intrudes so often in the writing process that it "breaks down the rhythms" of the writing process itself (Perl, 1979, p. 324). Pianko described the good writer and remedial writer as being separated "by the ability to reflect on what is being written" (1977, p. 20). Another difference appears to be that good writers revise as they reread their work while poor writers do not (Stallard, 1974; Sommers, 1980).

In her research study, Emig defined two kinds of writing. First, the extensive mode focuses on "the writer's conveying a message or a communication to another" (1971, p.4). The style is "assured, impersonal and often reportorial" (Emig, 1971, p. 4). Second, the reflexive mode focuses on "the writer's thoughts and feelings concerning his experiences" (Emig, 1971, p. 4). The style is generally "tentative, personal, and exploratory" (Emig, 1971, p. 4). According to Emig's research, extensive writing is generally school-sponsored; reflexive writing occurs most often as a "self-sponsored activity" (Emig, 1971, p. 4). Students using the reflexive mode have long prewriting times. There are more pauses, and they occasionally engage in contemplation (Emig, 1971).

Perl's research found different results. An individual composing in the extensive mode spent more time in prewriting but produced fewer words than when writing in the reflexive mode (Perl, 1979). The individual "produces more words with less planning and generally in less time in the reflexive mode, suggesting that his greater fluency lay in this mode" (Perl, 1979, p. 325).

Research has also been conducted on young children. Lamme and Childers (1983) studied the composing processes of three young children who were between the ages of two and four years. These children drew pictures and letters and

dictated information to adults. Results of this research indicated that composing for young children was "a highly social encounter" (Lamme and Childers, 1983, p. 48). The children used oral language and reading as a regular part of their composing activities. They tended to be more active composers when they wrote for personal communications as opposed to unknown audiences. Additionally, a sense of audience was present in their personal communication writing (Lamme and Childers, 1983).

Graves examined the writing process of seven year olds, and this research uncovered two kinds of writers. Reactive composers were identified as using oral language with prewriting and composing, proofreading one word at a time, desiring for rehearsal before composing, engaging in little reviewing of the product, having no sense of audience when writing, and exhibiting the use of the emotions only when judging their own writing (Graves, 1973). The second type of writer is the reflective composer. These individuals have little rehearsal before writing and do not engage in oral speech during the writing process. They reread their writing periodically to change a word or a phrase. They have a sense of audience about their writing, and they are able to provide "examples to support their reasons for evaluating writing" (Graves, 1973, p. 236). At some point prior to the fifth grade, the overt differences between these two

classifications disappear, and the most discernible difference between the two groups is their ability to reflect on what they have written (Pianko, 1977).

Process research has described, then, the composing strategies of young children through college writers. Differences have been noted between skilled and unskilled writers. This research, however, has used the case study approach which prohibits the information described from being applied to broad populations. Humes wrote in a review of composing process research:

Much important information has been derived from a small body of research because methodologies for investigating the composing process produced results not attainable by older, more traditional strategies (1983, p. 212).

Instead, this body of research serves to encourage others to duplicate these studies to help in providing groundwork for building a theory of composing.

### Discourse Theories

A number of discourse theories exist which attempt to describe why man writes and what kinds of writing he or she does. These theories provide a vocabulary for understanding the types of writing, and a few examine their views of the composing process.

Three theories are based on the relationship among author, audience, and subject matter (Moffett, 1968; Kinneavy, 1971; Britton et. al., 1975). Britton, Kinneavy,

and Moffett viewed audience on a continuum varying from self to teacher or significant other to the more distant category of unknown audience. Subject matter, however, was described differently by these three investigators. For subject matter, Moffett (1968) asked "what kinds of writing" and answered with two broad categories--fictive and non-fictive. Non-fictive included argumentation, exposition, narration, and drama. Fictive incorporated essay, fiction, plays, and poetry. Kinneavy's modes of discourse somewhat paralleled Moffett's categories. Kinneavy's modes included narration, description, classification, and evaluation (1971). Instead of asking "what," Britton asked "why" and labeled his answer as functions of language including informative, persuasive, poetic, and expressive (1975). Kinneavy also described aims of discourse which were similar to Britton's functions of language. These aims were called reference, persuasion, literature, and self-expression (1971).

Both Moffett and Kinneavy included speaking, listening, writing, and reading in their models; however, Moffett added thinking while Kinneavy "maintains that there is a separate kind of thinking in each of the modes and aims" (1980, p. 13). Britton and Moffett maintained a developmental dimension in the functions of discourse. Kinneavy viewed this developmental consideration as an area that should be

extended in all theories (1980, p. 14). Odell cautioned that these theories are based on written products and advised that "if we are to use this theory in researching the composing process, it seems essential that theory be informed by analysis of this process" (Odell and Cooper, 1978, p. 6).

Another somewhat different view was offered by D'Angelo. He stated, "The composing process is analogous to universal evolutionary processes" where the whole gradually changes into "a more complex, differentiated one" (D'Angelo, 1975, p. 81). His topics were divided into logical and nonlogical and were somewhat analogous to Moffett's and Kinneavy's modes of discourse. The nonlogical, according to D'Angelo, related to the right hemisphere of the brain and included imagining, symbolizing, association, displacement, transformation, and repetition. The logical more closely aligned with the modes of discourse and included the static which contained description, the progressive which had narration, and the repetitive (D'Angelo, 1975, p. 12).

D'Angelo also traced the development of concept formation in a child as a development of evolutionary stages. He cited Vygotsky's theory of concept formation to support his view. Vygotsky described three stages. The first was "placing of objects into organized heaps," and the second stage "consists of thinking in complexes" which means the noting of the connections between objects. The third

stage involved "the process of isolating elements from a concrete experience and viewing them apart" (1975, p. 83). These delineations closely approximate Piaget's stages of mental development in a child.

D'Angelo's theory, however, is lacking in a step-by-step projection of what transpires when a person composes. Two such theories attempt such a projection. Flower and Hayes described a theory of writing based on information-processing. This theory developed as a result of an analysis of writers in the process of composing and offers a framework from which composing can be studied.

Flower and Hayes posited that the stage model of prewriting, writing, and revision simply viewed the production of the written text without exploring the process of composing that text. They defined their theory as a cognitive process model in which "the major units of analysis are elementary mental processes, such as the process of generating ideas" (1981, p. 369a). To study these processes, the researchers examined "writers in action" by using protocol analysis which required the writers to describe orally their internal musings. In addition, notes and the manuscript itself provided rich data sources for these investigators (Flower and Hayes, 1981a).

Three major elements contributed to the cognitive process model. First, the task environment consisted of

everything outside "the writer's skin" and included the writing task or rhetorical problem. Defining this rhetorical problem "is a major, immutable part of the writing process" (1981, p. 369a). A second component of the task environment was the written text itself in which "each word in the growing text determines and limits the choices of what can come next" (Flower & Hayes, 1981, p. 371a). The influence of the text on the composing process varied with individual writers.

The second element in this theory was the writer's long-term memory. Flower and Hayes defined it as "a relatively stable entity that has its own internal organization of information" (1981, p. 371a). One problem that can occur with long-term memory is retrieval of information and a second is getting the information retrieved to fit into the rhetorical problem (1981a).

The final element Flower and Hayes called the "writing processes" (1981, p. 369a). The first writing process described was planning which could include generating ideas, organizing ideas, and goal-setting. Planning consisted of a writer forming "an internal representation of the knowledge that will be used in writing" (Flower & Hayes, 1981, p. 372a). A second process labeled "translating" was defined as putting ideas into visible language (Flower & Hayes, 1981, p. 373a). Reviewing, the third writing process, consisted of rereading

what had been written to evaluate the product and/or revise it (Flower & Hayes, 1981, p. 374a). The three writing components were said to be governed by a monitor which "functions as a writing strategist which determines when the writer moves from one process to the next" (Flower & Hayes, 1981, p. 374a).

The processes of writing have been viewed as being based on a hierarchical system in which "a large working system such as composing can subsume other less inclusive systems..." (Flower & Hayes, 1981, p. 375a). The researchers explained that "a given process may be called on at any time and embedded within another process" (Flower & Hayes, 1981, p. 375a), which simply means that reviewing the text or generating ideas can occur at any moment in the composing process.

The cognitive process model viewed "writing as a goal-directed process" containing two kinds of goals--process goals, which are instructions a writer gives to himself/herself and content goals which "specify all things the writer wants to say to an audience" (Flower & Hayes, 1981, p. 375a). During this process, writers make a network of content goals but always return to their "high-level goals which give direction and coherence to their next move" (Flower & Hayes, 1981, p. 379a). Writers make up their own goals in two ways. First, they may generate and support sub-

goals. Some of these can be seen as those that are already learned such as "interest the reader," thereby enabling the writer to pluck these ready-made goals out of long-term memory and then use them. A second means exists in goal generation. An individual may change a top-level goal because of learning which has resulted from writing. Thus, goals may be changed as the text grows to accommodate new perceptions of the writer (Flower and Hayes, 1981a).

A second theory on the composing process was offered by Augustine. She saw the writer first contemplating the subject and forming a tentative view based on information stored in the long-term memory. The writer then determines the meaning as it will be perceived by the audience and chooses the mode of discourse. If the view toward the audience and the mode match, the writer continues. If not, the person composing must start over (Augustine, 1981).

Augustine stressed linguistic theory as a view of writing and noted that the writer "operates in two dimensions simultaneously, the surface representation and the underlying form" (1981, p. 223). She also viewed composing as inventing whereby a writer's intent may be changed as a result of information recalled from long- and short-term memory banks (Augustine, 1981).

Augustine's theory is compatible with the Flower and Hayes model since both are based on information processing

theory; however, the Flower and Hayes model examines more fully the procedures that are used when an individual writes.

The theories associated with composing addressed two areas. One set of theories on discourse described the written product. A second set of theories examined the composing process itself. The composing process theories offer more promise in aiding the researcher interested in studying how an individual goes about creating the written product. As Flower and Hayes explained, "Part of the drama of writing is seeing how writers juggle and integrate the multiple constraints of their knowledge, their plans, and their text into the production of each new sentence" (1980, p. 31b).

### Linguistics

Linguistics is the study of the process of language. Because this study centers on the examination of the process of composing, the linguistic research that provides information that can relate to writing is reviewed.

Linguists have observed that language the world over has characteristics in common (Lenneberg, 1964; King, 1969). For example, many languages possess five vowels and most have the consonants p, t, k, s, and n. These similarities are called "linguistic universals" (King, 1969, p. 15). Lenneberg (1964) identified three traits that all languages possess.

First, languages can be broken down into "small, meaningless components of functionally similar sounds" which are called phonemes (Lenneberg, 1964, p. 586). A second component called concatenation involves the production of a string of words into phrases and sentences. Finally, the words are put together in a specific order which is termed syntactic structure (Lenneberg, 1964). These similarities have led researchers to posit that

all men are endowed with an innate propensity for a type of behavior that develops automatically into language and that this propensity is so deeply ingrained that language-like behavior develops under the most unfavorable conditions of peripheral and even central nervous system impairment (Lenneberg, 1964, p. 589).

Thus, language acquisition appears to be an inborn system in man (Chomsky, 1955; Leiber, 1975).

One of the arguments cited to support this theory is the way that young children learn to speak. The child does not simply imitate adults when learning to say words. A three year old can "be linguistically creative even at an early age," for the child can say sentences not previously heard (King, 1969, p. 72). King reported, "He has acquired... the ability that all native speakers of any language possess: the potential of constant and, in principle, infinite inventiveness" (1969, p. 72). McNeill studied the process of acquiring language and found that a child's speech "is not garbled output of a complete adult-type grammar but the

product of a first, relatively simple grammar" (1966, p. 19). Thus, the child appears to construct a grammar from the utterances he or she hears.

Linguists today are primarily interested in spoken language. They view writing as a "mere writing-down of the spoken language" (Leiber, 1975, p. 25). Linguists typically study no structure larger than a sentence in describing language (Leiber, 1975). Chomsky described the goal of linguistic investigation as "the construction of a grammar that can be viewed as a device of some sort for producing the sentences of the language under analysis" (1975, p. 11). Therefore, the job of the linguist is to describe those rules that the speaker uses subconsciously to produce sentences.

Chomsky's theory stated that these rules occur in the deep structure of language. The deep structure is the underlying form of an utterance. Through a series of transformations, the deep structure is converted to the surface structure or the spoken word (Grinder and Elgin, 1973). The deep structure possesses two types of transformations, obligatory and optional. The obligatory transformations such as subject-verb agreement have to be performed. The optional transformations include passive, question, and negative (Leiber, 1975).

The theory of deep structure provides an explanation of how persons are able to generate an infinite number of

sentences (Leiber, 1975). Chomsky projected that deep structure contains the capacity for recursiveness, much like an infinite loop that allows the speaker to insert adjectives upon adjectives and clauses on top of clauses (Chomsky, 1957; Leiber, 1975).

Some researchers attempted to link the information learned from linguistics to writing. Psycholinguistics "grew out of attempts to prove the 'psychological reality' of the transformational grammar, a study of the linguistic rules" (Diaute, 1981, p. 9). The results of this research have led to a hypothesis that language behavior is an interaction of linguistic structure and cognitive operations (Bever, 1970; Fodor et al., 1974; Clark and Clark, 1977; Slobin, 1979). These researchers held that talking is closely akin to writing in that they are both "production tasks that involve forming ideas into linguistic sentences" and both "are influenced by cognitive factors such as short- and long-term memory and attention" (Diaute, 1981, p. 9).

Diaute (1981) formulated a model of writing based on psycholinguistic research. Because more appeared to be occurring in the short-term memory during writing, she posited that the units the writer holds in short-term memory may be short. Psycholinguistic studies indicated that between 13 and 22 words can be retained in short-term memory (Miller and Isard, 1964; Carroll, 1979). Research suggested

that the errors occur after a large number of words, strong perceptual clauses, and complex syntactic structures (Diaute, 1981). Called the memory constraint hypothesis, this theory offers an explanation of why individuals do not find sentence errors upon rereading. The linguistic sequences that are recorded during writing may be repeated during reading. Hence, the writer will not perceive the error but will see in its place the sequence he or she intended to write (Diaute, 1981). As a result of her study, Diaute predicted that the short-term memory capacity for linguistics is "related to the ability to write correct sentences" (Diaute, 1981, p. 20). Therefore, writers who compose error sentences may have a smaller short-term memory capacity than writers of error-free sentences (Diaute, 1981).

Linguistics offers information about the way man speaks. Psycholinguistics provides a view of writing as it is compared to speaking. Thus, research in these areas offers insight into man's communication ability.

#### Research on the Composing Processes of the Blind

The role of vision in the composing process is an unanswered question. No known studies exist on the composing processes of blind writers; however, some general information as it pertains to the blind writer can provide some insight.

Gregory (1978) examined documented cases of blind persons who because of surgery gained their sight. The

individuals after surgery were not able to distinguish objects very clearly although no neurological impairments were indicated. Sometimes a long period of training was required before they came to have useful vision. For some, good vision was never attained. The difficulty that these persons had in naming objects by sight and their slow development of perception led psychologist D.O. Hebb to affirm the importance of perceptual learning in the infant (Gregory, 1978).

In one case, a fifty-two-year-old blind man received his sight through a cornea transplant. He never learned to read by sight, although he could recognize block letters that he had been taught while at the School for the Blind. Gregory held that this man's ability to read letters visually which had been learned previously through the touch system showed his ability to use this prior learning in the sighted world (1978). Perception extends beyond the information provided by the senses. Gregory stated that "the perception of an object is an hypothesis, suggested and tested by the sensory data" (1978, pp. 13-14). This view was supported by Roberts, who gave the example of a reader who overlooked obvious errors in a composition because the reader saw what he or she wanted to see (1982). Thus, the nonsighted who become able to see cannot fully use their newfound ability because they have not been previously taught to perceive these objects.

To understand better why writing is a seemingly "visual-bound art," a researcher must examine the available information on sight. Goodglass and Kaplan reported that writing arises from speech by transferring sounds into letters, adhering to phonemic rules, and remembering "syllables and short words as complete graphic sequences, bolstered by a visual mode of word configurations," in addition to the "availability of oral spelling as a guide to writing" (1972, pp. 10-11). Just as language is a prerequisite of reading, "competence in oral language is an integral part of written language" (Goodglass and Kaplan, 1972, pp. 384-385).

Ajuriaguerra and Auzias pointed out that different kinds of writing require different systems. In copying, "sight and perception of the form of the visual symbols are foremost, as are the faculties of motor innervation required for execution" (1975, p. 313). Dictation requires verbal comprehension of the information provided by another orally and the ability to change these into graphic symbols. Finally, spontaneous writing involves the putting down "in symbolic form material formulated by the internal language, and a choice must be made from among the forms of speech and the graphic symbols that society has made available to us" (Ajuriaguerra and Auzias, 1975, p. 313).

What happens in the brain when language is spoken and understood is an interesting phenomenon. The role of the

brain in language is evident in Geschwind's explanation of the production of language. When a person hears a word spoken, the primary auditory area in the brain sends this sound to Wernicke's area, which controls comprehension. The message is then passed from Wernicke's area to Broca's area, which controls the muscles used in speech production, "where the articulatory form is aroused and passed on to the motor area that controls the movement of the muscles of speech" (Geschwind, 1972, p. 79). If the word is to be spelled, information from the primary visual areas is passed to the angular gyrus which then arouses the auditory form of the word in Wernicke's area. According to Geschwind, most persons understand the written word through the soliciting of the auditory form in Wernicke's area (1972). For the blind person, the path for auditory forms would remain the same; however, to spell the word would not involve "seeing" the word in the angular gyrus. Too, the blind person's comprehension of written language would have to go through Wernicke's area for understanding.

Most of the research located concerning language of the handicapped examined persons who had the ability to speak and write but lost it as a result of neurological injury (Luria, 1970; Geschwind, 1972; Goodglass and Kaplan, 1972; Lenneberg and Lenneberg, 1975). Some research was conducted on individuals whose writing abilities never fully developed

(Espir and Rose, 1976; Lawrence, 1979; Leisman and Ashkenazi, 1980); however, no research was located on the writing ability of blind persons. Research on the oral language development of blind children revealed noticeable gaps (Fraiberg and Adelson, 1975; Fraiberg, 1977; Bernstein, 1978; Laudau, 1982). Fraiberg and Adelson noted "striking delays in the acquisition of I as a stable pronoun, in spite of adequacy in early language development" (1975, p. 177). These same children were delayed in their use of imaginative play suggesting the close tie between the ability to use personal pronouns and the capacity for symbolic representation of self. Also implicit in this connection is the role that vision plays in the development of personal pronouns and symbolic representation (Fraiberg and Adelson, 1975). A blind child's difficulty in incorporating imaginative play is demonstrated by that child's need to get in a bathtub to pretend that he or she is taking a bath, for the child cannot imagine the tub without the tactile stimulation of the object (Fraiberg and Adelson, 1975).

The examination of blind writers may provide information into the composing process itself. Science has long studied the abnormal to understand the normal. Geschwind began his article "Language and the Brain" by stating, "Virtually everything we know of how the functions of language are organized in the human brain has been learned from abnormal

conditions or under abnormal circumstances..." (1972, p. 76). Roberts wrote that "we generalize about the nature of healthy vision from specific cases of vision pathologies" (1982, p. 12). The study of the writing process of blind writers may reveal new information which will help in understanding the process of composing in general.

### Case Study Methodology

How a researcher examines the subject determines what form that investigation will take. The most widely used research methodology is positivistic in philosophy and has as its purpose the generalizability of the findings. Thus, this research tradition attempts to control variables within a study to determine what effect a treatment will have on the subjects.

Another paradigm exists for conducting research. This research is phenomenological in tradition and differs in two ways from the experimental approach. First, the phenomenologists believe that the setting can be a powerful influence upon the subject. Thus, the phenomenologist "not only acknowledges context but also often scrupulously locates and describes it" (Emig, 1982, p. 67). A second distinction between positivism and phenomenology concerns how each perceives the interpretation of a phenomenon. While the positivistic tradition perceives a "one-to-one

correspondence" between the interpretation and the phenomenon (Emig, 1982, p. 67), the phenomenologist, on the other hand, holds that "since reality is knowable in an infinite number of ways, many equally valid descriptions are possible" (Mishler, 1979, p. 10).

The philosophic differences between these two traditions have resulted in different research methods. The positivistic view employs methods usually found in experimental and quasi-experimental research and is often concerned with products such as achievement. As previously mentioned, this kind of investigation controls variables within a treatment to pinpoint any discernible change as a result of a treatment. The phenomenological tradition does not attempt any control of variables since the interaction of variables is of prime interest to the naturalistic researcher. The phenomenological view has resulted in many kinds of research types. The most popular types are case study and ethnography. This research describes the phenomenon completely, attempting to capture as much as possible about the subject and usually examines the process rather than the product.

The nature of this investigation of examining the composing processes of blind writers resulted in the researcher's choice of the phenomenological approach. The case study methodology allowed the examination of an

individual composing a writing product. Emig, in a justification of the use of the case study approach in writing research, explained:

For the kinds of questions an examination of writing throws off in its early stages--and early is assuredly where we are in writing research, conceptually as well as historically--certain methodologies seem premature, given the naive state of our knowledge. Tight pre-post-test designs, for example, imply an inquiry where the significant variables are not only known but also weighted and rated: true about writing? (Emig, 1982, p. 72).

The naturalistic tradition offers a means for developing a theory from the gathered data (Glaser and Strauss, 1967). Thus, naturalistic research methods have been used for building theory (Stake, 1978).

Naturalistic research does not attempt to predict outcomes; rather its purpose is to provide "thick description" (Geertz, 1975). Data collection methods include participant observations, in-depth interviewing, and document collection. The naturalistic or qualitative researcher collects data and analyzes it as the research progresses. This technique is termed the constant comparative method whose purpose is the development of grounded theory (Glaser and Strauss, 1967). Researchers examine the data for meaning without using preconceived hypotheses. As Filstead reported, "Qualitative methodology allows the researcher to get close to the data, thereby developing the analytical, conceptual, and categorical components of explanation from the data itself" (Filstead, 1970, p. 6).

Research design methods must adhere to those procedures that increase the validity and reliability of these studies (Owens, 1982). Triangulation is the method most often used to increase the validity of the data collection (Denzin, 1978). It is defined as the use of multiple data sources and methods of collection. The purpose of the multiple data sources is to allow the investigator an opportunity to cross-check observations with the other sources for verification (Owens, 1982).

The case study approach does not attempt generalizability. Rather its purpose is to provide a thorough description of the item under analysis. Thus, for the examination of the composing process, the naturalistic inquiry was selected because it allowed the subjects to compose a piece of writing as the researcher observed, thus providing a rich data source complete with the various composing strategies rather than a single, isolated technique.

One means employed to examine the composing process was process tracing whereby the researcher used introspection techniques to uncover thinking processes, which then were examined using protocol coding and interpretation (DeGroot, 1966). The think-aloud technique and stimulated recall are two forms of process tracing found in composing process research. The think-aloud method requires the subject to

repeat orally any thoughts that occur during composing. These oral musings are generally tape-recorded. In stimulated recall, the subject is provided either a tape-recording of what has transpired or is provided a verbal description of the situation to help in recalling thought processes. This technique is used after the composing session is completed to aid the subject in remembering key episodes during composing. The researcher then analyzes the transcripts of the composing sessions using the constant comparative method for analysis.

Process tracing techniques have a central criticism leveled against the introspective methods, which is that a subject's verbalizing of thoughts distorts or changes their nature (Nisbett and Wilson, 1977). Some researchers, however, defend the use of think-aloud and stimulated recall. Ericsson and Simon (1980) held that recall problems could occur if the task was so automatic that the thinking through of each step was difficult or where the task itself requires much concentration; however, when the time between thought and recall is short as in think-aloud, false reporting is held to a minimum. Although the techniques of think-aloud and stimulated recall may occasionally result in distorted information, the resulting information is helpful in understanding the composing process (Flower and Hayes, 1981a). The think-aloud technique has been used successfully

by a number of researchers (Emig, 1971; Mischel, 1974; Stallard, 1974; Pianko, 1977; Perl, 1979) to study the composing process.

### Summary

The composing process has only in the last fifteen years become a topic of research. To date, studies have examined normal young children through skilled college writers; however, no known studies exist which examine the composing processes of blind writers. The case study approach was used to describe the processes that blind writers engage in while composing. This information should provide further insight into the mysteries of the composing process itself.

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## CHAPTER III

### PROCEDURES

#### Research and Design

Through the use of the case study approach, the researcher examined the composing behaviors of four blind individuals. The study's research design required multiple data sources including in-depth, structured interviews, composing session transcripts, and writing products. The various information sources provided a means to check findings across the data. This technique called triangulation enhances the credibility of naturalistic research by having a variety of primary sources about the same phenomenon, which in turn strengthens the internal validity of the study (Denzin, 1978).

Interviews were conducted to obtain biographical information and a writing history of the participants. The subjects attended four sessions, which required them to compose papers on topics provided by the researcher. Topics of the first and third sessions were in the extensive mode and were a description of a process and a discussion of an issue. The reflexive topic for session two was a description of the most significant person in the writer's life. The subjects were given a choice of topics in session four. The

researcher offered the reflexive topic, a discussion of the happiest or saddest moment in one's life, or an opportunity to choose an original topic. This research was conducted in the fall of 1983.

The case study approach was used in this research because it was the best method by which composers could reveal their thinking processes while writing. The case study is "described as an intense, naturalistic examination of a given individual" (Emig, 1982, p. 68). Admittedly, the case study approach does not provide data that are comparable across large populations; however, the information known about composing processes is still in the discovery stage. Consequently, a research design that could provide data to aid in building a theory of composing was selected.

The case study approach first was used to study composing in 1971 when Emig published a dissertation using this technique to examine twelfth grade writers. Her research was the first major work to use the case study approach in the examination of the composing process. Her focus was the writers as they composed rather than the written products, which had been the primary area considered previously. Emig's work brought a dramatic change in the way that researchers examine composing, for they realized that little was known about how a person writes. Her research technique has been termed the "most productive area of

investigation" for understanding the composing process (Mischel, 1974). As a result, several case studies (Graves, 1973; Stallard, 1974; Pianko, 1977; Perl, 1979; Mayher, 1983) have since been conducted to provide information on the composing process. Thus, the selection of case study methodology was supported by the success of several previous studies.

### Subjects

The subjects of this study were three blind men and one blind woman. Two males had been blind since birth, and one male and the female had lost their sight later in life. An effort was made to have an equal number of males and females in the study; however, the researcher was unable to locate a woman blind from birth who could participate in the study. All individuals selected were attending or had graduated from college. Two requirements were established for subject selection. First, the individuals had to have attended or graduated from a college or university. Then, two of the persons had to have been blind from birth, and two were to have become blinded at least one year or more after birth. Participants in the study were obtained through two teachers of the visually impaired and the Visual Aid Volunteers organization in a suburban community.

The subjects' names were changed to protect their privacy. Larry was in late adolescence and was in his second

year at a junior college. Rob and Mary were in their early thirties. Rob had graduated from a state university and was employed by a government agency. Mary was attending a private university after having received an associate's degree from a junior college. Jimmy was in his mid-twenties and was in his fifth year at a state university. All participants resided within the same large, metropolitan area.

### Data Collection

#### Interviews

All subjects first were interviewed to gain biographical information and a writing history. An interview schedule was used, and these interviews were tape-recorded. At times, the researcher deviated from the schedule to probe further or to repeat the question in a different way. The interviews were conducted in the homes of the participants with the exception of Jimmy, who preferred to be interviewed at the researcher's work place.

Interviews lasted approximately 45 minutes. They provided information on the individual's history of blindness and on previous writing experiences. Participants were also questioned about their attitudes toward writing and their strategies for approaching writing tasks. An interview schedule is included in Appendix A.

The tape-recordings were then transcribed by the researcher for examination. These transcripts were used in gaining an understanding of the subject's personal background and writing experiences. During the interview, the researcher explained the procedures for the study and the subject's role as composer. The researcher attempted to put the individual at ease and to explain why the study was being conducted. The researcher stressed that the participants would remain anonymous. She also tried to become acquainted with the subjects and provided them the opportunity to ask questions about the study.

The transcripts of the interviews were later used in data analysis as a means of verifying the procedures that the researcher extracted from the compose-aloud sessions. They also provided background information and contained the subjects' attitudes toward writing. The interviews proved to be a rich source that the researcher used throughout the analysis of the composing sessions.

#### Composing Sessions' Transcripts

Each participant attended four writing sessions. Most sessions were conducted at the researcher's place of employment. Composing sessions lasted approximately 45 minutes. One subject stipulated that her sessions be conducted in her home. One session of another participant took place in his apartment on a college campus because of a

scheduling conflict. During the sessions, the researcher asked the participants to use a technique called compose-aloud whereby they repeated orally any thoughts that they had as they wrote. This technique cannot claim to capture all internal musings; however, it was the best tool available to uncover the thinking processes of writers and had been used by a number of researchers successfully (Emig, 1971; Mischel, 1974; Stallard, 1974; Pianko, 1977; Perl, 1979; Flower and Hayes, 1981). As the composers worked, the researcher observed their writing behaviors, noting the number of times the individuals rescanned the print. In the first session, three of the subjects were videotaped to provide an opportunity to examine the behavior of the writers at a different time. Mary requested that all of her writing sessions be conducted at home. Mary's house was older and was not equipped to handle a three-pronged plug that was used by the videotape equipment. Thus, Mary was not videotaped.

To provide an extra set of information on Mary, an individual sat in on the session and conducted an observation. The notes were compared, and the two observation records were not discernibly different. An examination of the other subjects' videotapes reaffirmed the researcher's field notes. The blind writers were not able to use their eyes to examine their work. Instead, they used their fingertips to touch the braille. This movement proved

to be easy to detect. The lack of a videotape for Mary did not cause a problem with data on her composing since the researcher used participant observation during the composing sessions for all writers. The interviewer noted on paper the physical movements of the writer. Any rereading of a word or line was noted. All interruptions were described. These written observations provided the researcher with a record of the composer's actions during the session.

As the subjects composed aloud, the researcher recorded their speech. These recordings were then transcribed verbatim by the researcher. Only irrelevant conversation was omitted. When deletions occurred, a notation was made in the transcripts. The transcripts averaged approximately nine single-spaced pages each.

Also contained within the transcriptions were questions the researcher asked the subjects after each composing session. These questions grew out of the researcher's observation of the sessions and provided further insight into the composing strategies. For example, the researcher during session one asked Rob, "Several times... you would say something; then you would pause, and then you would start a spurt of-of very vigorous brailleing. What was happening in the pause?" This technique of stimulated recall provided the researcher with further information about each writer's composing behavior.

Thus, the transcripts of the composing sessions consisted of the oral musings of the writers while composing aloud in addition to the questions and answers about the subjects' strategies used in the session. The composing sessions' transcriptions were the lengthiest and most valuable data of this study.

### Written Product

The written products that the subjects composed were also used as a source of data. The researcher used a specific script for each composing session to ensure that all writers received the same instructions. Prior to beginning the instructions, the researcher made sure that the subjects had all necessary materials and were ready to begin. The script began with a definition of the composing-aloud technique. Participants were encouraged to repeat all thoughts aloud. They were then provided an opportunity to ask questions. The subjects were not given a set length for the paper.

The researcher next gave the writing topic. The first session's subject was the description of a process, and the topic for the second session was a discussion of the most significant person in one's life. For the third session, the subjects were to write about an issue. The fourth session's topic involved a choice. The researcher gave the topic of a description of the happiest or saddest moment in one's life;

however, the subjects were told that they could also choose any topic on which to write. The first and third topics were in the extensive mode. The second topic was in the reflexive mode, and the fourth stated topic was also reflexive; however, the individual writers had the opportunity to compose in either the reflexive or extensive modes since they were given a choice of topics.

After the topics were given orally, the researcher began timing the composing session. Time was kept until the composer vocalized that he or she was finished. Since the writing was done in braille, the researcher requested each person to read aloud the final product, noting any corrections to be made. A teacher for the visually impaired translated the braille. She was instructed to include all strike-outs and misspelled words. The researcher then made a comparison of the translated essays to the oral rereadings by the subjects, notating all changes the composers made.

The next step in examining the written products was the reading of the essays for content. Organization, clarity, and logic were considered as the researcher read the products. After evaluation of the content, the researcher then studied the essays for mechanics. Misspellings, punctuation errors, and usage problems were noted. The writing products were then evaluated to determine if they impeded understanding.

### Data Analysis

The researcher used an iterative method of inductive analysis (Goetz and LeCompte, 1981) whereby the data were searched repeatedly for categories and descriptions of each writer. The researcher began her investigation with no preset categories. On the first reading of the composing session transcript, the investigator noted major activities such as planning, evaluating, and rewriting. During the next reading, the investigator further defined various activities and noted those. The third reading resulted in the categories that are presented in Chapter Four and included prewriting, planning, translating, and reviewing. At the start of the study, the researcher used the term "writing" for the category "translating;" however, the investigator adopted Flower and Hayes' terminology (1981) since the two terms described the same activity and the term "translating" has been used in the research on composing.

After designating the composing categories, the researcher then examined the composer's writing products and interview. The essays were compared to the compose-aloud transcriptions. Any differences were noted on the essays. The researcher also tallied the number of words in each essay. Mechanical errors were noted, and the content of each essay was analyzed by determining if the writer had composed in the assigned mode, if the idea was presented in an

organized, logical fashion, and if the essay conveyed its intended message. The interview was also content-analyzed. The researcher labeled the various topics discussed in each interview. These categories were later used when the researcher analyzed the various writing strategies of the composers. For example, when the researcher found through the composing sessions that no writer in the study used written plans, she was able to verify this finding through the transcribed interviews since all of the subjects had related that they did not make written plans prior to writing.

In addition, the transcripts of the actual composing were analyzed in the following way. First, the session was timed from the moment the assignment was given until the writer indicated completion. Then, the researcher listened to the tape-recording of a session and marked all pauses on the transcription. The pauses were then totaled. The observation record was used to tally the number of rescansions for each writing session. The researcher then counted the number of words in each writing product and divided that number by the amount of time spent in composing. The resulting number was the composing rate. These figures were compared for all subjects. Finally, the researcher compared the oral reading of the essay by the subject with the written product. Any changes made by the subject were so noted.

All findings for each composer were then compared to determine similarities and differences. The results were also compared to research that had been conducted on sighted writers. Too, the processes that the researcher uncovered were compared to the information given by the subject in the initial interview and the stimulated recall questioning after the actual composing. This cross-checking with other areas for verification provided internal validity for the study (Owens, 1982).

While the case study approach does not attempt generalizability, this research technique does strive for translatability and comparability (Goetz and LeCompte, 1982). Comparability is the qualitative counterpart of external validity, while translatability serves as naturalistic research's external reliability or replicability. The extensive description or "thick description" (Geertz, 1975) in Chapter Four should provide for replicability of this study. Additionally, the abundant use of quotations complete with sentence fragments and the redundancies of speech should serve to allow readers to verify the researcher's inferences, thus increasing internal reliability (Goetz and LeCompte, 1982).

#### Summary

The description and analysis of the composing process of blind writers were completed using a case study approach.

Four blind individuals participated in this research. Two were blind from birth, and two became blind later in life. The researcher used participant observation of the individuals as they wrote. They were instructed to use a technique called compose-aloud whereby they repeated orally their thoughts as they wrote. Data used for analysis included initial interviews, compose-aloud transcripts, stimulated recall questionings, written products, and writing behavior and observation sheets. The transcripts were coded as to the various composing processes, and the interviews and stimulated recall questionings were examined for information relative to the findings. Each writing session was timed. The writing behavior observations contained the number of rescansions for each writing session, which were tallied. Finally, the writing products were analyzed according to number of words and rate of composing. These methods of analysis were used to provide data for the building and refining of a theory of composing in accordance with the grounded theory approach (Glaser and Strauss, 1967).

The researcher used direct quotations and in-depth descriptions to provide support for the inferences made. Additionally, results were compared to research done on sighted writers and similarities and differences were noted. The case study approach provided a way to examine the composing processes of blind writers. This approach verified

existing composing process research while projecting new findings for blind writers.

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## CHAPTER IV

### PRESENTATION OF DATA

This study involved four blind subjects, three males and one female. Each person wrote four essays on topics provided by the researcher. All subjects used a compose-aloud technique. After each composing session, an interview using stimulated recall was conducted. In addition, an in-depth interview was held for each subject to provide information on the writing history, the personal background, and attitudes toward writing. All composing sessions and interviews were tape-recorded and then transcribed. An analysis of each subject was done based on the data consisting of the compose-aloud sessions, the interviews, and the written products. All composers are analyzed in this chapter to determine their writing styles in an effort to understand better how an individual composes.

#### A Description of Larry's Composing

##### Personal Background

Larry is a twenty-year-old junior college student living with his parents in a suburban community. He is the only child of a Caucasian father and a Japanese mother. His mother speaks English but does not read it proficiently.

Larry explains his mother's inability to speak English well by relating, "All of my mom's friends are Japanese friends; they all... seem to have adapted more."

Larry has been blind since he was a year old as a result of carcinoma of the eye. Both eyes had to be removed, and he now wears glass eyes. He wants very much to maintain the appearance of a sighted individual. Consequently, he spends much time working out at a local gym to keep in good physical condition.

The most obvious trait in this young man is his independence. Apparently this independent spirit has been a part of his make-up since childhood. Larry recounted an episode at the first writing session about his adventurous spirit:

Now I'm a little more cautious, more chicken than I used to be, but I mean, I used to--I mean, they [his parents] used to get so mad at me cause I used to run out in the street, play, you know, throw the ball around, you know, with all the people and stuff... I could hear those cars coming just as soon, almost as soon as they--they could see them .... I used to scare hell out of my mom.

Although Larry sees himself as more "cautious" now, the same courage demonstrates itself in a comment he made later in the same session. That day, he had walked alone to a strip shopping center about a mile from his home to get his hair cut and was embarrassed that his mother called the hair salon to see if he had arrived safely.

This underlying courage shapes Larry's carriage. He walks decisively with his head upright. After observing Larry as he wrote during the first session, the interviewer was puzzled by a movement Larry used at the end of almost every line of braille. He would place his right index finger at the far right margin of the typed line of braille. When questioned about this movement, Larry explained that during a class, he would not set his margins to prevent the bell from sounding. When asked the reason for this behavior, he replied, "Well, in class I don't set my margins because that bell goes off every time, and it's just distracting... to me and other people." He added that he also wads the cover up and inserts it around the bell to prevent any possibility of a loud sound. This behavior suggests that Larry is extremely conscious of the differences in himself and his sighted classmates and that he does not want to disturb the classroom's atmosphere by creating unusual noises.

Larry is a relaxed, open, intelligent young man. He uses humor to communicate and relies on natural intelligence rather than intense preparation to meet his educational tasks. He explains:

I sometimes think I'm a little lazier than a lot of people... I'm the first to admit I'm a rather absent-minded person, but seems like most things... have come pretty easy to me... I think the average person who has to study all the time is better off in a way cause... they're used to the work.

His self-assessment seems an honest portrait. Larry quickly adapted to the compose-aloud technique. He verbalized throughout the writing sessions and provided a rich source of material to be studied. Larry did not appear to be inhibited by the requirement to speak his thoughts aloud. Larry was able from the first session to criticize his own work. In session one after brailling a sentence, Larry stated, "I'm thinking maybe that sentence doesn't sound quite right."

Larry's writing flowed smoothly. He did not engage regularly in long pauses. Once a topic was chosen, Larry moved directly into the writing of the first sentence and paragraph. He never appeared to be unable to complete the paper. In fact, on two occasions, he seemed pleased with the products he had created.

### Prewriting

Larry's prewriting activities seemed to follow a preplanned agenda. After a topic was given, he clarified it in his mind. In two of the four sessions, Larry asked a question about the topic, apparently to focus the topic more clearly. In three of the four sessions, Larry repeated the topic aloud. The last session required a choice of topics, and Larry began by stating that he was thinking about which choice to select. The topics for all but the last session were the first ones Larry mentioned.

In the first meeting, Larry's prewriting time was the shortest of any of his sessions. He spent 35 seconds in oral contemplation before brailleing his title. The short time spent in prewriting may have been caused in part by his nervousness at the first writing session. Perhaps the interviewer, as Emig suggested, may have unconsciously hurried this writer through the pacing of the introductory material (Emig, 1971). The topic, the description of a process, was in the extensive mode. Larry chose to describe "the mechanics of playing the guitar" because "that's something I know a lot about."

A second component of Larry's prewriting strategy was the writing of a title for his paper. All of his composing sessions had the paper's title as the first written words of the composition. When asked if the title was always the first item he writes, Larry answered, "Not always. Ah, usually I do because the title is usually an offshoot of the whole thing, the idea...." In this explanation, he added a second purpose of the title, its role as an attention-getter. Although Larry's answer may have seemed a bit obvious, "an offshoot of the whole thing" may signify the guiding topic that governs everything he writes. Not all of the writers in this study attached this significance to the title. For Larry, the title seemed to have served as the ending of the prewriting session and the beginning of the

planning and composing segment. It appears to have given the specific purpose and focus of the paper and provided a guiding point of view for his papers.

The second session's topic involved a description of the most significant person in one's life, a topic in the reflexive mode. The prewriting for this paper lasted one minute 39 seconds, the second longest of the four sessions. Larry began with a repetition of the topic followed by a pause. He verbalized that he had a choice between his parents for his subject, and he had some difficulty choosing the one which served as his topic. After selecting his father as the subject, he interrupted his oral musings to ask a question. He wondered if the interviewer was interested in a physical description, personality make-up, and psychological analysis. Apparently, Larry was searching for the parameters of the topic to focus further on what he would say. He then repeated that his topic would be his father, and paused while "thinking how to begin." He ended his prewriting stage with writing his title, "Description of a Dad."

The third session's topic, which is in the extensive mode, was a discussion of an issue important to the writer. After hearing the topic, Larry repeated it and then asked if the paper had to be controversial. Again his purpose seemed to be to narrow his choices. Immediately he mentioned

physical fitness as his topic. Larry then cataloged some informative sources he had read on this topic to "classify information in my head." The purpose of the discussion of sources may have been two-fold. Through a reviewing of source material, Larry may actually have been planning parts of the paper. A second purpose may have been to determine if he had enough material to write about. The end of the prewriting period was again signaled by the brailleing of his title, "Physical Fitness." The prewriting segment for session three lasted one minute five seconds.

The final session's topic involved a choice. The writer could select any topic or could write on the happiest or saddest moment in his life. This reflexive mode topic required the longest prewriting time for Larry, for he spent two minutes 22 seconds contemplating the topic. He paused two times during his oral musings on the topic selection. He first said that he would write an "informative article of some kind," but he then mentioned the topics he had already written, noting that they were all informational. He finally chose to write about meeting his first love; he wavered on the topic but finally settled on it.

One reason that Larry had to convince himself to write about his first love may relate to the nature of the reflexive mode. When asked about why prewriting took longer in this session, Larry explained:

Well, I'm used to writing detached papers, and... immediately what popped into mind was... "Well, why not write about meeting Katie?" Then I was thinking, "No, I don't want to do that...." So I just played back and forth, and I thought of some possibilities....

At his interview, Larry noted the difference between reflexive and extensive writing:

I think I do best at writing that's more detached... preferably sit back, and "Let's examine the primary, secondary, and tertiary implications of such...." When I sit down, I feel, you know, but I... would say I have trouble writing about feelings.

Writing about emotions involved risk because it required a sharing of thoughts and feelings with the audience. Thus, the length of prewriting for this topic may be related to the risk involved in the reflexive mode, a chance he did not have to take since he could have simply chosen a "detached" subject, the easier of the two for him.

Larry, however, did not select the easy way out. He elected to write about "something that's really important that happened instead of just writing about a bunch of facts." He even admitted that writing about this topic was "embarrassing," yet he immediately concluded the prewriting period by titling his paper "Meeting Your First Love."

The prewriting period for Larry provided time to determine the specific topic to select, to determine if he had enough information on which to write, and to define the specific parameters of the topic. The amount of time he

spent in prewriting depended on the topic. Those in the reflexive mode required longer contemplation perhaps because of the risk involved in sharing emotions. He always ended with a title for his paper which served as a guiding focus as he wrote. Thus, the prewriting segment of Larry's composing process was a fairly structured means of beginning his writing.

### Planning

Since writing is a recursive process, the various components of the composing process occurred throughout the session. To discuss the various elements of this process, it is necessary to describe each separately; however, in actual composing sessions, planning, translating, and reviewing are interwoven in the writing process.

Larry made no written plans during the writing sessions. At his interview, Larry related that he did not usually "make an outline of any kind." All planning activities occurred as he thought about his papers. Although Larry did not use outlines in writing, he did have a formula for writing papers, and this formula involved a three part construction that many English teachers use in teaching composition. During the beginning of the first session, Larry said, "I'm thinking in terms of introduction, body, and ending." This framework provided structure for Larry's composing throughout the writing sessions. This embedded

structure appears to be the algorithms that learning theory research discusses as routines that simplify tasks (Mayer, 1977).

Although Larry seemingly had a preconceived idea of the paper's basic structure, he did not possess a preconceived plan for his writing. He began writing when he settled on a topic:

I write in paragraph form; you know, I just, you know, try to keep my main ideas separate, you know, for each paragraph, and I just--I just sit down, and I have it in front of me in braille, and I can see if a sentence doesn't sound right, and I'll go back and mark out, rewrite it.

Larry's actions reinforce Flower and Hayes' definition of planning as "an internal representation of the knowledge that will be used in writing" (1981, p. 372). This use of paragraphing provided an internal structure for the paper and demonstrated an understanding of the purpose of paragraphing in expository writing, which is to separate topics.

The creation of a plan is ongoing throughout the composing process. It involves decisions on what kind of paper will result, on specific constraints the paper should have, on questions of mechanics, on what follows next in the paper. In discussing his method of composing, Larry described what happened when he began to think through the topic:

I had a lot of branches going off in my head... but... what I did I just jumped head-on, just, I

just grabbed and went... took off on it, and it worked itself out.

During session three, Larry described the process of writing the paper as getting "general ideas of what I wanted to say in my head, and I'd try to--try to put them into some sensible manner...." The task of organizing thoughts is an important aspect of composing and appears to be a process whereby information previously stored in memory is reordered into a meaningful sequence.

Much of Larry's talk during the composing sessions concerned decisions he faced as he wrote. As Larry moved through composing, he established goals that shaped his writing (Flower and Hayes, 1981). Basically, two types of decisions occurred during Larry's writing, and these types reflect the categories established by Flower and Hayes. Both content decisions and process decisions faced Larry as he composed. Content decisions concern the topic of the paper, and process decisions describe instructions that the writers give to themselves on how to compose their papers. The goals or decisions that a writer makes move the written product forward and shape its meaning. Thus, goal setting is a dynamic, necessary part of the composing process.

In the four writing sessions, Larry established some constraints about the paper immediately after writing the title. These constraints can be viewed as decisions about what the end product will be. Flower and Hayes term these

constraints "process goals" (1981, p. 380). In the first session, Larry stated:

I'm going to make this, oh, I'm thinking that for a--for a fairly concise paper, this, you know, which is what I would want it to be 'cause there is so much to, you know... involved in playing the instrument. I want to give the generalities... this might be a little absurd, but I'm going on the assumption that someone didn't really know what a guitar was.

Larry provided three goals for the paper--to be concise, to give the generalities, and to assume the audience did not know anything about guitars. In the second session, he stated that he would "make this--ah--kind of an informal paper." Finally, in the third session, he explained:

I'm just going to write in a stream of consciousness sort of fashion since this is on an issue. This isn't describing a process, or I'm just going to try to take this from the informal subjective type of--type of--ah--perspective and just go with it.

Larry seemed to be establishing some broad categories with implicit rules that would guide his composing. When questioned about the difference between an informal and formal paper, Larry described a formal paper as one in which "it's more important the way you say something than what you say." Larry's definition of an informal paper was more involved:

An informal paper is when you're talking to people on your level, on their level, and you're using appropriate language to the situation for what it calls for, and it's when you're just writing without thinking too hard about--ah--grammatical construction proper....

These definitions demonstrate that this writer had a specific set of criteria that comprised certain kinds of papers. During the same writing session, Larry again made reference to the informal definition:

"Continuum" sounds too... It's weird. Sometimes I think it's the very simple types of sentences are the most... Well, since this is an informal paper, I'll just put "ball of wax." I love informal papers; I can get away with murder.

The labels that Larry described appear to establish a set of rules that govern a particular kind of writing, and it is apparent from the above quotation that Larry felt more comfortable with informal writing.

Thus, an informal paper, stream of consciousness writing, and informal subjective writing appear to be key descriptors that have a set of implied rules that govern the writing. This writer began all but one session with a categorization of the type of writing to be done. This framework seemed to serve as the organizing force in the papers.

Process decisions not only occur at the beginning of a writing task but also throughout the composing session. They seem to serve as a means of directing the writer's attention to the task at hand. Process decisions were evident in three of the four writing sessions. In session two, Larry as he composed explained that "I'm trying to leave me out of it, but it's hard to." The implied goal here is, "Leave me out

of it." A little later in the same composing session, Larry mentioned the constraint of time: "I'm thinking in generalities cause I could go on and on and on and on."

In the third writing session, Larry again mentioned length as a determining factor in the kind of paper that was evolving. In the interview following this session, Larry reported that he wanted to keep the paper "fairly short." An important consideration for this writer, then, was the length of the paper to be written. For Larry, being "fairly short" was a requirement of his composing sessions during the study. Even in session one, Larry stated that "I'd be here all afternoon writing all the mechanics of playing the guitar." The process decision inherent in this sentence is simply translated, "Do not spend all afternoon writing the mechanics of playing the guitar."

In session two, Larry told himself to give a "summary, something that translates the feel of it" before he listed the particular details of the topic. The word "summary" could have provided a specific set of criteria for Larry to use in completing the paper. "Summary" may have served to set off a "how-to" series of instructions that can be seen as a routine in the information processing tradition. During session four, Larry stated in one of the few pauses during this last session that he was thinking about "how to finish this sentence." Thus, other process decisions may simply

direct the writer's attention to the task at hand and keep the writer involved in the text production.

Content decisions also occur throughout Larry's writing sessions. Content decisions address the subject matter of the paper. In the first writing session, Larry pondered whether to discuss the history of guitars, the mechanics of playing the guitar, or the kinds of guitars. After writing a sentence, Larry then commented, "What's going through my head is various facts about guitars." In the third writing session, Larry again contemplated aloud about what the content of his paper would be. He stated:

Let's see, where to go from here? I'm thinking of should I launch--should I stay with the very general things? Do I want this to be a sort of persuasive paper or do I just want to talk about physical fitness in general, or should I outline a program? Hum, what do I want to do with this... paper?

The choices that Larry described above directly affect the content of the paper. The struggle with content is a continuing part of the writing process, and the writer must make decisions about the content of the paper until the final line is written. Larry's writing process seemed rich in its number of choices for him, and he always appeared aware of the options that lay open to him. For example, in the second writing session, Larry paused after brailleing the first sentence and then explained, "Right now, I'm just kind of coasting.... There's so many factors; there-there's so many

things that describe...." Larry then cataloged some adjectives that describe his father. After a short pause, he began brailleing a description of his father.

That goalsetting is the impetus that drives the composing process forward is evident throughout Larry's writing sessions. Both content and process decisions serve to move the written word forward. Although much of the decision-making process remained internal, Larry provided the investigator with enough oral musings to demonstrate that goalsetting is an on-going strategy throughout the composing sessions.

### Translating

Another component of the composing process is the act of translating. Larry had no obvious difficulty in brailleing his papers. In fact, he demonstrated a proficiency for brailleing. His rhythm was even and performed at a quick pace. One difficulty Larry mentioned about transcribing occurred in the interview after session four. Larry's writing in session four was different from the other three writing sessions, and it will be discussed in depth later. He explained, "I was writing so fast that I was making typo errors...." Apparently, brailleing, like handwriting, sometimes constrains the writer. The mind races ahead while the eye and hand lag behind as letters are typed or handwritten. In session one after reviewing a section of

writing, Larry commented that he had put in a word that did not belong in that spot in the sentence. Obviously, the time difference can cause difficulty in the translation of ideas to written discourse occasionally which results in misplaced and misspelled words.

Another difficulty Larry experienced during translating was spelling. During session three, he interrupted his composing to ask the investigator, "How do you spell 'obesity'?" He then answered himself by spelling the word correctly. He added, "Who cares about spelling?" Obviously, Larry did care since he allowed the question to intrude into his transcribing activity. During session four, Larry again solicited help in spelling "counselor." The task of transcribing requires the writer to juggle the ideas that are being formulated, the physical movement of the fingers and the hands, and the rules of spelling and sentence order. For Larry, the act of brailleing did not seem to be difficult. He was not a strong speller, which could have resulted from causes other than his blindness.

Translating for Larry did not appear to be a difficult task. He brailled quickly and did not appear to be hampered by the process of brailleing his ideas.

### Reviewing

Reviewing is an important aspect of the composing process. Reviewing consists of rescanning, evaluating, and

editing. For the blind writer, rescanning is an obvious activity. The writer must move his/her fingers back over the printed text. The number of rescansions for Larry was lower than the other writers studied. All of them, however, are higher than the rescansions reported for sighted writers. This fact may be a result of the blind writers' inability to see text. When beginning a new line of braille, most often the blind writer places a finger at the end of the last line written to ensure that what is about to be written logically follows the preceding line.

For Larry, reviewing served to take him back to what he had written and then propelled him forward to continue writing. Most often Larry reviewed the product but made no statement concerning what he was rereading. Occasionally, Larry would simply reread the sentence aloud, making no changes. During a few instances, Larry reread and evaluated the sentence. For example, at the first writing session, Larry stopped after brailleing his second sentence and stated, "I'm thinking maybe that sentence doesn't sound quite right." He then paused for several seconds and proceeded to discuss the remainder of the paper. Thus, the evaluation was negative, but for some undisclosed reason, Larry chose to keep the sentence intact and continued to plan the paper. During the first writing session, Larry evaluated the paper three more times; however, he made only one revision which

was a change in word choice. In this paper, Larry seemed to be using the review to spur himself on in writing. His final evaluation of the first paper was, "That's a rather lousy paper to me." He admitted that he would not be satisfied with turning this paper in. When asked what he would do next, Larry replied, "Oh, I would probably--Well, I'd look through it for mechanical errors." The interviewer then asked Larry to read the paper aloud, noting any changes that he would like to make. As he read through the paper, he noted at one point that he would probably

talk a little more about the notes. I would probably say something about a pitch pipe might be in order to get the notes right because, you know, because then I go right into... I jumped around a little bit too much.

The only changes Larry pointed out during this first writing session were the suggestions made above, and not one of them classifies as a "mechanical error." Thus, Larry used the final review for editing, and his editing extended far beyond that of looking for grammatical uses.

The remaining three sessions contained the same kind of evaluation. In episode two, he stopped brailleing and said, "I'm thinking that... I'm going to check back and look at this, thinking that maybe that that's not one of the best ways to start off." Again, he did not change the paper at all but continued to plan and to write. Larry did revise during session two. After writing "thing," he stated,

"thing--I hate that word. It's a catch-all word. Erase it out." Larry used the review portion to reread what he had previously written to move his thinking forward. The recursive feature of going back to extend forward has been noted by many researchers (Emig, 1971; Graves, 1973; Stallard, 1974; Mischel, 1974; Pianko, 1977; Perl, 1979). For Larry, the review component of the writing process was used regularly during the four composing sessions.

#### Session Four--Memory Writing

The fourth writing session for Larry proved to be very different from the others. He had the longest prewriting time of any of his sessions. The two minutes 22 seconds does not appear to be inordinately long until it is compared with the total writing time for this session which was only twelve minutes 36 seconds. During that time, he poured out 322 words, which translates into 26 words a minute. That statistic alone conveys that something different occurred during session four.

The prewriting period began with Larry stating that he would write an informative article, but he then realized that he had written several informative papers already. He then mentioned writing about his first love, but he added, "I'm not sure if I want to write on that." He finally decided to write on this subject, but he tried one more time to select a different topic. He conceded, "There hasn't been significant

deaths or any real family-type thing that has happened that are really sad or happy." He finally settled on writing about his first love, but he admitted, "This is embarrassing." In no other sessions did Larry avoid a topic as he did in session four.

After selecting this topic, Larry began composing immediately. For the next twelve minutes, Larry wrote nearly non-stop. He did not have to pause for ideas or sentence arrangement. He wrote as if he were recalling text word for word. Larry explained at the session's conclusion, "Now I didn't think too much about form on this. I just wrote... cause that's just, I just, like I would put down in a journal."

The effortlessness of Larry's composing made the topic appear to be one that the writer had stored in great detail in his memory. The writing appeared to flow word by word from Larry, and it contained the only piece of figurative language, "this voice filled with sunshine," found in any of Larry's writing. When Larry wrote a sentence that was awkward, he commented, "That sounds weird, but I'm going to leave it." Larry appeared to be compelled to continue writing. When asked why this paper flowed so effortlessly, Larry responded, "Personal experience... usually it's very, very clear because... people remember things like that." Larry also noted that he had not used paragraphs in this

paper. Paragraphing had served in his other papers as a means of structure. The lack of paragraphing emphasizes the free-flowing spirit of this topic for him.

Larry offered another reason for the ease with which the paper was written:

... something sounded a little corny but because it was a personal paper, I just left it... I mean I blew it off. I--I blew off just about everything in this paper except just what I wanted to say in my own words--the way I would put it, you know. I didn't consider, didn't consider an English teacher, or, ah, this was my personal paper.

The fact that he had not considered proper form in the paper may attribute to the quickness with which the paper was written. Larry described a singleness of purpose in this paper, and he only had to please himself. The fact that this is a "personal" paper may also contribute to the paper's flow. Larry discussed an emotion-packed meeting. His prewriting provided the parameters for the paper. He simply had to fill in the details that had been permanently etched in his memory. Thus, the selection of the topic and its meaning to Larry all contribute to the compactness of the paper's composing.

### Audience

Concern for audience was a constant consideration for Larry. In session one, an extensive topic, Larry explained, "I'm going on the assumption that someone didn't really know what a guitar was." Later in the same paper, he stated that

this essay did not contain much information that people did not already know about his subject of guitars.

Session two had a reflexive topic, and Larry did not refer to the audience overtly. When asked about his consideration for an audience, he admitted, "Oh,... I--I really hadn't thought about that. I would say just for someone that was just walking along and picked it up." In the third session, Larry explained that he tried to put himself in the reader's position, "Does this look right? Is this what I want to read?" After session four, the investigator asked if Larry had considered an audience for this paper. Larry replied, "I always think about how something's going to appear just to someone, to me. I always put myself in the audience."

This concern for the audience shows maturity in writing. Perl, in an analysis of poor writers, discovered that they did not consider the audience when they wrote (1979). Thus, Larry developed a concern which enriched his writing since the audience can certainly have an effect on a paper.

In addition, Larry wanted to be read. He was concerned about interesting the reader and referred to a strategy that he used to test for interest. In session one, he stated, "The way I look at a paper, I try to--I try to act like someone else is writing it, and then I try to be critical of

it... I mean, would I enjoy reading this paper?" In session two, he evaluated his writing product by stating, "It would be something that I would enjoy reading...." In discussing the purpose of the introduction, Larry emphasized the importance of catching the reader's interest. He tried to "put a little 'grab em' in your first paragraph, you know, like, 'Hey, read more; it's not bad.'" The fact that Larry wanted to be read is also an indication that he may have the potential of being an above average writer. Emig's (1971) case study of Lynn revealed an expectation of being read by this gifted writer. Below-average students who have been studied do not reveal this concern for an audience.

#### Written Product

An examination of Larry's writing products revealed an adequate grasp of writing. His papers were organized with an introduction, body, and conclusion. They had a message to convey, and they expressed that message adequately. His papers ranged from 232 words to 346 words.

The most noticeable problem in Larry's writing was the number of misspelled words and typographical errors. This problem may be attributed to the lack of spelling drill and practice. Some of the misspellings were the usual ones, including "there" for "their," "hieght" for "height," and "wieght" for "weight." A few, however, were unusual, for example "difined" for "defined," "fealled" for "filled" and

"meament" for "moment." He had a few missplaced or missing commas and several other minor problems with mechanics. His papers contained nothing to prevent them from communicating clearly.

The content of his writing captured the reader's attention and conveyed a message. It had a purpose, and that purpose was relayed to the reader. Larry's greatest need was to add specific details to several of the papers. When describing his father, he used broad characteristics with few supporting details. His sentence, "Like myself, he tends to be too trusting towards people who can do him no good," was located at the end of a long listing of his father's attributes. An anecdote would provide a richer explanation of what the father was like. This listing was typical of Larry's writing, with the exception of the third writing session. That paper had specific examples for the reader. Thus, Larry probably could have provided the necessary details for his writing if he was so required, but the nature of these assignments may not have encouraged Larry to do his best.

Larry's writing cannot be termed "barren" as the writing of congenitally blind writers has been termed (Rau, 1978). He is the only one of the four individuals in this study who used visual description in his writing. When describing his father, Larry wrote, "He is of average hieght and wieght, has

dark hair and light brown eyes." He also used imagery in his last paper, "Meeting Your First Love." In a description of his first meeting with Katie which was mentioned earlier in this study, he wrote, "I was sitting on my bed, just thinking and idly playing my guitar when this voice fealled with sunshine haes me from the door and walked in." The sighted reader may be uncomfortable with a "voice... walked in"; however, to a blind person, this action is exactly what happens.

The only paper that did not clearly convey its message is the first one entitled, "Learning to Play the Guitar." The reader was presented with a portrait of this instrument as if that individual had never seen a guitar. Thus, the point of view was inappropriate for most audiences. Also lacking were important details in playing the guitar. Larry noted some of these omissions when he evaluated the paper, saying that he would "talk a little more about the notes." Larry himself was dissatisfied with this effort. The lack of details made the paper appear to have gaps. For example, Larry mentioned chording and strumming, but he never defined either of these terms, yet he told the reader how the guitar was held with the strings facing away from the body. This kind of discrepancy in details made the paper more difficult to follow than the other three.

In summary of Larry's writing, the ability to organize, to provide details, to structure were all evident. The

misspellings, typographical errors, and lack of details were his writings' major weaknesses. His writing products did not contain anything that made them noticeably different from those of a sighted person.

### Attitudes Toward Writing

An interview with Larry revealed a positive attitude about writing. He stated a preference for the "subjective kind of writing" but admitted that he does not write much. He reported that occasionally he records an event that deeply moves him because writing it down allows him to "reflect on it a little bit on paper." Larry stated that his voracious reading probably "helped me a lot in my construction. My--my--I'd say my weakest point in writing and all would be use of punctuation, commas, and stuff in the right places." This self-analysis is an accurate description of his writing weaknesses.

Larry discussed barriers he had encountered in his writing as a result of blindness. One such barrier was the inability to get materials in braille. Another concern that Larry revealed in the interview was his fear of the research paper. He added, "How am I going to get down to the library and do all this research?" He anticipated that the availability of materials would be a problem. Whenever he was dependent on outside forces, Larry seemed to lose his confidence and feared the work.

Finally, when asked if being blind affected his creative writing, Larry answered that he felt he could compensate for any shortcomings caused by the handicap. He explained:

My reading has given me much greater cross section of the visual world which I've never experienced myself through... penmanship of other--of other persons....

### Summary

Larry's composing sessions revealed an organizing structure, a concern for audience, and a need for revision. During the prewriting segment, Larry developed a clear sight of the topic before proceeding to the translating of his thoughts into language. He did not appear to be confined by the braille of his work. An examination of his written topics revealed papers that had a specific purpose and that worked to convey that purpose. The study of Larry has resulted in a description of a blind writer's composing processes.

### A Description of Rob's Composing

#### Personal Background

Rob is a twenty-eight-year-old man who works for a branch of the government. He works in the middle of a large city and commutes to work on a city bus service each day. Rob graduated from a state university with a degree in history. He attempted student teaching but because of the

difficulty of grading papers, he did not finish that study. He has taken two graduate courses in history.

Rob lives with his parents in a large suburb about twenty miles from his work place. He has one younger brother who is not blind. Rob's blindness was caused by his prematurity at birth that necessitated high levels of oxygen be used. The oxygen caused new supplies of blood vessels to be formed in the eyes, resulting in blindness. This condition is called retrolental fibroplasia and is irreversible. Rob has never engaged in sports and does not exhibit good muscle tone. He is of average weight and height.

Rob is a voracious reader with an appetite for history and political books. After a discussion of favorite best-selling novels with the interviewer, Rob read the book the interviewer recommended. In addition to reading, Rob occasionally writes for recreation. He has started two short stories but has never completed them. Rob explained; "I like to write because I love to read all the time." Later he added, "Reading various books caused me to be able to--uh--want to do the short stories... I'm working on right now." Rob revealed that two high school teachers told him that he should become a writer. Rob explained:

I've had two people that have told me from, especially the high school days, that I ought to become a writer, one of which was a biology teacher who was intrigued by the fact that I was able to

memorize, you know, very fast, various biological functions.... I remember the guy had said that I should become a writer because of something I described.

The other teacher was an English instructor whose name Rob could not recall. He did remember that this teacher was impressed by his description of some aspect of the novel Lord of the Flies.

Rob is an inquisitive individual. Rob's quest to know permeated all the composing sessions. He asked several questions before the first writing session. One incident that Rob described during an interview demonstrates that this inquisitiveness has been a trait for many years. As a young child, Rob wondered how far above the ground the flags flew. Rob asked someone who did not know. Rob then decided that

Ok, I'll find out myself, and I'll climb the flagpole, and I did. I just climbed it. I don't know what anyone said at the time. I do remember it was hard work, but I got to the top, and I came back-slid back down. You know, but I had climbed the flagpole, and that's all that mattered, you know. I got to the top of it, and that was it.

Rob is a sensitive, intelligent young man who occasionally appears nearly childlike in his emotional expression. At one point after a composing session was completed, Rob excitedly relayed additional information about his topic and then clapped his hands together several times to demonstrate his feelings.

### Composing Aloud Sessions

The technique of composing aloud was easily performed by this writer. Rob exhibited strong verbal ability which probably helped to make the repeating of ideas aloud a task relatively easily performed. Rob did mention during one of the composing sessions that translating what he was thinking into oral language was sometimes difficult.

Rob's oral musings were regular in tempo. He did not exhibit long pauses; instead he maintained a rather constant flow of speaking and brailleing. Rob was able to braille and to speak at the same time. He was able to share some of the dilemmas he faced during composing through his oral language. For example, during session one, Rob described that as he was brailleing, his mind would race ahead and sometimes cause him to forget his thoughts.

Rob's rate of composing was consistently quick. He demonstrated the fastest composing rate of any of the subjects with 28.5 words a minute during session four. Rob commented after he finished writing the fourth essay that he had related the incident several times before. Therefore, he probably did not have to struggle with the order of his thoughts. His other composing rates included 16.5 words per minute during session one, 25.5 for session two, and 20.4 in session three. He averaged the second longest in actual minutes spent in composing. His times ranged from 17 minutes

58 seconds in session one to 28 minutes 23 seconds during session two.

Rob employed the phrase, "Let's see" throughout his composing sessions. This phrase could be viewed as an oral cue that internal thought processes were being used. He used this phrase 17 times in session one, 47 times in session two, 46 times in session three, and 59 times in session four. Immediately after "let's see" occurred, generally a phrase of a sentence would be stated. Some of the "let's see's" were used to rescan a line of braille. Others were spoken when activity occurred.

### Prewriting

The prewriting period for Rob seemed to serve as a time to clarify the assignments and to establish parameters for the determination of the topic. Rob did not appear hurried or frustrated during the prewriting segments. Instead, he spent most of his prewriting time discovering a subject for the paper. In three of the four sessions, Rob repeated the broad topic given. In the second meeting, Rob's failure to repeat the topic may have been caused by the fact that he went through two composing sessions. Equipment failure prevented the original second meeting from being recorded. Thus, the interviewer asked Rob to attend another session. As a result, the familiarity of the topic probably colored Bob's prewriting strategies for the second session.

The first topic which was to describe a process was in the extensive mode. Rob's prewriting time of one minute fifty-eight seconds for this session was the longest of the four meetings. In a follow-up interview after this session, Rob explained that he had been used to receiving very specific topics in school. When the topic of the description of a process was assigned, he had to arrive at a process.

Thus, Rob's unfamiliarity with topics of an open-ended nature may have in part caused the longer prewriting time. Rob repeated the topic and then set up a requirement for the subject selected. He stated, "Certainly I can think of something easy." He then asked himself, "What processes do I know?" Apparently, he was at this point checking various topics in his memory. He again repeated the topic and then rephrased the subject from "a process" to "how to do something." Perhaps the label "process" was not providing any possibilities; therefore, Rob may have had to discover the appropriate name for his internal filing system. Rob then was able to arrive at a topic. His first mention of the topic of writing research papers was a tentative proposition, "Perhaps I could do how to do a research paper. I think I will do that." Rob's next statement demonstrated that he remembered the parameter of "something easy" that he established at the beginning of the session, for he said, "That ought to be easy." The major part of Rob's prewriting

time was spent in selecting a topic. During the last part of his prewriting contemplation, Rob planned what he was going to write. His searching for content was concerned only with the first step in writing a research paper, which was topic selection. At this point, Rob began brailleing his papers.

Session two's topic, a description of a significant person, was in the reflexive mode. Rob spent one minute twenty-one seconds for prewriting. As mentioned earlier, Rob actually wrote two papers on session two's topic. As a result, Rob had rehearsal of the topic. Thus, the data reported about the second meeting may be colored by Rob's practice with the topic. He did elect to write on another topic. Thus, the researcher chose to include findings.

Rob began with a statement about the topic of the first session two. He had originally chosen his uncle as the topic and commented that his uncle was probably the most significant person in his life. After a pause, he stated that this time, he would choose a different individual "who I don't know personally but seems to have made quite an impact on me." It would appear that Rob had a specific person in mind at this point. He was not, however, ready to make an oral commitment yet. He hesitated twice before he stated the topic aloud. These hesitations may have been final tests to determine that this topic was certainly the one he would choose. He next stated that working with this topic "ought

to be fun." Then he reported that he would write on Tom Lehrer. As in writing session one, Rob spent the last few seconds of his prewriting time on planning what his first sentence would be. He gave himself the prompt, "What do I know about him?" and then answered with "Math professor at Harvard." Rob began brailleing his paper, thus ending the prewriting portion of his composing session.

The third composing session's topic was the discussion of an issue, a topic in the extensive mode. The prewriting time of fifty-two seconds was the shortest of any of Rob's sessions. Rob first repeated the topic. His next statement, "I'm interested in a lot of issues," demonstrates that Rob may have been thinking about subjects that he liked. His next two statements, "I think tonight I'll take up--ah--see, tonight I'll take up the--ah--let's see," appear to be time-fillers while he continued to go through his list of possible topics. He next arrived at a broad classification, "political issues," and then further limited the scope with "presidential election is coming up." He then immediately spoke aloud his topic, nuclear disarmament. In this prewriting session, Rob went from the broad to the specific in his topic selection. He once again examined the possible content of the paper in the last few seconds of his prewriting. He mentioned that much could be said on the topic. In addition, he reported that nuclear disarmament was

"a good topic, one of my favorites" and one that he had longed to write about for some time. The reduced time spent in prewriting for session three appears to have come from the quickness in topic selection. His planning for the writing of the paper appeared to be about the same as the other two sessions.

The fourth session's topic involved a choice. Writers could choose to write about the happiest or saddest moment in their lives, which is a reflexive topic, or any topic they wanted. Rob elected to write on the happiest time in his life. He spent the first part of his prewriting session deciding which of the choices to take. He asked himself, "Do I do the happiest moment?" He then added, "Any other topic, of course, would take too long to focus." It is unclear whether Rob intended that statement to encompass both the saddest moment and all other topics he could choose or simply all other topics. It would appear that he ruled out saddest moment when he selected the happiest time to verbalize. The time constraint provided a parameter for Rob's final selections. The topic chosen had to be quickly focused. Rob then stated that he would select the happiest moment. He created stipulations to that topic by stating "not necessarily because of success or anything" and then adding that it should be a "carefree moment... one that's bizarre, you know, unusual...." With the limits established, Rob went

to the past to retrieve an incident. He narrowed the time range to "when I was maybe eighteen or sixteen or somewhere like that." At this point, Rob arrived at his topic of a Boy Scout canoeing trip. In this session, Rob did not have oral planning for the first part of his paper. Instead, he simply began brailleing and orally composing his first sentence.

Rob's prewriting segments were used to select topics and in three of the sessions to plan how to begin the paper. Rob's times in the extensive modes were consistent at one minute twenty-one seconds and one minute thirty-six seconds. The extensive mode times varied dramatically. The first took one minute fifty-eight seconds and the third was fifty-two seconds. No reason can be given for these differences. In summary, the prewriting time for Rob served the specific and necessary purpose of narrowing broad categories to specific topics and then making preliminary plans for the first sentence of the paper. Rob never wrote a title to any of the essays and never mentioned the need for one.

### Planning

Rob's composing process was driven by active planning. In no paper written for this research did Rob plan more than the topic and first sentence during his prewriting stage. Rob did not create written plans for any of the four papers created. When asked in an interview if he made written plans

prior to writing a paper, Rob answered that he did "in a manner of speaking." He then described beginning one of the two short stories he was working on. He described outlining the characters and plot for the story. For these writing sessions, however, Rob made no written plans.

When asked about a strategy for writing compositions, Rob answered that he took a broad topic and "focused on-one aspect of it so that I wouldn't have to... approach a larger topic that I couldn't really cover...." The proceeding from the general to the specific provided Rob with a manageable subject for the assignment. Once Rob had determined a subject, he then would "make up an argument about about the subject... that I'm going to make a conclusion on... and then I'm going to try to do the research that will show that I was right." Rob employed paragraphing in his writing as a means of separating topics. He explained, "What I did was-was whenever I thought something new was coming, I would just... start a new paragraph."

Planning is a major feature in the composing process which drives the paper forward. As Rob considered the available topics during prewriting, he did not attempt to plan the major structure of the proposed paper in any way. He simply let one sentence proceed to the next. Rob prompted his planning by posing questions to himself. Those questions generally were not evaluative. They were instead queries,

the answers to which would provide the next logical sentence. For example, in the first writing session, Rob was explaining how to write a research paper using an essay on General Sherman as an example. He spoke aloud as he brailled the following sequence:

(Brailleing and speaking aloud) In this way, in this way, one gets a picture of-of the personality of the man, and thus, he, let's see, why he did what he thought was necessary to win that war. Now, now, let's see, what does one do once one collects information on this man? One also would want to--ah--let's see, one would also want to find out what other people wrote about the general.

Thus, the ending of the written sentence was followed by a question. The answer to that question provided the next bit of information for the paper. This questioning strategy was used throughout all of Rob's composing sessions.

The questioning procedure provided a majority of Rob's content goals. These goals served as a means of establishing the content of the paper and were a regular part of Rob's composing sessions. The majority of Rob's content goals occurred as in the following example from session three:

(Brailleing and speaking aloud) This is probably to--this is probably to counter, let's see, to counter the American, or rather the NATO, let's see, tactical nuclear weapons, let's see, "E.P.O.," yeah, weapons which have been primarily designed, let's see, designed to neutralize conventional forces. Ah, let's see, the Soviets are, what are the Soviets doing? Why do the Soviets not want to negotiate on this medium-range missiles? Let's see, OK, the Soviets, yes, will probably not negotiate for a reduction in medium... nuclear missiles....

The questions appeared to prompt the memory to supply the missing content. Too, in a case such as the above example, the question may have provided a focal point for the mind to analyze the information and to arrive at new conclusions.

After the third writing session, Rob discussed why he chose the topic of nuclear disarmament, "I just wanted to do more or less a summary of it rather than anything else--ah--because I don't know of any solution...." In the course of writing on this topic, Rob discovered a new idea:

When I mentioned something about the build-up of conventional weapons, that was something that just spontaneously hit. I never would have thought of that till tonight. I--ah--had no idea that would be a good idea.

Thus, content goals appeared to be established as the paper unfolds. This timeliness allowed Rob to shape the content as he continued. Through the continual process of setting new goals, Rob was able to arrive at original thoughts and solutions.

The depth of the content goal varied. At one point in session two, Rob was writing about a song and asked himself, "What was the name of that song?" This content goal required simple memory retrieval. A little later, Rob queried, "What happened after that?" This content goal required more than a simple name. Rob had to examine a sequence of events in his memory and locate the missing information.

In session one, Rob in a description of General Sherman asked himself what he could say next. He answered his

question by stating, "It would also help to know what other people thought of him who were living at the time, especially from the opposite point of view." Rob then proceeded to compose a sentence about the need to discuss the reactions of those affected by General Sherman's tactics. Occasionally Rob's questioning strategy did not lead directly to the next sentence of the paper as this example indicates. Instead, Rob seemed to require further elaboration before composing the next sentence.

The content goal Rob established did not always result in a sentence or idea. In session four, Rob was describing a canoe trip down the Colorado River. He composed a sentence about his cousin who drank several glasses of river water. He then orally added, "Hum, rather interesting kid. Let's see what we can do about him." Apparently this goal did not provide ample appropriate information, for Rob did not add any details about his cousin. The goals of a writer seem to provide direction but apparently may not result in new information for a paper.

In addition to content goals, Rob employed "procedural" objectives called process goals that served to guide his papers (Flower and Hayes, 1981, p. 372). In session one, Rob provided a process goal with the statement, "I'll have to do an example for that." Rather than specific content, Rob gave himself the procedure for providing the content. In the next

sentence, Rob tried to verbalize an example; however, he interrupted himself with the warning, "I'm getting ahead of myself." This goal, which translated to "Do not get ahead of myself," served to rein in the composing output, in effect, to control the content.

In writing session two, Rob gave another process goal when he instructed himself to use a contrast in the paper. This label served to stimulate a specific procedure in Rob's mind. The term "contrast" apparently had a specific definition for this composer that he was able to employ in the content of his essay. Also in session two, Rob asked himself, "How would I put this?" The concern expressed here is structural. He questioned about how the sentence should fit together.

Several of Rob's process goals occurred during the prewriting phase. In session one, Rob mentioned a constraint that the topic had to follow. This goal was the requirement that it be "something easy." After tentatively choosing a subject, Rob appeared to test the topic with the previously established criterion of "something easy," for he immediately said, "That ought to be easy." In sessions two and three, Rob did not use any process goals in prewriting. In the fourth session's prewriting phase, Rob again set forth a process goal. He mentioned the topic choice of the happiest moment in his life because "any other topic, of course, would

take too long to focus." Thus, a primary consideration to Rob for this assignment was a time constraint.

An examination of Rob's process goals revealed that no procedural goal concerned broad issues such as types of papers. His process goals were specific in nature, concerning a stated need such as a contrast or an example. Thus, Rob never verbalized a basic strategy for any of his writings. He concentrated on the topic, working from sentence to sentence in writing his essays.

Planning for Rob was an on-going integral process of his composing. He employed content goals and process goals to move his writing forward. His verbalized planning strategy was based at the sentence level and consisted primarily of questions to prompt the next sentence or two.

### Translating

Rob's brailleing ability during the composing sessions appeared to be adequate. Rob brailled quickly and surely. He did have difficulty with the brailleing machine during session two. Rob explained, "I'm finding it difficult to write on this thing [brailier] because I'm having to push harder and harder on the keys before I think it'll go down, they'll go down, and thus I'm more apt to--ah--make some errors...."

As Rob brailled, he occasionally made a brailleing error. For example, during session two, he stated, "Oh

pshaw, oh well... pshaw, I did it again... misspelled it." These errors did not inhibit Rob's composing rhythm. Rob employed some abbreviations as he brailled. Apparently, he had developed some abbreviations over the years that he used regularly. During the interview after session one, Rob explained:

I'm sure you'd know that "necessary"... I have "nec;" I didn't want to write the whole word out-- necessary to win the war. The reason is it's just a short-cut.

Rob did not appear to be concerned that the abbreviation was in his writing product. His only concern seemed to be that the researcher understood what the abbreviation meant. No other writing process researcher (Emig, 1971; Stallard; 1974, Mischel, 1974; Pianko, 1977; Perl, 1979) has discussed a subject's use of abbreviations in the body of a paper. Rob's acceptance of the abbreviation as a part of his essay may be linked to the fact that this paper is brailled. In order to hand in this paper to an instructor, Rob would have to typewrite it. He explained:

I had a couple of little misspellings, and... ordinarily, of course, if I were to go back and type it in... reality, I'd make sure that nothing was done, even if I have to have somebody proof-read it.

Too, perhaps teachers in the past had not mentioned to Rob that abbreviations are not a regular part of a paper.

Also during session one, Rob discussed some typographical problems he had which resulted in some misspellings. He commented:

I could have probably written just a little slower, and... as each sentence was written, I probably could have just reached up to be sure that no... words were being misspelled.

The researcher then asked Rob what effect the slowing down of his braille might have had on the composing process. Rob replied:

If I'm trying to write one thing down, my mind could go ahead just enough to make me... forget either a portion of what I had written, or it could make me stop to reassemble and reassemble, and if I did that, of course, well then it... might slow me down even more.

Thus, Rob realized that the speed of composing may be inhibited by the manual recording of thoughts. To slow down could mean a loss of ideas.

The translating portion of the writing process can at times be frustrating. Misspelled words that occur as a result of transcribing errors intrude. Too, the pace of translating can sometimes make the writer lose the train of thought. For Rob, the typographical errors proved to be irritating. His comment that he needed to slow the braille down was followed by his admitting that this reduction in pace could result in forgetting thoughts. Translating, then, was an activity for Rob that helped to shape the paper but proved to be occasionally a constraint in the composing process.

## Reviewing

An essential element of the composing process for Rob was reviewing. Rob regularly rescanned the text by running his fingertips across the braille symbols. Rob's number of rescansions were fairly consistent across the four writing sessions, ranging from 44 to 56. These numbers represented the second highest number of rescansions in the study.

Rescannings served several purposes for Rob. He explained that he might go back two or three lines to reread what he had written. In session one, Rob stated the purpose of his rescannings, "Does that look like the way that I want to write it down?" This editing function demonstrated itself during the composing sessions. As Rob rescanned several lines during the fourth composing session, he discovered that he had misspelled "wind."

Rescansions performed another function for Rob in addition to editing. The rereading of material provided a review of what had been said. Rob explained, "Well, it [rescanning] sometimes jogs my thoughts or memory into thinking, 'Well, here's what I was going to say next.'" He added that if the rescansion occurred during the middle of a sentence, the rereading helped to complete the sentence. At another point, he added, "I would sometimes read this just to get... my mind back in gear." During the interview after session two, Rob described the importance of rescanning:

Well, at first when... you've written something, and all of a sudden you seem to be right at a point where-where things just kind of stop for a second even in your mind, you know. You're going, "Well, I wonder what to do next?" Sometimes it helps to just kind of read what you've just written to see how you can continue it.

Rescansions constitute an important feature in the recursiveness of composing. In order to continue writing, composers seem to require looking back over what had previously been written. By rereading, writers appear to be spurred on to continue their thoughts on paper. For Rob, rescansions were an integral element in composing.

Evaluation, a second component of reviewing, was also found in Rob's oral composing. The majority of Rob's evaluative remarks were positive. For example, after composing a sentence in session two, Rob remarked, "Yeah, that's right." Later during the same session, he added, "That's even better." During session three, Rob rescanned a sentence and then stated, "That's perfect." He then proceeded to compose. In session four after completing a sentence, Rob said, "I guess that would be the best way to put it." Not all his evaluations, however, were positive. A little later in composing session four, Rob stated, "That's no good," and proceeded to note an error. In session two, Rob remarked, "Oh, pshaw." He had misspelled a word and then caught it. For Rob, evaluation was an ever-present tool that was sprinkled throughout the composing sessions. It seemed to serve as a monitor to maintain the quality of work.

Rob was one of two individuals in the study who reread his paper without being asked. After completing the last sentence of his essay, he stated, "Oh boy, let me see how that looks." He proceeded to read the paper aloud noting misspellings. At the conclusion of the rereading, he stated, "That's acceptable." During the rereading, Rob mentioned only spelling errors. When asked during his interview about revising a paper, Rob noted that he "fooled around with it [the paper] just a little bit" if the assignment was long-term. When asked if anyone ever critiqued his work for him before turning the paper in, Rob answered yes. His parents examined his work "mostly just to make sure that everything had been spelled correctly." Thus, for Rob, the rereading served an editing function.

Reviewing provided a means of moving composing ahead for this writer. Rob used rescanning often to recall what had previously been written. Occasionally rescanning served to locate spelling errors. No examples were located that changed a phrase or a sentence. Evaluation also was found in Rob's composing and generally demonstrated positive feelings about what had been written. Thus, reviewing was an essential function in Rob's composing.

### Audience

The intended audience for a piece of writing is one consideration for some writers. During the writing sessions,

Rob did not mention a concern for an audience or even specify an audience in his composing. Before the writing sessions began, Rob mentioned a concern for the reader during an interview. He said, "In the first place, I want it to be interesting to the--to whoever reads it so that they... will be impressed with it." Rob, however, did not mention this concern during any of his writing sessions.

During two of the four writing sessions, the researcher asked Rob who the intended audiences for the compositions were. In session two, Rob answered, "If I were writing it at all for anyone other than here, I would write for the general public at large...." The researcher, then, appeared to be the audience for session two. After session three, Rob responded to this question by stating, "Well, I wrote it for anybody who, if they read it, would be interested in, you know, world affairs, world politics, if you will." In session four, Rob mentioned a possible audience unprompted. He explained that he wrote the essay "just as if I were retelling it to some of my friends who I wanted to impress by the fact that... the guy is crazy, you know."

Audience consideration for Rob did not appear to be a major factor during his writing sessions. The only times that audiences were mentioned occurred after the writing sessions' conclusions. Although Rob mentioned a desire to please the reader in the prewriting interview, at no point

during the actual composing sessions was this consideration mentioned.

### Written Product

An examination of Rob's four papers provided insight into his composing process. The essays revealed that Rob was a good story-teller, but he had some problems in his writing that at times made comprehension difficult. Rob wrote the longest writing products of the four subjects, with essays ranging from 291 words to 720 words.

Rob's writing contained a number of misspellings, typographical errors, and several word omissions that impeded the reader's comprehension. For example, in session two the following statement occurred, "Satirical comedy has always my favopite any, and his covers almost all relevant topics today." Upon an oral rereading, Rob did not point out the obvious typographical error "favopite." He did read "kind" for "any," although he made no mention of a braille problem. He read the last half of the sentence as if it were correct. Although the interviewer asked Rob to state any errors that he needed to correct in session two, Rob only mentioned one omission which was "professor" and one braille error in which he wrote "194" instead of "104." After reading this paper aloud, Rob told the researcher that "I make mistakes on it [the braille] occasionally, like I left out a word or two and... missed--misspelled something

occasionally." This statement could be construed to cover the one omission and the one typographical error he noted, or it could intimate that there were at least two other errors that he did not mention.

Rob's attitude toward mechanical errors appeared rather unconcerned. For example, in session one as he was rereading the essay, he mentioned, "... All the punctuation may not be perfect." In session four, he stated during the rereading of his work, "There's a few little tiny typographical errors as you might call them." He then described a word omission in the sentence. This attitude may result from Rob's having had teachers who chose to ignore his writing errors because of his blindness. Too, during the prewriting interview, he said that his parents or a friend usually read his papers to examine the spelling. Thus, he might not have been used to finding his own errors. According to Augustine (1981), word omissions are particularly difficult for individuals to catch since the mind reconstructs the intended meaning as the person rereads the passage, thereby supplying the missing material. Whereas sighted writers sometimes appear to be impeded by their concern for correctness (Perl, 1979), this blind writer seemed to have the opposite attitude.

The individual papers varied in their effectiveness. Both of the papers in the extensive mode had more mechanical problems than those in the reflexive mode. The first essay,

which was on the description of the process of writing a research paper, was the hardest of the four to understand. The introduction did not introduce the topic smoothly. Instead it began starkly with, "When doing research, first find a topic for research." Rob used second person during most of the essay but switched to first person at the conclusion. His conclusion for this essay was stronger than the introduction, for he summarized the steps of writing research and then ended with, "Thus, a good research paper should result." The third writing session on nuclear disarmament displayed some problems in logic. Rob addressed the use of conventional weapons but ended the paper with the projection that Europe would emerge as a third nuclear power. During this session, he did add a definition of "throw weight" in the paper evidently demonstrating a concern for the reader.

The reflexive topics appeared to be easier for Rob. The essay on Tom Lehrer had an introduction, body, and conclusion. Rob used examples throughout the paper which added interest to the essay. The paper also seemed to capture the emotion of Lehrer and was interesting reading. The fourth essay, a description of a canoe trip, was a funny tale. The events were related in chronological order, and details were provided that made the subject more meaningful to the reader. For example, in describing the frustration

his uncle felt when other canoers were passing their canoe, Rob added this sentence:

In fact, one time as the other members of the troop were about to pass, Uncle Bart lost his hat when the wind blew it off his head, and he plunged into the river after it. Since he jumped without warning, he almost upset the canoe.

Details such as this example made this essay entertaining for the reader.

Thus, Rob's written products varied in their ability to capture the reader's interest and in their logical unfolding. The mechanical errors occasionally made comprehension difficult. The extensive topics appeared to cause Rob more difficulty than the reflexive topics.

#### Attitude Toward Writing

Rob had a positive attitude toward writing. When asked if he enjoyed writing, Rob answered, "Yeah, I do.... It helps me to put ideas down...; it allows me to be able to--uh--think better." During composing session two, Rob related that writing about nuclear disarmament caused him to discover a new insight into the subject. He explained:

When I mentioned something about the build-up of conventional weapons, that was something that just spontaneously hit. I never would have thought of that till tonight. I--ah--had no idea that would be a good idea.

Thus, Rob saw writing as a means of getting at meaning and appeared to enjoy the writing sessions themselves.

Rob was an avid reader. He credited his love of reading with causing the desire to write. He stated, "I like to write because I love to read all the time, you know, and I figured, well, I've been doing enough reading; I ought to do some producing myself." In addition to the two unfinished short stories, Rob wrote letters to a senator and a mayor and wrote the precepts of an imaginary religion.

Rob mentioned several barriers to writing, but he stated that he did not believe that they were related to his blindness. First, he described a difficulty with completing a writing task. He explained that he was never satisfied with the product, "so I rearrange it and rearrange it.... Mostly in this case it has to do with dialogue, but I don't think that has to do with the lack of sight." He then mentioned that some of the descriptive elements might be lacking, especially color. He added that some writers do not employ colors in their writing; therefore, colors would serve only a minor barrier to the blind writer.

Rob's positive attitude toward writing was evidenced by his composing short stories and letters on his own. He attributed his excitement about writing to his love of reading. Some barriers to writing were noticed by this writer. Specifically, he mentioned an inability to complete a writing product and a lack of sight details in a paper. His concern was evidenced in the essays he composed, for none

contained any references to color or visual details. He also never used imagistic language.

### Summary

Rob appeared to enjoy writing. He had begun two short stories for his own enjoyment and displayed a positive attitude when engaged in the writing task. Rob's writing contained a number of mechanical problems that occasionally impeded understanding. He appeared to plan at the sentence level during composing and did not evidence any global planning during the composing sessions. He brailled his work quickly and surely.

### A Description of Mary's Composing

#### Personal Background

Mary is a thirty-four-year-old woman who is in her third year at a large, private university. She lives with her mother and sister in a fashionable area of a large city. Mary received a two-year degree in bookkeeping from an area junior college. She has worked for a Bible society answering the telephone, typing, and performing bookkeeping duties. She has also worked as a switchboard operator for the community college that she attended. She held this full-time job for three years while she went to classes in the evenings. During these three years, she lived in an

apartment alone. After getting the community college certificate, Mary decided she would like to attend a four-year institution to pursue a degree in finance. She quit her job and moved back to her mother's house to go to a university which is located near her home.

Mary has been totally blind since 1972. She has an hereditary disease called retinitis pigmentosa, which is a deterioration of the retina. As a child, she had some vision, although she was legally blind with vision at 20 over 200. She knows braille and uses a braille writer. For her reading, she has a machine called a Visual Tek that enlarges letters to two inches high. The letters are white on a black background. Mary still has some light perception; therefore, she can use the Visual Tek to read.

Mary has two sisters. She lives with her mother and one sister. Her father is dead. She appears to be able to live a rather independent life in her mother's home. She is responsible for obtaining transportation to her church and other functions and occasionally has found that to be a problem. She is active in several organizations and keeps a busy schedule. Mary is moderately overweight and does not appear to engage in much physical activity. She has a robust laugh and appears to enjoy being with people.

Mary apparently had a difficult time accepting her blindness. Her parents did not tell her that she could

become totally blind until she began to lose her sight, although they had known of her condition since she was nine years old. In one of her essays, Mary described her parents' reaction when they learned of the prognosis, "My dad and my mom didn't like the idea of having a child that had a visual problem, so my dad came home and cried, and my mother tried to accept it as best she could." When her remaining sight left in 1972, Mary was not prepared to accept blindness. She spent four years rebuilding her confidence. During this time, she received training from a state agency for the blind. In 1977, she became employed.

Mary appears to be a bright individual who still has some problem accepting her blindness. During the course of the writing sessions, Mary discussed a particular professor who would not allow her to bring home tests. She felt that he simply did not understand her difficulty. Finally, an impasse was reached, and Mary dropped the course. Mary seemed to expect concessions be made for her impairment. This attitude was not expressed by the other three blind persons in this study and may be caused in part by her becoming blind later in life.

#### Composing Aloud Sessions

During the composing sessions, Mary did not speak as she brailled. She described what she was about to write; then she brailled the information. Her oral descriptions

supported the composing process's recursive feature, for after brailleing several sentences, Mary would state what she had just written. Then she would immediately proceed to plan the next sentence or two. For example, during session two after brailleing a line, Mary said:

I was just telling them [the readers] that I'd gone to this agency and gotten--and saw a counselor, and he was telling me the four things that I needed to do, and then, what I'm going to do is I'm going to tie this back in with my dad because he was the one that got me to go there, and--ah--[begins to braille].

When asked about this aspect of her composing, Mary replied, "What I had written... was kind of giving me some clues as to what I wanted to write next." This going back to move forward was a constant feature in all of Mary's composing episodes.

Mary's composing rate varied from 4.9 to 11.8 words per minute. These rates were the slowest of the four subjects. Some of Mary's pauses were long, and her brailleing was more labored than the other writers. Generally, she appeared to require more time to think through what she wanted to say. This statement can be supported by her slower composing rate.

Mary mentioned several times that she was ill at ease knowing that someone was observing her. During the first session, she said, "Sort of strange sitting here writing something, you sitting there watching me--not knowing what you're thinking...." In session two, Mary misspelled a word

and said while correcting the mistake, "Not really a problem, just you sitting here watching me." The requirement to repeat aloud also bothered Mary. In the interview after session four, Mary admitted:

Well, I guess the thing about saying it aloud is-- is it kind of bothered me because--ah--it's something that I'm not really used to doing, and most of the time I'm just usually used to sitting at my desk and thinking about something and then writing it.

Both the observer and the compose-aloud requirement bothered Mary as she wrote; however, her composing aloud was very descriptive and complete, and the discomfort that Mary experienced did not visibly impede her composing process, except perhaps to slow it down somewhat.

### Prewriting

Mary's prewriting time was used to determine a topic. To help in thinking of a particular subject, Mary repeated the topic in all of the composing sessions. In every writing episode, Mary asked the interviewer a question during prewriting to clarify what she was to do. In two sessions, she asked the interviewer two questions. Her prewriting times ranged from 54 seconds to three minutes 18 seconds. She had the two longest prewriting times of the subjects studied.

The first session's topic was the description of a process, a subject representing the extensive mode. Mary's

prewriting time for this session was one minute 46 seconds, her second shortest prewriting segment.

After the topic was given, Mary immediately asked if the interviewer meant how to do something by the term "process." She then repeated the general subject and then stated her topic of the Visual Tek, a machine used to enlarge print. She again questioned the researcher to see if that topic was appropriate. She next related that "description of a process" was a broad topic and that she had narrowed that broad subject by her choice, "Visual Tek." Her next task was to plan the content of the first paragraph. Mary provided a formula for her introduction by saying,

What I'm going to think about doing is writing a few--few introductory sentences and then--ah--give a thesis statement. And with this thesis statement, I'm going to tell what the essay is going to be about, and then I'm going to give three particular things I'm going to tell about.

With this synopsis, Mary provided an outline for her paper. Once again, she asked if what she planned to do was appropriate. She then put the title, "Visual Tek," thus ending the prewriting phase of her composing process.

The topic for session two was the description of the most significant person in one's life, which represents the reflexive mode. Mary's prewriting time was three minutes 18 seconds, the longest of her prewriting segments. She again began by asking the researcher a question. This question attempted to determine the meaning of "significant." She

then stated that her father was the first person to come to mind. She added that her mother was also important, but she followed with a reason why she first thought of her father. Mary then outlined some of the information she could use in the paper. One of the examples, "In 1972 was when I was losing some of my vision--ah--he suggested that I learn to read braille...", was particularly specific. Following these examples, Mary asked the interviewer if she could write about both her parents because she could not "single one of them out and not forget the other one was there...." Mary then repeated the topic and ended this prewriting period by titling her paper, "My Parents."

Apparently, Mary experienced a dilemma concerning this topic. She spent a sizeable portion of the prewriting time discussing her father, only to choose to write about both of her parents during the last few moments. Although she did not specifically outline what would appear in the paper, she mentioned several incidents concerning her father that later appeared in the essay.

The third topic, the discussion of an issue, was in the extensive mode. Mary spent 54 seconds, her shortest prewriting time, orally contemplating the subject. Mary first repeated the topic and then stated that the most important issue to her was blindness. She next asked the researcher, "I'm supposed to write an essay?" Her final act

in this prewriting segment was to entitle her paper, "Blindness." The shortness of this particular prewriting segment could be a result of her familiarity with the issues involved in blindness. Even in this short time, Mary established some parameters concerning the topic, for her question about an essay apparently provided the scheme for an essay. Thus, this prewriting segment provided a topic and an undisclosed form that the topic would take.

The final session involved a choice of topics. Mary could have chosen an original topic, or she could choose to write about the happiest or saddest moment in her life. Mary paused while she considered her topic. She repeated "the happiest or saddest moment" and then stated that she could recall the saddest moment but not the happiest time. After several pauses and partial statements, she asked about the length of the paper. She explained that she could think of an experience but that it might be short. Then she mentioned the topic of finding a Sunday school class. She added that this experience was a happy one. She concluded the prewriting portion by brailleing the title, "The Becomers."

Mary's choice of the happiest experience in her life represented the reflexive mode. She spent two minutes 48 seconds in the prewriting phase, her second longest. The topic selection for session four was not an easy one.

Although Mary never verbally considered choosing any topic, she did orally admit that she did think of the saddest moment but she did not want to write about that. When asked in an interview after the fourth composing session why she did not want to write about the saddest moment, Mary said:

Well, I guess the reason I didn't choose a sad thing was because I just, you know, I feel like, you know, there was one thing that did stick out in my life, which was when I tried to get my driver's license, and I didn't... want to write about that.... Another thing is because I, you know, I-- I cho--other things I've written... on blindness, and this time, I wanted to write on something that was part of my life, but was something else, you know.

Apparently she thought of an experience about her happiest moment, but she was concerned that the length of the resulting paper would be too short. She then thought of choosing a Sunday school, which became her topic. She did not plan any of this paper during this prewriting segment. She used the entire time in selecting a topic.

During all of Mary's prewriting phases, she repeated the topic at least once. She also asked the researcher from one to three questions in each of the prewriting segments. Some of these questions provided information relative to topic selection, including length and paper type. Other questions simply solicited approval from the researcher that Mary's discussions of the topic were appropriate. In the first two sessions, Mary planned information to be included in the essay. The first session's prewriting contained a generic

plan for an essay. The second session's prewriting segment provided specific examples that were later used in the paper. The third and fourth prewriting phases were spent in selecting a topic.

For Mary, the reflexive topics required longer prewriting times than did the extensive topics. The extensive subjects appeared to come much quicker. Mary ended each prewriting session by brailleing her title. The title appeared to be a concrete statement of the topic, thus providing the initial framework for the paper.

### Planning

During the composing sessions, Mary made no written plans. In an interview, the researcher asked this writer if she ever made written plans. Mary answered:

Not necessarily, ah--I know sometimes I've taken notes, and I'll kind of organize my notes and put them down on paper, but usually when I'm writing or thinking about what I'm going to write, I usually just kind of create it in my mind.

Mary did verbalize a broad plan during three of the writing sessions. In session one, she mentioned that she was thinking about the first paragraph which would include a "few introductory sentences and then... I will give a thesis statement" which would "tell what the essay is going to be about and then I'm going to give three particular things I'm going to tell about. Then I'm going to develop the paragraphs from that." This long-range plan got Mary started

on her paper, but it had to be adjusted when she realized that she could only think of two major subtopics for the subject.

During the interview after composing session two, Mary described the structure that she wanted her papers to take. She related:

Usually when you write an essay, you're supposed to use five paragraphs. You're supposed to have a thesis sentence, and you're supposed to have... an introductory paragraph. You're supposed to have a thesis sentence that kind of explains three different things that will be in three different paragraphs, broken down into three different paragraphs and a concluding paragraph.

The five paragraph paper is one favorite means of teaching composition in high school and college. Mary described a class at the private college she attended that held instruction on sentence structure and essays. That instructor or a previous one equipped Mary with an algorithm for essay-writing. Indeed, the strategy proved to be successful for this writer. Only the fourth writing session did not contain global planning, and that fourth session was a chronological retelling of an experience that apparently for Mary did not require the structure of the previous three writing tasks.

After the broad plan was set in sessions one through three and from the beginning of session four, Mary planned much of her composing at the sentence level. Her descriptive composing aloud provided example after example of Mary's

rhythmic planning strategy. She would describe what she had just written; then she would make projections about what would come next. For example, in session three, she wrote:

Oh, I basically put that the reason for a person, a blind person, standing on the corner with a tin cup and begging was because he or she was not supposed to hold a job because of their blindness. Ok, now what I'm going to put now is that nowadays with the techniques and the tools that blind people have, they can hold most any job they want to hold--ah--because of this.

The recursive feature occurred throughout her composing sessions and apparently helped Mary to complete her assignments successfully.

The plans that Mary made throughout her writing sessions consisted of goals. One type of goal dealt with content. With these content objectives, she supplied the paper with specific information. For example, in session four, Mary explained that she was going to write about calling "Bill Smith who is the adult singles minister to talk to him about it[a Sunday school class]...." Not all of the content decisions were made as smoothly as the first example. During session one, Mary appeared to be searching for three stages in using a Visual Tek machine. She stated:

There's three stages, let's see, there's three steps. You focus it, and then.... Let's see, ready, making, getting ready, focus, focusing... using it.... I guess I'll just do two paragraphs because I can think of focusing and then using it. I can't think of three things you do....

Thus, the setting of content goals does not guarantee that these goals will be achieved.

Content goals may involve choices. During session three after a pause, Mary explained that she was having a difficult time "thinking which way I want to go with this." Content decisions can be tied to options. These powerful objectives force the writer to continue the composing by moving from one piece of information to the next.

Process goals or goals that direct how to write also appeared throughout Mary's composing sessions. Process goals were found in two of her prewriting sessions. In the first composing episode, Mary stated:

You're given a very broad topic like process.  
OK. That could be anything. That's the broad,  
broad topic. What you really need to do after  
you've got this broad topic is to break it down and  
decide what area you want to write it in....

The goal in this sequence is, "Break down the broad topic of process into a specific subject." In session four during the prewriting period, Mary asked the researcher about the length of the paper. Length consideration also provided a specific constraint for the paper.

The broad plans that Mary made in all of the composing sessions were process goals. In session one, Mary said, "I was thinking about if... in the first paragraph like to introduce like telling what--what it is and then kind of... give the... three steps of process in the... paragraphs." Mary's instructions to herself provided a broad plan that would give the paper structure. She described in this

sequence a form for the whole essay. In the other writing sessions, Mary stated process goals for paragraphs. During session two, Mary reported, "I'm going to kind of ... begin to tell who it is I'm going to describe and then kind of go from there, and maybe in the next paragraph tell what they've done as a significant point in my life." This goal actually contained information concerning the content, but it also discussed the structure of the paper, a concern for process. These process goals that provide plans at the paragraph and essay levels served to structure the paper and appeared to be a regular part of Mary's composing strategy.

Paragraph-planning process goals occurred in Mary's sessions. The final paragraph appeared to be for Mary a "winding up" of the paper. The first writing session included this statement concerning the conclusion, "I think the final... paragraph I'm going to kind of wrap it up, and--ah--kind of maybe give... an overview or summary...." In session two, she wrote, "I think in this last paragraph, I'm going to try to tie it all together, kind of ending that paragraph to tie it all together." In the third composing episode, she described the last paragraph, "What I think I'm going to do in the--in the last paragraph is just kind of wind it up and kind of give an overview, not an overview but a-kind of a conclusion." In session four, she whispered to herself, "What conclusion." This concern for writing a

summary conclusion prompted the process goals being verbalized in three of the four sessions. The organization that Mary used for her papers always included a conclusion.

In addition to process goals at the paragraph level, Mary employed this same kind of objective at the sentence level. For example, in the second episode, Mary said, "I've kind of got a broad statement. Then in the next sentence, I'm going to kind of narrow it down to my significant persons, rather." The process goal translated to "narrow it down." In the same writing session, Mary again planned at the sentence level. She stated, "I guess before I go into the next paragraph, I kind of like to have a sentence that would lead into what I'm going to describe." After brailleing one sentence, Mary added the next objective on structure, "... I would explain the circumstances and with that, kind of get to the next paragraph." These goals concern the organization of the essay. Transition between paragraphs was a consideration that surfaced twice as Mary wrote a single paragraph. The goals that she established served as cues to perform the instructions she gave herself. Concern for transitions occurred in session three as well. Another example concerned the order or structure of the essay. After making a brailleing error, Mary discussed correcting it by adding symbols to what she had already brailled, but she found another solution. She described her answer, "I know

what I'll do. I'll just put that in at the end; that's what I'll do." Thus, process goals may provide flexibility to allow the correcting of an error.

Thus, Mary used content and process goals to plan the essay. She employed broad planning in three of the sessions and described a basic five-paragraph structure for essays. She used no written plans as she wrote. Instead, she planned orally and then wrote. Planning appeared to be an essential part of the composing process that moved the essay to completion.

### Translating

The act of translating puts the words onto paper. For Mary, transcribing involved the use of the braille writer. She learned to braille in 1974 which was six years after her high school graduation. Her braille was much slower than the other three subjects, which may have resulted from her relatively late start using this skill.

She mentioned several times that she had problems with braille. During the first session, she was braille when she stopped and said:

Shoot. Scratch that. Whoever's going to transcribe this is going to have a good job. It's not too bad, but I have made a few mistakes. Oh shoot, I did make a mistake there.

She realized that her braille contained several errors, but she seemed at this point to place the burden of correcting

upon whomever was to transcribe the braille into regular script. In the interview after the session, Mary again mentioned the brailling, "Oh, that brailling is horrible, but... there's not too many mistakes. I think I got--when I reread it, I think I got most of the... mistakes out of there. It's hard." Another example occurred in session four. Mary was brailling when she uttered, "Shoot, oh no" and stopped typing. She added, "I'm messing up my braille - wanting to put a lower "b" when I should be putting ... a higher, I mean, you know...." At one point, Mary said, "My braille is not very good. I guess my mind is getting ahead of my fingers."

The problems that Mary encountered with brailling did not appear to hinder her composing. She did have a slower composing rate, which could in part be a result of the slower brailling. Too, she had a greater number of pauses for her sessions. All four of the writing episodes have at least 44 pauses. Only one other subject had about 44 pauses, and he had that number in only one of his four sessions. In spite of the slower rate, Mary continued through the writing sessions and produced adequate essays.

In summary, Mary's transcribing appeared more labored than the other writers. During the sessions, she verbalized some problems with the physical act of brailling, yet the difficulty she may have had with brailling at times did not prevent her from producing her writing products.

## Reviewing

Mary throughout her composing sessions reviewed what she had written. Sometimes she rescanned a few symbols, at other times a line or two, and occasionally an entire paragraph. Mary rescanned from 41 to 65 times in three of her writing sessions. The first session's rescansions were not included because the researcher was counting a movement Mary used at the end of each line. Mary explained that the reaching up and touching the end of each line was to determine the amount of space still available to braille letters. Therefore, this movement could not be counted as reviewing.

This composer used rescanning for two purposes. First, Mary used reviewing to edit mistakes. In the interview after session two, she said:

A couple of times I looked to see if I was spelling a word right, and another time I think I looked to see if I'd made a--missed a sign or something else... And, of course, then a couple of times... I went back and... corrected.

Finding mistakes was not the only purpose of rescanning for Mary. She also used this procedure to think of ideas to allow her to continue the paper. Later in session two, she explained, "Another thing was I think I was trying to maybe get--grasp what I was thinking, and then... kind of thinking ahead of what I wanted to say after that, you know." In the interview after session three, Mary again referred to the recursive nature of reviewing:

... I was kind of thinking as I was going along, thinking--ah--in other words, what I was telling you what I--what I had written that was kind of giving me some clues as to what I wanted to write next.

The function of reviewing as a means of deciding what should follow next occurred in Mary's composing sessions.

Although Mary described on two separate occasions that reviewing served a role in writing new ideas, more concrete proof exists in the composing session transcripts themselves. Mary, as she composed aloud, developed a specific pattern. Initially, she would discuss what she had just written. She then would project what the next sentence or two would be. This pattern has been described earlier in this section; however, this feature demonstrated clearly that rescanning offered to Mary a means of grasping the next idea.

Evaluation, another element of reviewing, occurred during Mary's composing sessions. Most of her evaluation included the desire to edit a word. In session two, Mary said, "Oh, I'm changing a word. I didn't like that wording." Later she said, "Let's see, changing words makes it sound better." Several times, she simply uttered, "Yeah" or "Oh, shoot" to show her feelings about the writing. In an interview following session three, Mary described how the evaluation process was ongoing:

I was thinking that when I was composing this sentence, I always think about how it will make sense if somebody looks at it or listens to it, and that's when I changed that word because I didn't

think it should be ended in... "to be" or "to something;" in other words, leaving it kind of hanging... didn't sound right to me. That's when I changed the word.

Thus, that constant inner voice evaluated what was being written, providing editing suggestions as they were needed.

Mary, along with Rob, chose to read a writing product without prompting from the researcher. After writing the last sentence at the first session, Mary said, "Now, I'm going to read through this and see if I'm happy with what I've done." As she read through the paper, she described errors that were found. Although she did not choose to read other writing products, this occurrence demonstrated that Mary was concerned about possible errors and wanted to find them for correction.

When questioned during an interview about rewriting a composition, Mary replied that she had never rewritten a composition of her own accord. She also related that her parents had never read over a writing assignment that was to be turned in. The continual editing process that Mary described apparently took the place of the need for complete revision.

Mary's reviewing strategies included both rescanning and evaluation. She used rescanning to locate possible errors as well as to get ideas flowing for the next sentence. She described the evaluation component as a constant process

throughout her writing. For Mary, reviewing served a valuable function in composing.

### Audience

A concern for audience is a consideration for some writers. Mary demonstrated an interest in the audience during an interview after a composing session. No statements during the writing episodes, however, could be construed to represent a reference to audience.

After session four during an interview, the researcher questioned Mary about audience. She answered that she did not consider audience during the writing of this paper. When asked if she ever considered audience when writing, Mary stated:

A lot of things that I write, I mean, things that anybody else is going to read it.... I don't really consider the audience who I'm writing it to. But things that I've written for my English class, you know, when I write it, I don't really care who's going to read it because, you know... whatever they read or whatever, when they read it, they're either going to like it or not going to like it, you know... I just write the... way I think it should be-should be written, you know.

Thus, Mary's concern appeared to be simply that the reader would like the product or would not. Audience was not an important consideration for this writer during the majority of her composing sessions.

### Written Product

An examination of Mary's written products revealed a writer whose work was logical and specific. The four essays consisted of from 364 words to 459 words. These numbers demonstrate that all her papers were fairly consistent in length. They generally filled two pages of 8 inches by 10 inches of braille paper.

The essays adequately covered the specified topics. Mary used specific examples to provide support for the paper's focus. For example, when she was discussing the myths associated with blindness, Mary used the "Uncle Tom" image which "is the idea of a blind person standing on a corner with a tin cup and begging for money." In the second session, Mary chose to write on the topic, "My Parents." During a paragraph on the background of becoming blind, Mary used a specific reference to the doctor's prognosis. She stated, "The doctor saw that I was having trouble walking down the hall, so he said to my parents that I would be blind in 2 weeks, and to send me to Austin." These details supported and strengthened her essays.

Another strength of Mary's written products was the logical progression of the essays. The most outstanding example occurred with the first session's topic, "Visual Tek." This essay described the Visual Tek, a machine that enlarges type. Mary's description proceeded logically and

included specific details that aided understanding. She began with a definition of the term and then proceeded to describe the process of using the piece of equipment. The supporting statements were in an order that led to understanding. An example of the specificity of these details occurred during an explanation of focusing the machine. Mary wrote:

After the paper is placed on the platform, and before you actually read or write with it this process is done. To focus the camera, a lever is turned up to its maximum intensity, and then the lens of the camera is twisted back and forward to make the image clear.

The details are specific enough for understanding, and no major steps appear to be omitted. A second example found in session three's essay provided extra details. Mary wrote, "The reason for this attitude is due to the fact that all a blind person can accomplish in life is to work in a workshop and make brooms or weave baskets." These enriching details provided the paper with interest and believability.

Mary's writing revealed several typographical errors and misspellings. Some examples include "eole" for "whole," "defferent" for "different," "teachwith" for "teacher," and "laarn" for "learn." Upon an oral rereading of the essays, Mary located some of these misspellings. Additionally, Mary's writing contained some problems with mechanics. For example, an agreement error occurred in session one, and several commas were misplaced; however, the majority of

Mary's writing products did not contain serious mechanical problems. Occasionally, a sentence would have problems with structure that would cause it to be difficult to understand. An example occurred at the conclusion of session three. Mary wrote, "... But the message I want to leave with anybody that reads this issay is the philosophy that for a blind person to get along in this world is the idea that if there is a will there is a way." Although Mary did have some problems with spelling and sentence structure, her writing was not difficult to understand.

The structure of Mary's written product consisted of an introduction, body, and conclusion. The introduction generally stated the topic and explained what would be accomplished in the paper. For example, in the third session, Mary wrote,

The most important issue in my life is dealing with the public on the issue of my blindness. I would like to discuss some of the problems that I as a blind person encounter in my everyday dealings with the world around me.

The body of the paper consisted of two to three paragraphs that dealt with specific aspects of the topic. In all essays, a conclusion ended the writing. In three of the papers, the conclusion summarized the main points of the paper. The last essay's ending paragraph offered an insight based on the information given in the body of the paper. They were effective in signaling the essay's ending.

In summary, Mary demonstrated an adequate proficiency in writing. She had few grammatical mistakes, and her essays proceeded logically from start to finish. Although her work occasionally contained repetitious words and awkward phrasing, she succeeded in communicating effectively.

#### Attitude Toward Writing

Mary's attitude toward writing appeared positive. When asked if she liked to write, Mary answered affirmatively. The researcher then questioned her about facets of writing that she enjoyed. Mary explained:

Well, it fascinated me because I like to sit down and think about it, and what I'll do is I'll create what I want to say in my mind first, and then I'll put it down on paper which is kind of a challenge, you know. And it also I guess kind of gets your-- ah creative juices going....

The challenge and creativity of composing were stimulating to this writer. Mary kept a journal in high school for herself. That was the last self-sponsored writing she had done. Thus, writing for Mary did not serve as recreation.

This writer did not believe she had encountered any barriers in writing as a result of her blindness with one exception. Mary related that teachers in high school were sometimes a barrier, but she stated, "I don't feel right now that I have any sort of barriers."

Thus, Mary's attitude toward writing must be viewed as positive. She described the enjoyment she derived from

composing, although she had not engaged in any self-sponsored writing since high school. The fact that Mary could not remember any barriers to writing since her high school graduation also demonstrated a lack of negative experiences during the last ten years.

### Summary

Mary's formula of an introduction, body, and conclusion provided structure to her papers. Although her work contained some problems with mechanics, Mary's essays communicated a message. She related that she held a positive view of writing although she had not engaged in self-sponsored writing since high school.

### A Description of Jimmy's Composing

#### Personal Background

Jimmy is a young man in his early twenties. He has attended a state university about forty miles from his home for five years. At college, he lives in a small, neatly kept apartment close to the campus. His home is in a large suburban community where he lives with his father and brother. He has another brother who does not reside with them. Jimmy's mother died several years ago.

The brother living at home is also blind. Both he and Jimmy were premature at birth which necessitated oxygen to be administered resulting in a condition called retrolental

fibroplasia. Jimmy appears to be an independent individual. Although he has never worked, he maintains an apartment by himself, cooking his own food, doing laundry, and buying groceries.

Jimmy has changed majors at the university several times. In a discussion with the researcher, Jimmy described the difficulty in determining what he wants to do as a career. He mentioned that if he could find a good job, he would leave the university without a degree.

This young man has a muscular build. While in high school, he was on the school's swim team. As a senior, he participated in a national swim competition for the blind and broke the national record for the men's free style. He apparently still holds this record for the blind. As a result, Jimmy's muscle tone is good, although he has gained weight since high school.

Jimmy appears to be shy. During the initial interview and the first composing session, Jimmy spoke in short sentences and did not elaborate. The first composing session only lasted five minutes 54 seconds. He appeared somewhat uncomfortable with the researcher during the first meeting; however; during later sessions, Jimmy appeared to grow more comfortable and relaxed.

Jimmy is a polite, soft-spoken young man who is looking for a vocation. Although reserved when first meeting

someone, Jimmy quickly adapts to the new situation and handles tasks through to completion. His independence is evident through his gait, for he carries a cane to locate obstacles and walks alone.

### Composing Aloud

The technique of composing aloud appeared difficult for Jimmy. He generally spoke aloud what he was about to braille. He then would braille several lines. Most of the time, Jimmy simply repeated what he wanted to write or had written. He did not often speak of the thoughts or questions that occurred while he was composing.

The tempo of Jimmy's composing aloud was rather erratic. His braille was very quick and aggressive, nearly frenzied, but his composing was filled with pauses and then short discussions of what was being written. Although Jimmy was very proficient at braille, several times he mentioned that "Sometimes the old brain gets ahead of the body... and... I could have been thinking about something else, and just writing something entirely different." Apparently, the quickness with which Jimmy was able to braille was not fast enough to capture his thoughts without occasionally causing problems.

### Prewriting

The prewriting portion of Jimmy's composing sessions provided a time for topic selection and rehearsal of ideas.

In three of the four writing sessions, Jimmy asked the researcher a question about the topic apparently to clarify the assignment in his mind. In all four sessions, Jimmy mentioned only one topic. He thought of the subjects almost immediately after the topic was given. Thus, for this writer, capturing a topic was not difficult.

Session one's subject, a description of a process, was in the extensive mode. The prewriting time for this writing episode was one minute five seconds, which was average when compared to all the writers studied. When this figure was compared to the total composing time of five minutes 54 seconds, the length of the prewriting period gained significance. After the topic was given, Jimmy asked if the researcher said "any process." Apparently, he was attempting to fix the topic in his mind. A long pause ensued, and then he apologized for taking so much time. Jimmy then stated his topic of cleaning fish. The next statement concerned the first step in cleaning fish. Jimmy told the researcher that he would place a title on the paper. Thus, the prewriting stage ended with the brailing of the title. This prewriting session included some internal contemplation prior to a decision on the topic. After determining the topic, Jimmy thought through the first step which provided a starting point for the essay.

The second session had as its topic a discussion of an issue which was in the extensive mode. The prewriting

segment lasted one minute 57 seconds. This figure represented the longest prewriting for Jimmy. Jimmy again asked the researcher a question after the topic was given by stating, "Ah, can it be like just, you know, like any current thing, maybe something you might have heard on a talk show or something?" This question served to establish some parameters about the possible selection. Jimmy then described a radio talk show he had heard on the topic of smoking earlier that morning. He stated his view that smoking is harmful but added that he did not agree with using laboratory animals for the tests on smoking. It was not clear if the discussion of laboratory animals was mentioned on the talk show. An examination of the transcript indicated that this aspect was not mentioned on the show since Jimmy stated after outlining the items covered by the radio host, "But there's some things I'd like to add to that. What I disagree with is the way they... work with these laboratory animals, the rats and stuff." It would appear that Jimmy structured the topic on a disagree versus agree dicotomy.

He related to the researcher after his statement about the rats, "... So let me see if I can go about figuring out how to write this down." Apparently Jimmy had to organize his thoughts. He then asked if what he was planning was what the researcher wanted. After receiving an affirmative answer, he described a plan for the paper by relating, "I'm

just gonna write down a brief summary of what he said and start adding my thoughts to it, I guess." Again Jimmy asked the researcher a question which concerned the title. After receiving an answer that required him to make the decision about the title, Jimmy entitled his paper, "Dangers of Smoking."

Session three's topic, a description of the most significant person in one's life, was in the reflexive mode. Jimmy spent one minute five seconds in prewriting. After the topic was given, he immediately asked, "OK, ah--you mean just... like a friend you've met...?" After receiving a positive answer, Jimmy stated that this assignment "sounds like fun." He then described a friend and asked if he should write the name down and "the whole bit...." Jimmy again made a positive statement about the assignment and began brailleing. He did not write a title for this essay. He interrupted his brailleing apparently for clarification, "Significant person, isn't that what you said that the topic was ...?" Jimmy appeared to need another reassurance that he was proceeding correctly. The prewriting segment for session three seemed to be used to locate a topic and then to plan the initial sentences of the essay.

The fourth topic involved a choice. Jimmy could choose to describe the happiest or saddest moment in his life, a reflexive subject, or he could select any topic of his own

choosing. Jimmy paused after the topic was given and then chose the happiest moment as his topic. He spent one minute twenty seconds on the prewriting portion, which was the second longest of his prewriting stages. Immediately after stating his topic, Jimmy added, "That will be fun." He then related four sentences about the topic. Those sentences provided how the incident started. The first sentence gave the broad subject of swimming. He added, "Now I'll just explain a little story to you here." The descriptor, "story," appeared to be a key word about the organization of the essay. Jimmy gave a brief outline of an incident and then stated that he would begin writing the essay. At this point, he started brailleing. Jimmy did not write a title for this essay; instead, he immediately began to write the paper.

The prewriting segment of Jimmy's composing provided the writer the opportunity to decide on a topic in all sessions, to outline the form of the subject in session two, and to plan the first sentence or two in all sessions. Through questions to the researcher, Jimmy established parameters for the topic and received feedback on its appropriateness. In two of the prewriting sessions, Jimmy wrote titles for the essays. Both of the subjects were in the extensive mode. In the two sessions in the reflexive mode, Jimmy simply began writing a description of the incidents. They appeared to be a retelling of a happening. Thus, all prewriting sessions did not end the same way.

## Planning

For Jimmy, much of the planning for these four writing episodes was not revealed orally to the researcher. Thus, the discussion of his planning may appear abbreviated which is a result of the lack of data for analysis.

In an interview, Jimmy stated that he did not make written plans before he wrote. When asked if he ever made mental plans, Jimmy answered, "Hum, sometimes I start thinking; sometimes I just start writing something down and letting things come." This strategy of "letting things come" was mentioned several times during the composing sessions and will be explored later. During the initial interview with Jimmy, the researcher inquired about the method he used to write essays on assigned topics. Jimmy responded:

... You just sit there and think about it, you know. You don't think about that time you have to get that done. I don't--I don't know. We're supposed to be honest with you. Ah, I guess I'd just try to think about maybe what someone has told me.... If I remember and hope that they're not going to care if it's all true or not.

Jimmy apparently used content as an organizer for an essay. He never mentioned a structure for an essay during any of his composing sessions. He was the only individual studied who used what the paper was about as the means of organizing the essays in the extensive mode.

In one of the writing episodes, Jimmy discussed a broad plan. Session two's topic selected by Jimmy was "The Dangers

of Smoking." During the prewriting phase, he made the following statement, "I'm just gonna write down a brief summary of what he said and start adding my thoughts to it, I guess." The plan for this essay, "a brief summary," provided a task to be accomplished. Additionally, he planned to provide his own perceptions about the topic. An examination of the written product revealed that this original plan was carried out. After this writing session was completed, the researcher conducted a follow-up interview to question Jimmy about his composing. When asked about a pause during the prewriting phase, Jimmy answered:

I guess it's [the pause] just automatic, you know. You just have to sit down and plan a little bit. It's just better, I think... to do a little bit of planning. I mean, I know I-I said last time that I generally just jump into writing... and it just happens, but I think sometimes you do need to think a little bit, too, before you do it. There is a little planning process there.

Thus, this writer realized that for some topics, he needed to plan a structure. The other three writing sessions did not have a preconceived structure that was articulated. Instead, Jimmy simply wrote, apparently allowing the writing to lead him to the next statement. At the end of composing session four, Jimmy remarked:

It sounds... to me as though I just really don't have much of a plan. What I do is sort of go; I don't know how it happens. Ah, I don't understand it, but I manage to get it done.

This summary aptly described the planning that occurred during Jimmy's composing sessions.

During composing with the exception of the broad plan for writing session two, Jimmy planned only at the sentence level. He never mentioned a plan for a paragraph. Indeed, he did not have his writing divided into paragraphs. During the interview after composing session three, the researcher asked Jimmy if that particular written product was one paragraph. Jimmy answered, "Oh, I sort of didn't even indent." He then added, "Did you want that? I'm sorry; did you want that?"

Jimmy's composing sessions varied in their verbalized planning. His nervousness with using the composing aloud technique was one probable cause since each session got richer in planning descriptions after the first one. Session one in which Jimmy chose to write about cleaning fish held no evidence of planning after the prewriting phase. This session was also unusual in its short composing span. Jimmy only spent about six minutes and wrote only 92 words.

The other three writing sessions did show evidence of planning. This planning took the form of goals that moved the writing forward. Content goals provided information that could be used in the essay. For example, in session two, Jimmy stated after brailleing several sentences, "Start adding my feelings about it." A little later in the same session, he commented that "I'd like to add... to this." He then described how smoking had directly affected his family. He then began to braille again. These two goals helped to move

the paper forward by providing content for the writer. In writing session four, Jimmy gave a second content objective when he said, "Ok, ahm, how I got the money to go...." What followed this statement was a description of the method of financing a trip. Not many content goals were spoken. It is unknown whether or not other goals were present in the writer's subconscious.

Process goals were more prevalent in Jimmy's composing sessions. These goals help to direct the procedures for writing. For example, Jimmy in episode two stated, "I'm just going to start off by summarizing what he said at this point." This statement translated into the goal, "Summarize what he said." Later in the session he told himself, "I'll just sit back and think about it." In session four, Jimmy stated, "I'm just trying to organize here." These process goals helped Jimmy to complete the essays. The process goals served to provide structure for the essays and helped to keep the writer focused on a task.

During the composing sessions, Jimmy also mentioned several times the need to work out the content of the paper by composing. This need was expressed by one other writer, Rob. During an interview after one session, Rob explained that he had not known what he was going to say. He explained that as he wrote, he discovered a new idea. For Jimmy, writing appeared to be the central means he had for planning. Some of his essays did contain a few process goals

and content goals, but they also had several statements concerning the need to let the writing reveal the content. For example, Jimmy was attempting to describe in session three some background concerning the most significant individual in his life. He said, "I don't know how to describe it really. I'll have to write a little bit." In session two, Jimmy said, "I was just going to write for a little bit; then I'll tell you if I have any more thoughts...." In the same session, he said, "I'm not--not sure exactly what else to put down. I'll think as I go along though." For Jimmy, the act of writing itself appeared to help him discover what to say. Thus, writing for Jimmy sometimes performed a function of creative problem-solving.

Jimmy's planning strategies were difficult to analyze as a result of his inability to articulate his conscious thoughts. The researcher, as a result, was unable to determine if Jimmy's planning strategies were different from the other three writers or if he simply did not describe fully what his thought processes were.

### Translating

Jimmy's ability to translate his thoughts to paper via the braille writer was evident in the quickness with which he brailled. As mentioned earlier, he appeared to be the fastest brailleur of the four subjects. He hit the keys of

the machine assertively and rapidly which created a loud, almost harried staccato.

Apparently Jimmy occasionally had problems as a result of his quick brailleing. In sessions two and three, he specifically mentioned that perhaps he had brailled too quickly. In the interview after session two, the researcher asked this composer about a correction he had made during the writing of the essay. He recalled the incident:

Ok, when... I wrote "Sunday" down, it accidentally put a-a "e" instead of a "d," and... I don't know if it's that sometimes--ah--something-I have seen brailers malfunction a little bit, and--ah--all the dots-if you push one key, something else comes up that's not supposed to, and... so I don't know. I can't really blame it on the machine because it may be me.

In this answer, Jimmy appeared to be blaming the machine for a typographical error, although in his last statement, he left room for human errors. Later in the same interview, Jimmy mentioned the limitation of the physical act of brailleing. He said, "Sometimes the old brain kind of gets ahead of the body, we say, and.. I could have been thinking about something entirely different."

Problems with brailleing surfaced again in session three. He had picked up his brother's braille writer and was using it for this third composing session. As he was brailleing the essay, he exclaimed, "God, I don't like this brailler. It's different from mine. I don't like it. It's all-ah--I get ahead of myself on it, I think." Machinery may

play a role in the efficiency of the blind when composing. Just as a sighted person will be prone to more mistakes when using a different typewriter, the blind have the same problem with an unfamiliar braille writer.

Jimmy's transcribing was fast; however, his rapid pace occasionally caused problems. The use of an unfamiliar braille machine also resulted in his discomfort in using it. These problems did not prevent Jimmy from transforming his thoughts to paper. They simply caused a few errors and some frustration for this writer.

### Reviewing

Much has been written about the recursive nature of the composing process. Writers read over a sentence or two to review and edit what has been written. This rereading then causes those composers to plan the next sentence or paragraph. For unskilled writers, however, the reviewing is seen simply as an editing function (Perl, 1979). Their concern for correctness seemingly inhibits that part of reviewing that could be used for planning. Based on the transcripts of his four composing sessions, Jimmy demonstrated some of the same reviewing behaviors as did Perl's unskilled writers.

Jimmy was observed rescanning his previous writing from 13 to 37 times. These rescansions were primarily to edit his work. For example, in session two, Jimmy read a previously

written line and then said, "I'm misspelling stuff today." During session four, Jimmy commented again on a spelling error after rescanning a line.

These observations were supported by Jimmy's perceptions that were revealed in several interviews. In the interview after writing session one, Jimmy was asked the purpose of his rereading. He said, "Oh, basically just for spelling and English.... I don't know, just to see if I did leave anything out." When asked the same question after session two and session three, Jimmy gave the same answer. During the interview after session four, the researcher again asked Jimmy about the rescanning of words. He answered that it provided a means of checking the mechanics of the writing. The interviewer also asked if a concern about mechanics ever interfered with his composing. Jimmy answered:

Oh yeah, I'll be honest. Sometimes it does, but I think, you know, you can always go back and change. If you can get your basic ideas down, that's really the important thing. Sometimes, yes, it does bother me, especially when I go a-a real big paper; I just hate going back and doing parts over and over, but... really sometimes that's the only way you can do it.

This concern for correctness appeared to impede Jimmy from thinking ahead about what was being written on several occasions.

During the fourth session's interview, Jimmy was asked about the planning of sentences. When Jimmy had not mentioned the thinking through of upcoming sentences in any

of the sessions, the researcher decided to ask him about planning sentences. The researcher asked if pauses were used only to edit sentences rather than to think about the next sentence. Jimmy answered that he thought that was right. He said, "You can think a little bit ahead, but generally... if they're that short, you don't really have time to. You know, you have to sort of finish what you have there and be thinking about it." At least in Jimmy's perception, the pauses and rescansions he engaged in were not used primarily for planning. The researcher did ask Jimmy when he planned the next sentence, and he replied that sometimes he stopped a moment, but "generally for me, if I can just get going, it-it kind of comes to me, you know, what I'm going to say."

Throughout the sessions, Jimmy evaluated his work. Evaluation for him was a continual process of judging what was being written. Several of his evaluations concerned misspellings. In two, he said, "I'm misspelling stuff today." A few moments later, he added, "Excuse me, you're going to have to excuse this." In addition to spelling, Jimmy also provided an evaluation of the interest level of what he was writing. During session three, as he was relating orally the parts of an incident, Jimmy said, "This might sound a little boring...." He did not, however, change what he had written. A positive evaluation also occurred during session three. The statement, "That's great,"

occurred at the end of the prewriting stage. Although Jimmy had not written a word, he was at this point endorsing his idea for a topic. Although not many examples of evaluation occurred during Jimmy's composing sessions, he did occasionally use evaluation as a means to review what he had composed.

When writing in a typical setting, Jimmy apparently sometimes wrote at least one draft for a major paper. Drafts of a paper certainly can be seen as a reviewing of the essay. After composing session four, the researcher asked this writer about making written plans. He answered, "Generally, I just make them in my head, and sometimes I keep part of the paper started on. Most of the time, I just pitch it 'cause it's just not what I want at all, you know." Jimmy explained that he usually started writing with no plan in mind, and if the paper was not proceeding as he wanted, he simply would start over. The researcher then asked if all papers Jimmy wrote had rough drafts. He replied, "Well, yeah, like if it's a major paper, sometimes you almost have to have a rough draft to go on...." Jimmy is the only one of the subjects who described using rough drafts regularly. For Jimmy, the rough draft could have served as a written plan of the revised paper. The composers in this study were not required to write rough drafts, and not one of them chose to rewrite an essay for this researcher.

Reviewing was an important element in Jimmy's composing sessions. He primarily used reviewing to locate mechanical problems with the paper. Apparently, he did not perceive the use of a review to help plan the next sentence, although an observation of his composing sessions revealed that occasionally he would reread a line and then plan aloud his next sentence or two. Jimmy reported using drafts when he wrote major papers at school which no other subject in the study mentioned.

### Audience

Present research indicates that audience is not a consideration when composing for poor writers (Perl, 1979). Although Jimmy seemed to understand the importance of making an essay appeal to the reader, he never demonstrated a concern for the reader during composing. The only comment that could be seen as an acknowledgement of an audience while he was composing was when Jimmy said that what he was about to describe might be boring. He did not, however, change the passage as a result of his concern.

Jimmy did not consider audience when he composed. After session two, the researcher asked this writer if he had a particular audience in mind when he wrote this paper. He replied, "Ah, I think young people; especially I mean some of 'em, but... I guess some older people; well, I mean basically anybody...." Jimmy's answer demonstrated that he was unsure

of the intended audience. In session three, Jimmy again was asked the same question. He answered:

Not really [laughter]. Ah, I guess it could have been. Now if I would really have wanted to sit down and get into it, it probably would have been for older people--ah--... that, for example, might want to get their own business going....

Jimmy again gave the same reply after writing session four when he stated, "It [audience] wasn't really a consideration for here. Just whoever could read my misspelling." Thus, for this composer's written products, audience was not a consideration.

Jimmy was aware that writing for a particular audience could be useful to a writer. He discussed the importance of considering who would read a piece of writing after session three:

Ah, I think you do need to consider an audience... because sometimes you can lose people. I know I hate to sit down and read something that's over my head. Ahm--you get bored with it. I think you need to be able to explain it a way to where it doesn't bore the higher level people, but yet the younger people can understand.... Ah--I guess that's just something that people develop. I don't even know if I'm that good at it. I think it's just a special talent some people have.

For this writer, understanding the need to consider audience and doing that were two separate functions. Jimmy even alluded to "a special talent some people have" in that they thought about who would read their writing prior to or during composing.

After writing session four, Jimmy did mention the importance of keeping people interested in the topic. The researcher had asked him about what had taken place during a pause, and Jimmy recalled that he did not want to "ramble on and on and on" and that he wanted to "make it more interesting... like I said in our last meeting." He then added:

I really think that's [keeping the audience interested] important to do and also maybe considering your audience, too, but I guess in this situation, it wasn't quite as important but that it--it is sometimes.

He could not explain why it was not important for that piece of writing. The answer given above could indicate that Jimmy did consider an audience as he wrote the fourth essay since he wanted to make the paper interesting. It might also show that Jimmy remembered the interview from session three and realized that the researcher was interested in the audience for a piece of writing. In either case, by his own admission Jimmy did not consider audience as he wrote.

### Written Product

The written products that Jimmy produced during the study displayed no specific means of organization. When asked during the initial interview what steps he employed when writing an essay, Jimmy related that he thought about the topic and the amount of time available to write. He then added, "We're supposed to be honest with you. Ah--I guess

I'd just try to think about maybe what someone has told me...." He appeared to possess no organizing framework for the paper. His written products ranged from 92 words to 365 words in length. They increased steadily in length from the first session to the last.

Jimmy's two essays on extensive topics displayed problems that prevented them from communicating clearly. Both lacked a logical sequence or organization. The first essay on cleaning fish was a one-half page paragraph that omitted necessary details for understanding. For example, Jimmy explained to the reader, "The first thing you need to do is to scale it. You do the scaling with a spoon, fork, or a fish scaler." No mention was made about the process of scaling the fish, yet Jimmy's next sentence concerned where a scaler could be purchased. This sentence simply did not belong in this paragraph on cleaning fish. The last sentence, "Filleting is optional," provided no definition of the term and no process for filleting. In short, the process Jimmy described simply did not convey a clear idea of cleaning fish.

The second extensive topic, a discussion of an issue, also created problems in Jimmy's written product. He chose to write about the dangers of smoking and wrote a paragraph, which was 152 words in length. The first several sentences provided an adequate beginning. Jimmy related that a topic

for a radio talk show that morning had been "The Great American Smoke-out." After this appropriate introduction, Jimmy next launched into a question about research done on animals. He spent the next few sentences discussing the unfairness of using doses on animals that far exceed normal human consumption. At no time during the essay did Jimmy ever mention that smoking could cause cancer. Therefore, no tie existed between the sentences on the laboratory animals and the dangers of smoking. After the discussion on animals, Jimmy provided a personal example of the dangers of smoking by relating that members of his own family had had heart attacks and lung diseases as a result of smoking. His next sentence was, "It has been found that the other people in a room breathing smoke get more smoke than the smoker himself because many cigarettes have filters." No attempt was made to provide a transition between his family and a non-smoker's danger of inhaling a smoker's cigarette smoke. The abrupt ending, the lack of a sustaining purpose, and the illogical placement of sentences resulted in a writing product that did not communicate its message clearly.

Jimmy's writing products on reflexive topics were more logical than those on extensive topics. These topics provided the writer with an opportunity to use episodes which formed the framework of the essay. For example, Jimmy wrote about a man who was significant in Jimmy's life. He used an

incident which described a man being robbed to provide unity for the paper. The paper contained one passage that did not follow a chronological order. The remainder of the paper, however, did follow the logical order. The essay contained some specific examples of why Jimmy admired the man that strengthened the paper; however, the essay simply stopped. It did not appear to be finished, yet Jimmy signaled completion to the researcher.

The fourth writing product described the happiest moment in Jimmy's life, the day he broke a national freestyle swimming record for the blind. This essay was probably the best that Jimmy did. It contained a strong introduction that related a story using direct quotes; however, this essay also contained an omission. Never once did Jimmy explain that he was going to compete in a swimming meet for the blind. Instead, he relied on the reader's getting inferences from information provided. At the paper's conclusion, Jimmy never related that he had won the race. The closest that he came to mentioning that he was the winner was his statement, "My parents and swimming coach were all congratulating me." This obvious omission could provide difficulty for a reader. Jimmy did add an interesting detail to this writing. He described his nervousness by saying that he continually tapped his feet up and down before the race. Like the other essay on a reflexive topic, this product contained the

retelling of a story which formed its framework. Despite the omissions of the swim meet for the blind and Jimmy's winning the race, this essay represented an adequate written product.

Jimmy displayed a simple style of writing. He wrote fairly short sentences with few grammatical errors. He had some misspellings. For example, he spelled "cropy" for "crappie," "finns" for "fins," "labratory" for "laboratory," "occationally" for "occasionally," and "congraduating" for "congratulating" to name a few. The occasional problems with mechanics that Jimmy had did not interfere with the reader's understanding.

For this writer, essays in the extensive mode proved to have serious problems in organization. Necessary information was omitted, while no organizing framework was provided. The writing products produced on reflexive topics were better essays; however, they too lacked important details. Several of the essays had no introduction, and all but one simply stopped without providing a conclusion. In fact, all of the writing products consisted of single paragraphs. Thus, Jimmy's writings contained some obvious weaknesses that inhibited the message.

#### Attitude Toward Writing

When first asked if he liked to write, Jimmy responded that he sometimes did. The interviewer then asked if he ever wrote anything besides school-sponsored writing, and he

answered that he did not. After further questioning, Jimmy admitted, "Ah, I guess it's just one of those things that-- that I really don't care that much about doing."

When asked if he encountered barriers in writing as a result of his blindness, Jimmy answered that he had found no barriers in writing. He then described a problem with securing readers to find research materials for his college classes. This problem did have a secondary effect on writing research papers. He added, "And to me that's the hardest thing [getting good readers] because if you can't get good... material, it's hard to write, and you can't get through with it."

Jimmy noted in the interview after session four that he perhaps should have added details to what he had written. He explained:

I mean, if I... had it to do over, depending on what the paper was going to be for, I would, you know, add a lot of little details because that does make it interesting, especially if it's a-a book or something. It's just some people are so good at describing, and I like books that... describe. You almost feel like you're there with the writer, but yet it's not boring.

Jimmy's awareness that details were lacking in his work was evident in the above passage. This statement of one of the weaknesses of his writing was on target from the researcher's point of view.

Thus, this writer's attitude toward writing was not very positive. He was aware that his writing lacked details;

however, he did not appear to understand that some of his writing products had problems severe enough to impede a reader's understanding. The abbreviated first writing session which lasted only six minutes also demonstrated the writer's discomfort at composing.

### Summary

The composing sessions of this writer revealed a composer who relied on planning as he wrote. He seemed to expect the writing to appear as he composed without any forethought. The writing done in the extensive mode lacked logical progression and omitted information necessary for understanding. For Jimmy, composing appeared to be a chore that should be completed as quickly as possible.

### Summary

The four subjects' writing processes have been described in Chapter Four. Each individual's composing process was analyzed according to prewriting, planning, translating, and reviewing. In addition, the composer's consideration of audience and the written product were examined. Finally, each subject's attitude toward writing was described. In Chapter Five, comparisons and contrasts will be drawn between writers blind from birth and those blinded later in life. Then the findings concerning the blind writers will be compared and contrasted to the writing research on sighted writers.

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## CHAPTER V

### CONCLUSIONS

This study consists of an examination of the composing processes of four blind writers. Two of these individuals were blind since birth. The other two had become blind later in life. The subjects wrote on broad topics provided by the researcher at four writing sessions. They were asked to use a technique called "compose aloud" whereby they would repeat orally the thoughts they had as they wrote. The researcher tape-recorded these oral musings and later transcribed the sessions. After each composing session, the researcher used stimulated recall to probe the subjects about their composing strategies. In addition to the composing sessions, a personal interview was conducted to provide the writing experiences and personal history for each subject. Finally, the written products themselves were a rich source of information.

Using the composing session transcriptions, the personal interviews, and the written products, the researcher utilized an iterative process to develop a description of the composing strategies of these writers. These descriptions of each composer's writing process are compared and contrasted in this chapter. Next, the strategies of the writers blind

since birth and those blinded later in life will be studied. Then the composing processes used by the blind writers are compared to the processes of the sighted. The last section of Chapter Five will include recommendations concerning the findings of this research.

### Findings

The descriptions found in Chapter Four will be analyzed as they relate to three research questions associated with this study. These findings form the heart of the research conducted on the composing processes of blind writers and could serve to encourage further study on this topic.

#### Question One

The first question asked, "How did persons blind since birth compose?" The two individuals studied who had been blind from birth were Rob and Jimmy. They were very different in their perceptions of writing. Rob enjoyed writing, even choosing to write short stories as a recreational pursuit while Jimmy did not like to write and did not engage in self-sponsored writing. Rob composed the three longest writing products in the study while Jimmy composed the three shortest. Rob appeared at ease composing aloud and even was able to compose orally and braille at the same time. On the other hand, Jimmy seemed very uncomfortable using the compose-aloud technique and brailled in silence.

In spite of these differences, Rob and Jimmy displayed many of the same behaviors during prewriting. Both used the prewriting time to select a topic and then to plan the first sentence or two of their writing. Rob's prewriting strategies appeared to be more elaborate than Jimmy's. In three of the four writing sessions, he immediately repeated the topic. Also in three of the four episodes, he explored the topic by using a cataloging technique. An example of this strategy occurred during session two when Rob asked himself what he knew about the subject. The answer to this question provided information about the topic. In two sessions, Rob went from the broad to the specific in arriving at a topic.

Jimmy began three prewriting sessions with a question. Two of the questions related directly to the topic that Jimmy selected for the papers. Jimmy did not appear to narrow any of the subjects he chose. He simply stated the topic and then began planning the first part of the essay. He used a title in three of his sessions. Rob never used titles for any of his works. The prewriting times for these two individuals varied from 52 seconds to one minute 57 seconds. The extensive topics required the longest and shortest prewriting times for these two writers. Thus, no difference can be made between planning for reflexive and extensive topics for these individuals.

Planning for Rob and Jimmy was done only at the sentence level. No written plans were made by either writer. The planning for what was to come occurred immediately prior to writing the sentence. For Rob, content goals were stated in a question format, such as "What are the Soviets doing?" The answer to this question supplied information for the next sentence. Both writers appeared to have few process goals which govern the procedures for writing. Neither Rob nor Jimmy made broad plans about an essay during a composing session; however, when asked to describe how he went about writing an essay, Rob stated that he would narrow a topic and then "make up an argument about... the subject" and then "do the research that will show that I was right." Jimmy's answer to the same question was, "I guess I'd just try to think about maybe what someone had told me... if I remember and hope that they're not going to care if it's all true or not."

Both seemed to rely on outside information to write, and neither generalized a process useful for all kinds of essays. Jimmy and Rob both mentioned the need to allow the writing to uncover what needed to be said. Jimmy especially relied on the "let things come" approach as he wrote. At the conclusion of the last writing session, Jimmy told the researcher, "It sounds to me as though I just really don't have much of a plan. What I do is sort of go; I don't know

how it happens." Thus, for the composers blind since birth, planning occurred at the sentence level and consisted primarily of content goals.

Another composing process, translating, did not prove to be difficult for the writers blind from birth. Both Rob and Jimmy brailled quickly. Rob used abbreviations in his writing. Upon rereading the abbreviation, he did not attempt to correct it but merely wanted to ensure that the researcher knew what it meant. During one session, Rob mentioned that he should have slowed his brailleing down, but when questioned about the effect slowing down might have on his writing, Rob concluded that consciously brailleing slower might create even more problems. Both Jimmy and Rob had difficulties with a braille during one composing session; however, the act of translating did not seem to be difficult for these two writers. They both brailled assertively and did not mention any undue problems with the physical act of putting down words.

For these writers blind from birth, reviewing was a regular aspect of their composing. Rob rescanned 44 to 56 times, and Jimmy rescanned from 13 to 37 times. Rob and Jimmy differed in their views of the role of reviewing in their own writing as the differences in the number of rescannings might suggest.

By rereading what was just written, Jimmy was able to locate misspellings. For him, editing was the sole purpose

of rereading. Rob saw the rereading of a phrase or sentence as providing an opportunity for editing and as a means of planning the next sentence or two. Throughout his composing sessions, Rob would rescan a line of braille and then ask a question that would provide content. For him, reviewing served as a means to project what should be written next.

After each composing session, the researcher asked Jimmy about the function of reviewing. Each time he described the editing function. Finally, after the fourth composing session, the researcher asked if the rereading might serve as an aid to planning. Jimmy answered negatively and added, "Generally, for me, if I can just get going, it... kind of comes to me, you know, what I'm going to say." The researcher noted during observation that Jimmy occasionally during composing would reread a line or two and then continue brailleing. Perhaps he simply did not realize that he was planning during rescanning, or perhaps Jimmy did not find rescanning a line useful for planning.

Both writers used evaluation throughout their composing. As he wrote, Jimmy would locate misspelled words. The researcher asked him what he saw as the purpose of editing. Jimmy answered, "Oh basically just for spelling and English... I don't know, just to see if I did leave anything out." Jimmy, of all the subjects in this study, appeared most concerned about mechanics. He admitted that a

concern for correctness did interfere with his composing at times. Rob's evaluations of his writing were a continual part of his composing. He gave positive evaluations generally; however, on occasion, he did find errors and would state his feelings. While both of these writers used evaluation throughout their composing, Jimmy appeared more concerned about the mechanics.

Good writers demonstrate a concern for audience (Emig, 1971; Perl, 1979; Sommers, 1980). The writers blind from birth did not show a concern for the reader during any of their composing sessions. Jimmy, when asked if audience had been a consideration, answered that it should be important but that he did not think about the readers. Rob, during the initial interview, verbalized a desire for his writing to be interesting, yet when asked who was the intended audience for one composition, he answered that the essay was for anyone. Although both writers mentioned that a writer should be concerned for the reader during the course of the writing sessions, neither considered audience during composing.

For the composers blind from birth, the writing products in the extensive mode displayed some basic problems in organization. Jimmy's essays were of poorer quality than Rob's work; however, Rob's essays on extensive topics also lacked a cohesive unity. Rob began with the logical sequence of finding a topic and collecting information. At this

point, the writing lost its specificity. Throughout the essay, Rob used an extended example of a paper on General Sherman. After discussing the collecting of data, Rob turned his attention to Sherman. With the exception of the conclusion, the remainder of the writing product concerned the paper about Sherman rather than how to compose an essay. Rob's third writing sample also did not remain focused on the topic he selected.

Jimmy's writing in the extensive mode also displayed problems in logic. His first essay contained only 92 words and displayed major gaps in sequencing. His next essay on an extensive topic also did not remain on the subject. In the middle of the essay, Jimmy began discussing an issue not directly related to his topic of the "Great American Smoke-out." His essays in the extensive mode were not adequate, for they did not convey the intended message. Although his essays in the reflexive mode were better, they were not good writing products. Both of the writers had misspellings and typographical errors; however, these problems did not prevent the essays from being understood. The lack of logical progression and necessary details occasionally impeded understanding.

The two writers displayed different attitudes toward composing. Rob stated that he enjoyed writing. He also related that he wrote as a hobby. At the time of the

research, he had two short stories in progress. He liked to write because composing helped him "to think better." He credited his enjoyment of writing to voracious reading. A barrier that he cited was an inability to finish a product; however, he noted that he did not believe that this barrier was a result of his blindness.

Jimmy reported that he did not enjoy writing. He had never engaged in any self-sponsored writing and appeared throughout the writing sessions to be rather uncomfortable. When asked about barriers as a result of his blindness, Jimmy answered that getting readers to locate library materials for research papers was the most difficult task as a result of his blindness.

Both Rob and Jimmy evidenced several characteristics that research has associated with inexperienced or poor writers. For example, neither of these writers showed a consideration for audience, a trait associated with good writers (Emig, 1971; Perl, 1979; Sommers, 1980). Neither made broad plans. Rather, they planned at the sentence level. After brailleing a sentence, Rob would pause and formulate the next sentence. When the investigator questioned Jimmy about when he planned the next sentence, he replied, "If I can just get going, it... kind of comes to me, you know, what I'm going to say." One researcher (Sommers, 1980) holds that inexperienced writers rely on inspiration

rather than planning during composing. Jimmy's description of what occurred as he wrote appears to be a form of "inspiration." Good writers also were reported to scan their writing more often than other writers (Pianko, 1977). Both of these subjects had more rescansions than the sighted writers' rescansions; however, Jimmy had the fewest rescansions of any of the subjects. A final characteristic of poor writers is too much concern for mechanics (Stallard, 1974; Pianko, 1977). Rob did not exhibit a concern for correctness. On the other hand, Jimmy explained that a concern for correctness sometimes hampered his composing. Thus, Jimmy displayed many of the traits associated with poor or inexperienced writers while Rob had two of the characteristics in his composing.

The essays on extensive topics displayed problems in organization; however, writing done on reflexive topics did not contain these problems. The writing products of Jimmy and Rob contained several misspellings and typographical errors. Generally, Jimmy's writings had more problems in development than did Rob's. Both writers provided information on composing that gave new insight into the writing of the blind.

### Question Two

The second question posited, "How did persons blinded after birth compose?" A man who had been blind since he was

eighteen months old and a woman who lost all of her sight in her twenties were selected for this study. Both writers displayed a positive attitude about writing. Although a disparity existed between the ages of the two individuals when they became blind, they were used in this study since research (Fraiberg and Adelson, 1975; Bernstein, 1978; Landau, 1982) indicates that much language development occurs early in childhood. Larry reported that occasionally he would write down an idea to reflect on it. Mary kept a journal in high school but had not engaged in any self-sponsored writing since that time.

These two composers were different in their observable writing methods. Larry composed quickly, and he was able to speak and braille simultaneously. Mary displayed the slowest composing rate of the subjects. She appeared to require much contemplation time. She was unable to speak aloud as she composed, although she did describe what she had been thinking during her pauses. Mary verbalized some apprehension about being observed while she wrote; however, this uneasiness did not appear to affect her composing.

These two writers displayed much similarity during the prewriting stage of their composing sessions. Both used the time to choose a topic, occasionally wrestling with a topic choice. Larry repeated the topic in three sessions; Mary repeated the topic in all of her sessions. Both asked

questions in at least two sessions to establish parameters for the papers. Mary used the technique of going from broad to specific in one session. Larry employed cataloging in session three to "classify information in my head." In at least one session, they made tentative plans for the first paragraph. Both of these individuals ended their composing sessions by brailleing titles for their papers. The prewriting times of reflexive topics were longer than time spent contemplating the extensive topics for Larry and Mary. The majority of the prewriting time for reflexive topics appeared to be spent in choosing a topic. For composers blinded later in life, the prewriting period appeared to be a time to select a topic and to plan the first few sentences of the essay.

Planning for the composers blinded later in life was similar. Mary and Larry did not use written plans to organize their essays; however, they both described a formula for composing. Mary mentioned the use of a thesis statement followed with three ideas to explore. These ideas would then become paragraphs in the essay. For Larry, writing a composition consisted of "an introduction, body, and ending." He used paragraphs to keep the main ideas separate. These recipes for writing an essay appeared to provide an external structure for the papers. These two writers displayed both content goals and process goals

throughout the composing sessions. Mary used process goals in planning paragraph structure in her essays. She said during session one that in the final paragraph "I'm going to kind of wrap it up...." Larry demonstrated an understanding of different kinds of writing. He mentioned that he was going to write an informal paper during one session. During the third writing episode, he stated that he was going to use a "stream of consciousness" method. He appeared to understand that there are a variety of types of essays and used this knowledge in his composing sessions. These two writers appeared to have an understanding of the structure of a piece of writing and were able to incorporate that structure into the planning of an essay.

The role of translating as a writing process is to get thoughts onto paper. For any writer, this skill depends on short-term memory storage and manual dexterity (Flower and Hayes, 1981). The composers blinded later in life occasionally had problems with translating. Larry was an efficient and quick brailier. The act of translating very rarely impeded Larry's composing. In the fourth session, Larry brailled rapidly. The fast pace created some typographical errors which Larry noted. The act of brailing, then, appeared to constrain the writer, preventing him from composing too rapidly. For Mary, translating was a more difficult task. She did not learn to braille until she

was in her early twenties. Her braille rhythm was slow and uneven, and the act of braille caused her to make typographical mistakes. After the first session, Mary exclaimed, "Oh, that braille is horrible." The act of braille for her was a laborious process that appeared to slow down her composing.

A third composing process that performed an important function for these writers was reviewing. Mary and Larry used reviewing throughout their composing sessions. Both of these individuals used reviewing for two purposes. First, it served an editing function whereby misspellings or omissions could be detected. A second purpose of reviewing provided the writer a way to facilitate planning. Many researchers have described the recursive nature of composing (Emig, 1971; Graves, 1973; Mischel, 1974; Stallard, 1974; Pianko, 1977; Perl, 1979).

Reviewing is a part of that recursive feature. Writers look back over a phrase, sentence, or paragraph to plan the next sequence. When asked why she rescanned a sentence, Mary replied, "I think I was trying to maybe... grasp what I was thinking... kind of thinking ahead of what I wanted to say after that...." A component of reviewing is evaluation. Both writers used evaluation throughout their composing sessions. Larry evaluated as he reviewed, noting that a word was misspelled or changing a word that he did not like. Mary

engaged in the same evaluation activity in her composing sessions. Thus, the composers blinded later in life used reviewing throughout the writing sessions to edit their work and to plan the next sentence.

A consideration for audience is one characteristic of a good writer (Emig, 1971; Perl, 1979; Sommers, 1980). Larry displayed a concern for audience throughout his writing. He wanted his work to be read; therefore, he thought about his unseen audience. In session three, Larry asked himself, "Does this look right? Is this what I want to read?" A second example occurred during the interview after the first composing session when Larry explained that he tried to get the reader's perspective to determine if that reader would enjoy his work. Mary displayed no concern for audience during three composing sessions. When she was asked about a consideration of audience, she stated that she did not think about who would read the essays. During another writing session, she did mention that she always thought about how the essay would sound to someone else. Thus, these writers did consider audience in at least one of their writing sessions.

The written product provides much information about the composer. An analysis of the work of the writers blinded later in life showed both to be adequate composers. These individuals wrote from 232 words to 459 words in each

essay. All their compositions had an introduction, body, and conclusion and conveyed its message. All but one of the essays proceeded in a logical fashion and adequately covered the topic. Mary's first essay was especially strong in its thorough description and its organization. In this composition, she described a Visual Tek, a machine that enlarges letters to allow those with some light perception to be able to read. For example, in this essay, Mary wrote:

After the paper is placed on the platform, and before you actually read or write with it, this process is done. To focus the camera, a lever is turned up to its maximum intensity, and then the lens of the camera is twisted back and forward to make the image clear.

The specific details made understanding an easier task for the reader.

The only essay that did not show evidence of logic was Larry's first writing product. This paper was a description of how to play a guitar. The content was not well-organized and left gaps in the process. Larry was not pleased with this essay and noted after rereading it that the essay needed more details. Both writers blinded after birth had misspellings and typographical errors. Some of these mistakes were found during an oral rereading of the products. Larry was the only composer who used a color in his essay and an example of figurative language. Since the blind do not receive visual stimuli, the lack of sight details in the writers was expected. Larry's use of color

was unexpected, yet of the subjects participating in this study, he was the most concerned about not appearing blind to others. Both of the writers produced compositions that displayed organization and details and could be viewed as average writing products.

The attitude toward writing expressed by these two writers was generally positive. Both had written self-sponsored writing previously although writing was not a regular pastime. When asked if they had encountered barriers in writing, they both responded affirmatively. Larry mentioned the difficulty of locating material in braille. Mary answered that the teachers in high school posed problems. Larry credited his enjoyment of writing to his love of reading. Thus, both writers demonstrated a positive feeling about writing.

Writers blinded later in life used a structured approach in writing compositions which resulted in essays with an introduction, body, and conclusion. Although their writing products contained misspellings and typographical errors, these problems did not prevent understanding. Mary and Larry displayed positive attitudes about writing, and both had produced self-sponsored writing. These two individuals through their willingness to participate in this research provided a view of the writing processes used by composers blinded later in life. A chart is included on page 198 to

provide a comparison of the composing processes of these subjects.

### Question Three

The final question asked, "How did the information gained from the blind writers compare with the information known about sighted writers? All writers in this study had prewriting times within the range of one to four minutes reported by other researchers (Emig, 1971; Mischel, 1974; Pianko, 1977; Perl, 1979). The strategies of cataloging, proceeding from broad to specific, and writing with no oral plans were also employed by sighted writers (Perl, 1979). The finding that writers blinded later in life spent longer in prewriting on reflexive topics supported Emig's research (1971). A notable difference in writers blind since birth and those blinded later in life was the prewriting times for reflexive and extensive topics. One of the composers blinded at birth exhibited both the longest and shortest composing times in the reflexive mode; the other had the shortest and the second longest times for planning in the reflexive mode. These findings could indicate that the composers blind since birth did not perceive much difference in a reflexive topic and an extensive topic. The organization required for the extensive topic differed from the episodic nature of the reflexive mode for sighted writers and writers blinded later in life, yet the composers blind from birth did not

demonstrate any discernible difference in their treatment of the two modes.

Planning for the blind composers did conform somewhat to the research that has been done on sighted writers. Flower and Hayes projected that composers have broad goals that give the writing product its structure (1981). Both Larry and Mary exhibited broad goals when planning. The writers blind from birth did not evidence this characteristic in their composing aloud. Instead, they relied on sentence-level goals to write their compositions. Perl (1979) found in a study of unskilled writers that this group indicated no broad planning. Indeed, some of the unskilled writers stated that they had "no idea" as to what they should write (Perl, 1979, p. 330). Although Rob lacked broad-based planning, he did appear to know what to write. Jimmy, however, seemed to have problems with knowing what to say.

Translating, another writing process, has been discussed by Flower and Hayes (1981). These researchers mentioned the constraint that the physical act of writing imposes upon the ideas coming from the composer. The composers in this study did occasionally have problems with braille. Braille, like writing, served as a constraint to composing. No discernible difference was found for Larry, Rob, or Jimmy. Mary had more problems than the other subjects since she had been braille for a shorter period of time; however, the act

of braille did not visibly hamper her composing. In fact, the composing rates of blind writers exceeded the rates of the sighted perhaps because of the quickness of braille as compared to handwriting.

Reviewing is an integral part of the composing process. The recursive feature of composing is based on a writer's need to look back over work already completed to be able to plan the next writing segment (Emig, 1971; Graves, 1973; Mischel, 1971; Stallard, 1974; Pianko, 1977; Perl, 1979; Flower and Hayes, 1981). The number of rescansions for blind writers was much greater than those reported for sighted composers. The subjects in this study rescanned an average of 39.06 times per essay. Sighted writers were reported to have rescanned an average of 6.29 times per composition. The reason for this tremendous increase perhaps resulted from the nature of braille. In order to space properly, blind composers cannot simply glance at a margin. They must instead place a finger over the line of braille to determine the proper location. Thus, for the blind composers, some rescansions were probably used for location. Too, the researcher was easily able to tell when the blind writer was rescanning since the movement of the finger across text was much more obvious than eye movements. Another reason could simply be that the blind needed to touch the text to continue the composition. For

the sighted, the view of the growing text is constantly there, perhaps sending subconscious messages that prod the writer along. The blind cannot receive the subtle text message without the continual touching of the paper.

Research has been conducted on revision (Sommers, 1980; Faigley and Witte, 1981). Inexperienced writers see editing as looking for grammatical errors (Sommers, 1980). The only subject that viewed editing in this way was Jimmy. His writing errors and his composing strategies qualified him as an unexperienced writer as well. Sommers (1980) also reported that these writers tended to rely on inspiration rather than planning when composing. As mentioned earlier, Jimmy made a statement that rereading his work did not help in planning what was to come next. Instead he simply wrote, allowing the writing to unfold. His perception of his composing resembles the inspiration that Sommers mentioned. The remainder of the writers displayed some characteristics of experienced writers. For example, Rob, Larry, and Mary revised their work during the composing process (Stallard, 1974; Sommers, 1980). These writers, however, did not revise any structure larger than a word. Larry mentioned after rereading his first writing product that he needed to add specific details to enrich the essay; however, no changes were made. Although Rob, Mary, and Larry could not be termed "experienced writers," they were adequate writers.

Another trait of a good writer is a consideration for audience during writing (Emig, 1971; Perl, 1979; Sommers, 1980). Only two subjects revealed any concern for the reader during composing. Larry, one of the composers who became blind later in life, mentioned the reader throughout his writing episodes. His concern apparently arose from his wish to have his work read, another characteristic of a good writer (Emig, 1971). Larry's desire to be read could also be attributed to his social nature and his need for acceptance by his peers. Mary stated during one composing session that she thought about the reader as she wrote. The other composers did not mention a concern for audience during composing. In the interview after the writing sessions, when asked if audience had been considered, Rob and Jimmy answered negatively. For the writers blind from birth, a concern for the reader was not important when composing.

The written product is the tangible result of the composing process. An examination of the composition can provide insight into the writer's organization. A comparison between the essays of the writers blind since birth and those blinded later in life revealed some differences. The composers blind from birth had difficulty with writing in the extensive mode. Organizing the writing, following through on a topic, and adding supportive details were problem areas for the writers blind from birth.

Several projections can be made about why these individuals had problems with the extensive mode. First, they may simply have not put much effort into the composing of these essays. A second possibility is that they may not have been taught how to organize. A third suggestion is that these writers because they have been blind since birth were not equipped to handle the complexities of developing the extensive topics since research points out some critical differences in the language development in children blind from birth when compared to sighted children (Fraiberg and Adelson, 1975; Bernstein, 1978; Landau, 1982). Perhaps a necessary component for organization is dependent on sight. More research on blind writers should be conducted to determine if these subjects were isolated cases or were representative of congenitally blind composers.

Attitude toward writing was the last major area examined. Three of the subjects reported that they enjoyed writing. Of course, these individuals may have answered positively as a result of the expectations of the researcher. Jimmy did state that he did not like to write. For him, writing seemed to be a rather negative experience. When asked to describe positive writing experiences, Jimmy could not remember any. The following chart compares the writers who participated in this study as well as research on sighted writers.

Table 1  
Comparison of Subjects' Composing Strategies

	Mary	Larry	Rob	Jimmy	Sighted
Planning					
Process Goals	+	+	+	+	+
Global	+	+	-	-	0
Content Goals	+	+	+	+	+
Average Rescansions	51.6	28	50.5	29.3	6.29
Rescansions/ Editing	+	+	+	+	+
Rescansions/ Planning	+	+	+	-	0
Concern for Audience	+	+	-	-	0

+ = Yes

- = No

0 = Experienced or good writers only

In summary, the research on composing has been reinforced by this study. Although blind writers did exhibit spelling problems and the composers blind from birth had difficulty with organizing extensive topics, the

characteristics of composing were virtually the same as sighted writers. Despite the lack of vision, these writers engaged in prewriting, planning, and reviewing. With the exception of Jimmy, they went back over what had been written to be able to plan the next sentence or two. They established goals as they wrote, occasionally adjusting those goals as they composed. For the blind writers in this study, writing appeared to be a cognitive activity that required a focus on a topic and a commitment to work through the organizing of information.

### Recommendations

As a result of the findings of this study, several recommendations and suggestions for further research will be made.

#### Blind Composers

This study represented the first one done on the composing processes of blind writers. These findings represent only four writers and cannot be generalized to the population of blind writers. Composing process research needs to examine further the blind as they write. Through a series of studies, perhaps a set of data can be compiled which will offer an understanding of how the blind compose. This research will either validate that congenitally blind writers have problems composing on extensive topics or will

demonstrate that the writers in this study exhibited organizational weaknesses from a cause other than blindness. This information could then be used in teaching the blind writers a means of composing for extensive topics.

A need exists for other writers with handicaps to be studied as they compose (Emig, 1978). This information could help in determining what effect sensory deprivation has on the ability to compose. Through an understanding of the roles that sight and sound have on the development of writing, teachers could perhaps provide better writing instruction in the future. Too, maybe those with handicapping conditions could receive instruction that may at least help somewhat in overcoming writing problems they may have.

#### Teaching Writing to Blind Students

Some research should be undertaken to examine how the blind are taught writing. A researcher should observe the classroom to determine if the blind writers are receiving adequate instruction and materials on writing. It is conjectured that because of the demands being placed on the teacher by the other students in a classroom, the time needed to work with the blind writer is diminished. Over time, this lack of instruction could result in problems with mechanics or organization. Perhaps because of time constraints, a teacher might not require a certain assignment from a blind

student. One subject in this study was able to avoid doing a research paper in his twelfth grade English class. If blind students are not required to write, they, like their sighted counterparts, will certainly not learn how to approach the writing task with understanding. Thus, an examination of the interaction of the teacher and the class could provide information about how the blind student is incorporated into the instructional setting.

### Rescansions

Further study should be done on the number of rescansions for blind students. The high numbers that were found in this study were different from sighted writers. Thus, other blind students should be observed as they compose to compare the number of rescansions per essay with the findings reported in this study. If the number of rescansions remains high, then further research should be done to determine why the difference exists.

At least two possibilities could explain this discrepancy between the number of rescansions of sighted and nonsighted writers. One reason could result from the difficulty of researchers to detect the eye movement of sighted composers. Thus, perhaps the rescansions reported did not reflect the actual number. A second explanation could be in the short-term memory of the sighted and the blind. A difference in the capacity of short-term memory

storage of these two groups could result in the blind composer's frequent rescanning of the written products. Further study should be done if the rescansion counts remain high for blind writers in subsequent research.

### Implications

The results of this study may have some implications for teachers of blind students. Although this study has reported on case study research which cannot be generalized to a general population, some of the information reported, if documented through further research, could have an effect on classroom instruction. For example, writers who are blind may have problems understanding the organization of an essay. Thus, further elaboration may need to be used in teaching structure. Additionally, special attention should be given to teaching spelling to blind writers.

### Summary

Through an examination of blind writers, this study attempted to document the composing strategies of the blind in a case study approach. The results demonstrated that for the most part, blind writers employ the same techniques and strategies of the sighted. The only consistent differences involved congenitally blind composers who exhibited problems in the organization of essays on extensive topics and the number of rescansions for blind writers. Further research

should be done to determine if this difference is found in all congenitally blind writers. Through research of this nature, a better understanding of this complex cognitive activity can be developed.

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## APPENDIX A

### Interview Schedule

#### Introductory Statement

I'd like to discuss your previous writing experience with you. I am going to ask you a few questions, and I would like you to respond as well as you can remember. I would like to tape-record this interview to allow me to reflect on your answers at a later time. Is that OK with you? Then let's begin.

1. Would you describe how long you have been blind and your educational background?
2. Do you like to write?
  - \*If yes, why do you enjoy writing?
  - \*If no, what makes you dislike writing?
3. Do you ever write anything besides school-sponsored writing (e.g., class assignments)?
  - \*If yes, describe the kinds of writing you have done besides school-sponsored writing.
  - \*If no, why haven't you written anything?
4. What kinds of writing have you done in the past (for example, essay, short story, review, poem, critique, research paper, editorial, news story)?
5. What is your earliest memory of writing? Would you describe it?
6. Was there an individual or individuals who helped you in learning to write or in improving your writing?
  - \*If yes, what kinds of activities did this person engage in that proved helpful to you?

7. Could you describe what school-related activities were used to teach you to write? What is your assessment of their value? Were they helpful to you?
8. Describe how you go about writing in the following subjects.
  - a) when a topic is assigned to you
  - b) when you may choose an original topic
9. Have you encountered barriers in writing as a result of your blindness?  
\*If yes, please describe these barriers.
10. Do you make written plans before you write?  
\*If yes, describe.
11. Did your parents ever work on your writing before turning it in?
12. Would you share any comments that teachers have made on your papers in school?
13. Have you ever rewritten a composition? If yes, can you recall what you did to the paper and why?
14. If you were to describe the ideal teacher of composition, what characteristics would this teacher have?
15. Is it difficult for you to write about feelings?
16. Would you describe any positive experiences you have had in writing?
17. Would you describe any negative experiences you have had in writing?

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