

THE COMPOSING PROCESS: INSIGHTS  
FROM THE LITERATURE AND AN  
ESTABLISHED ADULT WRITER

CENTRE FOR NEWFOUNDLAND STUDIES

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**THE COMPOSING PROCESS: INSIGHTS  
FROM THE LITERATURE AND AN  
ESTABLISHED ADULT WRITER**

**BY**

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(C)

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in partial fulfillment of the requirements  
for the degree of  
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## ABSTRACT

The purposes for this investigation were to establish a theoretical and research framework for composing from a review of the literature and to extend this framework by studying the composing processes of an active adult writer.

A critical review was carried out of selected studies of composing. The reviewed studies were then utilized to trace the development of a theoretical framework for composing research. Within the theoretical structure that emerged, the investigator observed an established writer in her normal work setting as she composed a self-assigned article.

Three types of verbal reports from the writer were utilized in the analysis of her composing. These reports took the form of a preliminary interview, thinking-aloud protocols and retrospective interviews. The reports were supplemented by a text-based analysis of the writer's revisions in book reviews composed outside the research context.

The review of composing studies showed that since 1971 many researchers have moved away from a stage model of composing and toward a cognitive-process model of composing to serve as a theoretical framework for their research. The cognitive-process model was adopted as the theoretical structure for this study. Within this structure, analysis of

composing was based upon the researcher's inferences about the cognitive processes employed by the writer as based upon the writer's verbal reports and the researcher's observations. The utilization of multiple verbal reports within a case study method was found to be a valuable approach to research, yielding large amounts of basic information and converging lines of evidence about the writer's composing.

Composing was found to be a dynamic process in which writing processes could not be assigned to any one stage or function. Instead, composing was characterized by complex interactions of thinking processes that were deployed according to the writer's broad goals, learned strategies and immediate plans. These goals, strategies and plans were key factors in composing. They mediated the influence of contextual factors and provided direction for the thinking processes, but were themselves subject to review and modification as the writer's ideas developed through her creation of text.



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## CHAPTER I

### INTRODUCTION

The personal impetus for this study comes from curiosity about how writers go about writing. Initial questions arose from experiences in writing research papers. They were questions such as: Why do I need time to mull over ideas and build up steam before I write? Do good writers outline a project before they begin? Do most writers go through similar processes when writing? Later, my interest in writing was piqued by the glimpses of composing that established writers offered in personal conversations and in published interviews. As my interest grew, I became increasingly aware that my thoughts and ideas changed and developed, sometimes in significant and unexpected ways, during a writing episode. When I found echoes of these private observations in statements by published writers who spoke of ideas flowing from the pen and of discovery through writing, I decided to study composing more thoroughly.

After some reading in this area, it was clear that many researchers are currently interested in how writers compose. There is indeed a growing body of research conducted in school settings with emerging writers. However, there are still gaps in basic knowledge with many questions to be asked and answered. Therefore, in an effort to learn more about composing and to broaden the framework of composing research, I decided to investigate the composing processes of an active

adult writer.

Before specifying the purposes of the study, a brief overview of some research related to composing is presented to provide a theoretical direction.

Composing is a valued and necessary activity in our society. King (1978) stated that "writing, perhaps more than reading, is a hallmark of a truly literate society. Certainly, writing is essential to full participation in a literate society" (p. 196).

Clark et al. (1983) maintained that "not only does writing, like speaking, provide entree into community for the individual, but community is, in fact, able to exist to the extent that people are able to share their thoughts and feelings by means of communicative symbols" (p. 239).

Our society has tended to take what might be called a product-consumer orientation to composing, emphasizing the consequence of written texts for the cognitive development and pleasure of readers. However, the significance of understanding the composing processes of writers stems from a process-producer orientation to composing which is built upon the premise that composing is important for the cognitive development and personal fulfillment of writers.

Outstanding researchers such as Vygotsky (1934/1962) and Bruner (1971) have, in fact, pointed to the crucial role of oral and written language in cognitive development. But Vygotsky also distinguished between the development of

writing and the development of speaking. He noted that written speech is a separate linguistic function, differing from oral speech in both structure and mode of functioning" (p. 98). It is because of the distinct qualities of written language that Emig (1977) spoke of composing as "a uniquely powerful multi-representational mode for learning" (p. 125). King (1978) and Smith (1982) also indicated the power of composing as a means of learning and growth for the writer. Indeed, Smith pointed to composing as one of the "most powerful tools" (p. 32) for accessing the implicit store of knowledge in the brain.

Mosenthal (1983) noted that children have most of their experiences with composing in school. This circumstance indicates the potential for teachers to influence the composing processes of students. While Murray (1978) observed that there is little need for writers themselves to possess explicit knowledge of composing processes if they write well, Emig (1967) remarked that teachers who want to intervene in the composing processes of their students, to provide appropriate freedoms and constraints, must do so on the basis of explicit knowledge about composing.

There is now an expanding but as yet inadequate body of knowledge about composing. Further investigation is warranted because of the belief that composing can be a powerful means of development for the writer and because expert opinion suggests that more knowledge about composing is needed to provide a basis for the development of effective



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teaching practices. The aim of this study is to extend the framework for understanding the composing process by studying the composing of an active adult writer.

### The Problem

The problem which gives rise to this study may be stated in the following terms:

Knowledge about composing is at present insufficient and narrowly based. Existing research has often focussed on student writers in school settings, or has been based upon analysis of written products and not upon observation of composing processes. In addition, research findings about composing processes often lack integration with existent research and theory on the nature of composing. In an attempt to deal with these issues, this study will combine what is currently understood about composing with the observation of an adult writer in the process of composing.

### Statement of Purpose

The purpose of this investigation is twofold. First, it is intended to establish a theoretical and research framework for composing from a review of the literature. Second, it is intended to extend this framework by studying the composing processes of an established adult writer.

### Need for the Study

The perceived need for this study is based upon the premise that understanding the composing process is of consequence to our society. Underlying this premise are the beliefs that composing is an important means of individual cognitive development and is requisite to full participation in modern society.

Since most people in our society have their main experience with composing in a school setting, it is likely that teaching practices will have a significant influence on their composing abilities. It is assumed that the teaching of writing, if it is to be sound, should be based upon a broad foundation of knowledge about the composing processes of writers. Seen in this way, the value of expanding the existing framework of knowledge about composing processes is clear, while the need for further study can be supported from within the present body of literature on composing.

There has been continuing reference to the paucity of studies on composing - the process - as opposed to composition - the product or outcome (Lyman, 1929; Godwin, 1963; Braddock et al., 1963; Hagstrum, 1964; Emig, 1967; Graves, 1973; King, 1978; Cooper and Odell, 1978). Lyman noted that researchers up to 1929 had measured the products of composing. In his opinion, the researchers were incorrect in assuming that such studies also evaluated "the manifold

intangible processes of the mind by which those products are attained" (1929, p. 274). The finished artifact conceals the efforts that made it. As Murray (1980) wrote, "Process cannot be inferred from product any more than a pig can be inferred from a sausage" (p. 3).

In reviewing studies related to teaching composition, Godwin (1963) found no definite answers for the question "What is the nature of the writing act?" She noted the interdependence of the communication skills which she characterized as reading, writing, speaking, listening, observing, and demonstrating, but added that "no one seems to know, or to be able to find out, how or why a student learns to write. Certainly the process is both cumulative and complex, the result of a variety of interrelated sources" (p. 35). It should be noted, however, that the studies reviewed by Godwin focussed on the outcomes of writing and did not examine the nature of the writing process.

Braddock et al. (1963), in an extensive review, compared the state of research in composition generally to "chemical research as it emerged from the state of alchemy" (p. 5), and listed many areas "fundamental to the teaching and learning of written composition" that were unexplored by careful research. Included among these were: "What is involved in the act of writing? How does a person go about starting a paper? What questions must he answer for himself? Of what does skill in writing really consist?" (p. 53)

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In his review of Research in written composition by Braddock et al., Hagstrum (1964) found fault with even those studies deemed "best" and stated that researchers have to reflect more and consult the experience of professional writers and students before they conduct new experiments looking for "hard" data. Researchers need to ask writers "exactly what they do when they write - what they think about, what steps they follow, how they get ready for expression, what they read, how they have been helped or hindered by rhetoric, by grammar, by the writing of others" (p. 56). His advice has since been followed by researchers who have not only asked writers to reflect on these questions, but have devised more sophisticated means to observe and/or measure some of them.

Emig (1967) stated: "For far too long, for far too many of us, the teaching of composition has been solely product-centered," contrasting this state of affairs to the teaching of mathematics and science in which "instructors are quite as interested in the routes students take to a solution as in their identifications of the solutions themselves." She continued, "If teaching is intervention, the primal question in teaching composition is, of course, 'In what kinds of intervention should we engage?'" (p. 128). Research into the processes by which writers compose is needed before decisions on how or if to intervene can be made. In 1983, Clark et al. believed this research was still needed. They stated: "Written literacy is an acknowledged and valued outcome of



schooling in our society, yet it has been lamented that writing is the most neglected expressive mode in both research and teaching" (p. 237).

Perl (1979) cited Cooper and Odell's (1978) Research on composing: Points of departure, which considered issues and questions related to composing investigations, as signalling "a shift in emphasis" in this research. Perl continued: "Alongside the traditional, large scale experimental studies, there is now widespread recognition of the need for works of a more modest, probing nature, works that attempt to elucidate basic processes" (p. 317).

There has also been concern expressed about the lack of theory to facilitate an understanding of composing and to guide composing research. King (1978) expressed just such a concern on behalf of an international group of researchers. She noted a shift from pedagogical questions to more basic research since Braddock's analysis of the research fifteen years before. But the continuing lack of investigation of both the composing process and the context of writing were of special concern to King's group (p. 193).

In relative terms, King noted greater progress in research on the composing process than on context variables such as the role of teachers, or the home, or literature in influencing children's writing. In process research she cited significant work by Emig, 1971; Graves, 1973; Britton et al., 1975; and Cooper and Odell, 1978. In large part this

work centered on student writers and school-related writing tasks. Although there have been various descriptions of the composing process, King noted that "a great deal of study of the detailed behaviors of writers in action" needs to be carried out before it is possible to delineate which aspects of the writing process are constant across different tasks (p. 198). King suggested studies of "what writers say about their own processes" as one of ten needed types of studies on the writing process (p. 200).

Hayes and Flower (1980, 1983) and Flower and Hayes (1980a, 1980b, 1981a, 1981b) constructed a cognitive-process paradigm for writing. They utilized thinking-aloud protocols in an effort to tap the thought processes that underlie writers' observable behaviors. Their cognitive-process theory explained composing in terms of these inferred thought processes. Flower and Hayes did not believe their theory to be in final form; instead they called it a "working hypothesis" and "a spring board for further research" (1981a, p. 366).

Concern over the absence of a well established model for composing is ongoing. Gebhardt (1982) noted the confusion that exists in the field because of the abundance of partial and conflicting theoretical frameworks. Then too, Mosenthal (1983) stated that much composing research has been conducted "in the absence of any leading paradigms of writing" (p. 26), while Bereiter and Scardamalia (1983) remarked that there are "no magic keys" (p. 3) to an understanding of composing.

research.

The literature reviewed above shows that there has been a continuing call for more study of composing. This investigation is proposed in response to that call with a view to extending the study of basic composing processes beyond student writers and school-related writing tasks.

### Scope and Limitations

This investigation took the form of a case study of the composing processes of an established writer. A case study affords access to qualitative data that is often inaccessible through other approaches. The approach chosen was well suited to fulfilling both the general intention of the investigation which was to add to basic knowledge about composing and the specific task undertaken, which was to observe and study composing-in-process.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

The review of literature is divided into two sections. The first section reviews research into the composing process while the second section reviews the nature of the composing process. Each contributed to an understanding of the composing process from a different perspective.

Research specific to the composing process afforded insight into the methods researchers have developed to study composing and the theoretical concepts they have proposed on the basis of their findings. Part of the purpose of this thesis was to establish a theoretical framework for understanding composing. Much of this framework must grow out of generalizations from research. Therefore, a critical analysis of the procedures and findings of studies closely related to this one was carried out to establish what generalizations could be drawn with validity.

#### Research into the Composing Process

Before the seventies there was virtually no systematic research that observed and described the composing processes of writers. Selected studies carried out since that time were reviewed in depth since the scope of their inquiry, methods of procedure and validity of their findings all had bearing on the perceived need for this study and the

theoretical framework that currently exists.

To facilitate the review, the studies have been organized under the following headings: (a) The First Study and Replication, (b) The Composing Processes of Young Children, (c) The Composing of Skilled and Unskilled Writers, (d) Purpose and Planning in the Composing Process and (e) The Composing of Adults in Work Settings.

### The First Study and Replication

In the first study of its kind, Emig (1971) studied the composing of eight twelfth grade students. Over four sessions, she questioned the students about their writing histories, assigned them writing tasks, noted the students' actions as they wrote and employed a procedure entitled "composing aloud". Composing aloud was an attempt to externalize internal composing behaviors by having students verbalize their thoughts, strategies and actions as they proceeded to write.

Building upon the work of Britton et al. (1975), Emig accepted that all student writing originates from an expressive impulse that branches into two major modes. These she labelled as reflexive and extensive (Emig, pp. 36-37). The reflexive mode is primarily in the affective domain, which focusses on the writer's thoughts and feelings. It is characterized by a personal, exploratory style, and is usually intended for the writer herself or a trusted friend.

The extensive mode, in the cognitive domain, is characterized by an assured, impersonal or reportorial style and is intended to convey a message to someone other than the writer (usually a teacher). Examination of the compositions students completed for the study and analyses of their writing histories convinced Emig that reflexive writing was self-sponsored while extensive writing was school-sponsored. Significantly, Emig found that each of these modes was characterized by composing processes of different lengths and with different clusterings of components (pp. 3-4).

Analysis of her subjects' composing aloud confirmed Emig's earlier impressions (1967) about the alinearity of the composing process. She wrote:

The composing does not occur as a left to right solid, uninterrupted activity with an even pace. Rather there are recursive, as well as anticipatory features, and there are interstices, pauses involving hesitation phenomena of various lengths and sorts that give their composing aloud a certain - perhaps a characteristic - tempo (1971, p. 84).

From her analysis Emig derived ten dimensions on which to study the composing process. She determined that the most important of these in influencing the nature of the composing process was the nature of the stimulus, that is, whether the writing was self- or school-sponsored. School-sponsored writing was a "limited and limiting experience for students" (p. 97). Such writing was exclusively in the extensive mode; it was other-centered and other-directed with little focus on the self-edifying aspect of writing that Smith (1982), among

others, has written about.

Self-sponsored writing generally involved a longer process. More time in the "prewriting" activity accounted for much of this increase. In self-sponsored writing starting and stopping were dictated by the piece whereas in school-sponsored writing they were dictated by the composing context, the classroom. Emig noted more contemplation of the product and more reformulation in self-sponsored writing as well as a "committed and exploratory engagement with the field of discourse" (p. 91). These characteristics were absent from school-sponsored writing which was often hastily written, not voluntarily revised and often detached and reportorial. Emig was highly critical of the teaching of writing in the schools, believing it out of touch with the practices of established writers and the elements of composing she observed in her subjects.

Emig's study was valuable in setting a new direction for writing research; in essence she established composing (in contrast to composition) as a research subject. The case study approach was shown to be a valid and rich method of amassing knowledge about students' perceptions of writing and about what they actually do when they compose. The development of composing aloud as a type of thinking-aloud protocol was an imaginative response to the difficulty of observing the inner processes of composing. Although imperfect, it has proved to be a valuable research tool in

composing research.

Mischel's (1974) case study of a seventeen-year-old writer also raised questions about the efficacy of writing instruction. The subject was characterized as "thoughtful, articulate and logical. . .intellectually and developmentally far ahead of the average twelfth grader" but the only statement that might shed direct light on perceptions of his writing ability was that "his greatest assets do not show on paper" (p. 304).

Mischel listened to the student compose aloud in response to broadly defined writing tasks, examined his written work and interviewed him about the observed composing, his ideas about writing and his school experiences. This study, including the dimensions of the composing process chosen for observation, was modelled on Emig's (1971) study of twelfth graders.

Like Emig, Mischel noted that the student spent little time deciding on a subject regardless of the task. Although the amount of time spent planning what to say varied with the nature of the task, all planning was in the student's head and, except for one lengthy task in which it was ongoing, planning took place before the student started to write so that it was not a recursive element in the process. There was evidence of rereading, reflection and revision during writing, sometimes in one interval about half-way through a piece, but more often at the end. There was no extensive correcting or large-scale rewriting.



The procedure of composing aloud was found to provide insight into the student's composing process although it was limited in early sessions perhaps because of the "inexperience" (p. 307) of both researcher and subject. Composing aloud did show the reasons for many of the student's pauses and his decisions at the word and paragraph level. However, the procedure did not afford much insight into his actual structuring of sentences, for he verbalized little of his reasons for adding a word here, or deleting another word there" (p. 307).

This student attached little value to writing and Mischel asked whether this might be attributable to his writing instruction. Mischel quoted Moffet (1968): "Both reading and writing are at once shallow mechanical activities and deep operations of mind and spirit" (p. 313). Mischel concluded that this student's writing instruction had dealt with the more "shallow, mechanical activities", neglecting to help the student develop writing for introspection and personal growth. In view of his teacher's high opinion of his intellect one can speculate that composing could be a very powerful cognitive tool for him, could he only come to see its possibilities.

Mischel's study is functional in that it basically confirmed Emig's earlier findings about the characteristics of students' composing processes and the value of composing aloud as a research method.

### The Composing Processes of Young Children

Graves (1973) described writing as "an organic process that frustrates approaches to explain its operation" (pp. 14-15). In an effort to generate instructional and research hypotheses to investigate children's writing, he studied the writing processes of a group of seven-year-old children in learning environments classified as formal or informal. The classifications were dependent on the amount of choice children had in determining their learning activities and the extent to which they were able to function without specific directions from the teacher. Graves gathered data through analysis of samples of writing, observation of children writing in their classroom and case study procedure.

Because writing is a complex process, Graves believed a case study approach was well suited to its study. He noted:

There is more to a writing episode than the child's act of composing and writing down words. . .to understand even a single writing episode a researcher must broadly reconnoiter territory before, during and following the composing of the child (p. 59).

His own research design, which incorporated both large groups and a case study, Graves believed ideal. His findings led him to conclude that "many variables, most of them unknown, contribute to the writing process" at any point in a writing episode. His study also made him see the writing process as highly idiosyncratic. He maintained that "children write

for unique reasons, employ highly individual coping strategies, and view writing in ways peculiar to their own person" (p. 217).

- Graves was able to draw some generalizations, however, about the children's writing. Analysis of the observed writing episodes on the basis of developmental factors such as use of language and problem solving behaviors led Graves to classify writers as (a) reflective (high development), or (b) reactive (low development). He found that the writing developmental level of the child "transcends the importance of environment, materials and methodologies in influence on children's writing" (p. 211). Still, the degree of formality in the environment affected writing in that children wrote more often and to greater length on a wider range of subjects when they had freedom to choose more of their activities. Graves concluded that this showed that children do not need motivation or supervision in order to write. Regardless of environment, girls wrote longer products than boys, but boys did more unassigned writing and wrote more on themes beyond home and school (which were usually the themes of assigned writing) than girls.

Since 1973, Graves (1983) has continued to study the composing processes of children and to develop teaching approaches that he believes foster children's development as writers. Emig (1971) identified the nature of the task (self- or school-sponsored) as the most important factor in

determining the nature of the composing process. The essence of Graves' approach has been to transform all writing in school settings into "self-sponsored writing." This means that students exercise choice at all stages, including the choice of whether or not to write, and assume responsibility for their writing. Graves has recognized drawing as an integral part of many children's composing and has promoted the acceptance of invented spelling to free children to compose independently. He has addressed Emig's question of "when and how to intervene" in the composing process by promoting the use of short, individual pupil-teacher conferences in which the teacher's role is to facilitate the purposes the child has set for the writing, to help the child to shape the writing through successive drafts rather than to take control away from the child. Through this process, Graves has maintained that children write more, gain insight into what good writing involves and the process through which it may be produced, become engaged with their writing and rework and rewrite it willingly. In essence, he has maintained that their composing assumes many of the characteristics Emig (1971) attributed to self-sponsored writing but within a school setting.

Lamme and Childers (1983) videotaped three preschool children in group sessions held over a six month period in order to study their composing processes. The children composed with an adult who presented a topic, took dictation and provided help when asked. There were two types of topics

which involved writing for different audiences. The majority were personal communications to an immediate audience while the rest were making books for an unknown audience. Categories for analysis of the data were derived from the data itself rather than through the use of a predetermined analytical procedure.

A number of the findings contribute to an understanding of composing. It was noted that the children's composing "included a variety of scribbling, drawing and writing behaviors" (p. 41) but there were "dramatic" (p. 45) differences in their composing processes depending on the immediacy of the audience for their product. These children appeared to have a sense of audience that was reflected in their actions and in the way they talked about them. Composing for an immediate audience was characterized as more sophisticated, involving more word production and less scribbling than composing for an unknown audience. The children's composing did not occur in prewriting, writing and revising phases. While readers were left to infer that the children showed no clear composing patterns during the book-making sessions, Lamme and Childers were more precise about what happened during personal communication sessions. They stated that the children "dictated, then wrote, then drew, then shared their completed product" (p. 44) during these sessions, planning and revising as they wrote and drew. They concluded that personal communications to "numerous real

audiences" (p. 47), because of their similarity to talk, were a good way to initiate children into composing.

Three other findings of Lamme and Childers contribute to an understanding of how young children compose and hold implications for learning how to compose. First, drawing was an important part of the children's composing, just as Graves (1973) had found it to be with primary-school children. Second, the study showed that composing was a very social activity in which the children talked, helped each other and read each other's writing. In contrast to the popular adult view of composing as a silent, solitary activity defined in terms of word production, these young children mustered a number of their own creative resources, as well as those of their peers, for composing. This finding points to the potential power of a group process that allows for the contribution of speech, reading and drawing to writing and may show writing as a facilitative factor in the development of reading. Third, the authors observed that the drawing and writing of all the children showed signs of development over the six month term of the study although there had been no direct teaching. This may indicate two similarities between speaking and writing. First, both will develop in young children without direct instruction provided there is a conducive setting (also Clay, 1975) and second, both develop through practice.

### The Composing of Skilled and Unskilled Writers

Stallard (1974) set out to determine the behaviors and cognitive processes that characterize the composing processes of "good" senior high school writers. He observed 30 students, 15 "good" writers (those who achieved the highest scores on the STEP Essay Writing Test) and 15 control writers (who were randomly selected from the remaining students) in response to a set task. Immediately after they finished writing, Stallard interviewed them "about the things they remembered consciously attending to and feeling concerned about while writing" (p. 209).

There were significant differences between the groups in four areas. First, good writers more often expressed concern for having a clear purpose for their writing. Second, good writers spent more time in both prewriting and writing activities and were slower writers, producing fewer words per minute. Third, good writers more often read what they had already written and reflected upon it at intervals during the writing process (accounting for the longer time they spent in process). Fourth, the revisions made by good writers were greater in number and differed in kind from those of the control group. While there were no differences in spelling, punctuation or syntactic revisions between the two groups, there were significant differences in single and multiple word changes and paragraph changes. Stallard's conclusions must be treated with caution since he did not consider

possible interrelationships among the variables studied.

Stallard concluded that good writers "put more effort into their product than writers selected at random" (p. 217), as evidenced in their greater investment of time, attention to communication problems, and repeated reflection on their writing while it was in progress. He reasoned that this repeated behavior reflected the writer's need to note "what is evolving on the page, to experience it for himself. Such experience might influence the writer's perspective of the message and exert some control over what comes next" (p. 218). For this reason, Stallard supported the idea that writing is itself a perceptual and conceptual act.

Based upon what has been learned about the writing process in the last decade it is clear that there are several aspects of Stallard's study that could perhaps have been improved without deviating from his intended purpose. First, the provision of a theoretical justification for the composing behaviors chosen for observation would have added weight to Stallard's procedures and conclusions. Second, a thinking-aloud protocol could have added a valuable, concurrent, cognitive element to his observations. Finally, Stallard's definition of good writers, based on part of a standardized test, was rather narrow. One is left to wonder whether an alternate definition of a good writer, derived from a broader measure than performance on one test, might have resulted in a sample made up of different students who



would have exhibited a different set of composing behaviors.

On a positive note, Stallard recognized the complexity of composing and avoided the simplistic suggestion that the differences he found in writing behaviors would be eliminated by direct instruction. Instead, he maintained that the behaviors were indicative of the writers' cognitive processes and concerns. For future research he raised questions as to the function of contemplation and conceptualization in composing and their place with respect to other elements of the process.

Perl (1979) analyzed the composing processes of five unskilled or "basic" college writers. During five, 90 minute sessions with each student Perl collected three kinds of data: written products, tapes of students' composing aloud and interviews about students' perceptions and memories of writing (p. 318). From the written products and audio tapes she devised a system for coding the students' behaviors and charting them on a time line. Perl divided the composing process into discrete sequences - prewriting, writing and editing - and devised a system of three major categories of behaviors - talking, writing and reading - which were further broken down into 16 subcategories. In this way Perl produced "composing style sheets" which indicated how students wrote by showing "the sequences of behavior that occur from the beginning of the process to the end" (p. 322).

A major finding was that all of the students displayed consistent composing processes. Perl stated:

This consistency suggests a much greater internalization of process than has ever before been suspected. Since the written products of basic writers often look arbitrary, observers commonly assume that the students' approach is also arbitrary. . . [but] very little appears random in how they write. The students observed had stable composing processes which they used whenever they were presented with a writing task. (p. 328)

Perl formulated two hypotheses about the general nature of composing on the basis of her findings from unskilled writers. First: "Composing does not occur in a straightforward, linear fashion. The process is one of accumulating discrete bits down on the paper and then working from these bits to reflect upon, structure, and then further develop what one means to say" (p. 331). Perl characterized the process as one of "retrospective structuring. . . the going back to the sense of one's meaning in order to go forward and discover more of what one has to say." Second: "Composing always involves some measure of both construction and discovery." Composing is a process of "constructing meaning," of bringing the implicit sense of what the writer wants to say into an explicit form. Composing is also a process of discovery in that "writers know more fully what they mean only after having written it. In this way the explicit written form serves as a window on the implicit sense with which we began" (p. 331).

Perl blamed poor products on editing that intruded upon students' thinking early in the composing process and was

dominated by concerns for correctness. She concluded it was ineffective for teachers to see unskilled writers either as simply needing correction of what was "wrong" in their products or as rank beginners who knew nothing about writing. While the first attitude might cause students to look upon writing as "a 'cosmetic' process where concern for correctness supercedes development of ideas" (p. 334), the second "ignores the highly elaborated, deeply embedded processes the students bring with them" (p. 335).

Perl noted that her hypotheses needed to be tested in studies with different types of writers. In fact, both have received considerable support. It will become apparent in this review that numerous researchers have used concepts similar to "retrospective structuring" to describe recursive elements in the composing process, while the dual functions of "construction" and "discovery" have been expressed by many writers in describing their own writing processes and in generalizing from research on composing.

Pianko (1979) described the composing processes of 17 freshmen college writers whom she divided into groups on the basis of age, sex and writing status (traditional - remedial). On the basis of one videotaped observation of each student composing and a follow-up interview to ask the students about the "causes and meaning" (p. 7) of some of their observed behaviors, Pianko discerned seven dimensions in their composing processes: (a) prewriting, (b) planning, (c) composing (consisting of writing, pausing and

rescanning), (d) rereading of the entire script, (e) stopping, (f) contemplating the finished product, (g) handing in the product. Based upon these dimensions and information from additional interviews about the students' past writing experiences, she identified 22 variables with which to study the students' writing processes.

Many of Pianko's findings were based on statistical analysis. These must be treated cautiously due to the small sample size and large number of dependent variables. However, some of her findings were noteworthy in that they correspond to findings in related research or suggest interesting areas to be investigated. All Pianko's students, for example, reported they planned during, not before, composing. This is similar to what Emig (1971) found but is somewhat in contrast to Mischel's (1974) findings. Like Perl (1979), Pianko found unskilled writers to have discernible composing processes, but in contrasting these processes to those of better writers she found them to be "of much shorter duration and of poorer quality" (p. 20). Pianko continued, "What basically separates the two groups of writers is the ability to reflect on what is being written." She based this conclusion on the observation that remedial writers did not rescan as often "to take stock of what they have written to aid in the next formulation" (p. 20) nor did they pause as often. In addition, what the students did during pauses seemed of significance. Pianko observed that "traditional

students were pausing to plan what to write next, rescanning to see if their plans fit, and then pausing again to reformulate", whereas remedial students "were glancing around the room or staring into mid-air, sometimes as a diversion, and at other times hoping. . . something else to say next would suddenly appear to them. They usually did not look to their own text for the answers" (p. 14).

So while Pianko's study reaffirmed the presence of recursion and retrospective structuring in the composing of all students, she found less in the process of poorer writers. This was seen to be detrimental to their writing since they could not "get a holistic sense of the evolution of their papers" (p. 14).

Pianko concluded that there were real differences in the composing processes of traditional and remedial writers, but one must be cautious of this conclusion, again because of the small sample size and large number of dependent variables she utilized in the analysis on which she based her findings.

#### Purpose and Planning in the Composing Process

In a more specialized examination of composing, Flower and Hayes (1980a) set out to "explore the problem-solving or discovery process that produces new insights and new ideas" (p. 22). They used thinking-aloud protocols with expert and novice writers to see how they dealt with "the most crucial part of that process - the act of finding or defining the

problem to be 'solved' in their writing task" (p. 22).

They found that writers defined their rhetorical problem in terms of (1) the rhetorical situation (audience and assignment) and (2) the set of goals the writer creates. Four kinds of goals were observed from the protocols: (a) goals affecting the reader, (b) goals creating a voice, (c) goals building a meaning and (d) goals producing a formal text. The authors pointed to the "happy" (p. 25) parallel between communication theory and the writer's observed practice in terms of these goals.

It was possible to discriminate between the way expert and novice writers defined problems and worked out solutions. Expert writers spent more time than the novice "in thinking about and commenting on the rhetorical problem, as opposed to spending that time generating text" (p. 29). This observation was in agreement with studies such as those of Stallard (1974) and Planko (1979) which found skilled writers produced fewer words per minute than unskilled writers because the skilled writers rescanned or reformulated the text to a greater extent. At the same time Flower and Hayes were able to provide a more detailed explanation for these observations. The authors concluded that expert writers were essentially solving a different problem in their writing task than the novice writers. This was true in the sense that the experts represented the rhetorical problem in more breadth and depth, continuing "to develop their image of the reader,

the situation and their own goals with increasing detail and specificity" (p. 31), while the novices responded mainly to problems they represented in features and conventions of the written text and often maintained throughout composing the "flat, undeveloped, conventional representation of the problem with which they started" (p. 30).

The authors suggested that problem-finding is a cognitive skill which can lead to creativity. In their opinion, the ability to find and explore a rhetorical problem is teachable. They stated:

Unlike a metaphoric "discovery", problem-finding is not a totally mysterious or magical act. Writers discover what they want to do by insistently, energetically exploring the entire problem before them and building for themselves a unique image of the problem they want to solve. (p. 31)\*

Since readers are not told the size of the authors' sample, it is difficult to know whether generalizations can be made. Nevertheless, in terms of basic knowledge, this study did help illuminate elements of the composing process that differ in expert and novice writers and presumably contribute to good writing as opposed to poor writing. This research concerned an element of planning in the composing process, contributing to what has become a fruitful direction for composing research.

Matsumashi (1981) studied how purpose for writing influenced writers' planning during composing. Utilizing videotapes, she analyzed pauses in the writing (the

"straight-away production of discourse, excluding revisions" (p. 122)) of four skilled high school writers, writing in three modes of discourse.

Matsubashi envisaged the writing process as "a cognitive activity best explained with concepts of planning and decision making" (p. 114). In her view it was "highly complex. . . involving an entire hierarchy of decisions at all levels in the production of discourse" (p. 128). She assumed that valid inferences about writers' planning and decision-making could be based upon the length and location of their pauses in the production of the text. Matsubashi also conducted post-writing interviews with the students but did not include them in her report. Such a report or composing-aloud protocols could have added weight to the inferred nature and purpose of the pauses.

Unlike many researchers who have conducted observational studies of composing processes, Matsubashi provided her subjects with a selection of topics two days before each writing session and encouraged them to "rehearse and plan" (p. 117) before the taped writing session. This may limit comparisons to other studies which did not provide topics ahead of time, thereby eliminating any chance of students planning ahead. But because Matsubashi allowed students the potential to experience the prolonged thinking, planning and pre-writing engagement that Emig and others have associated only with self-sponsored writing, her results may be more applicable to this study which investigates "the self-



sponsored composing of an adult.

Matsuhashi found some evidence at several levels of text production to support the idea that writers think and plan in different ways to produce writing which involves different levels of abstraction, although her small sample of writers (four) and their subjective means of selection limit the generalizability of her results. The author noted that her research was "basic and exploratory", directed to finding out "how the mind works to compose written discourse" (p. 131). The study could perhaps have benefitted from the use of thinking-aloud protocols and from the use of the interviews with students to probe and report on their pauses. Nonetheless, the purpose and methodology reflect the advances that have been made in composing research beyond tentative exploration of the composing processes of students in toto.

Building upon Matsuhashi's research into planning, Flower and Hayes (1981b) utilized thinking-aloud protocols to find out "what writers are actually thinking" (p. 233) during the long "pregnant" pauses in their composing. Their aim was to understand the nature of the planning that researchers have assumed writers do when they pause.

Through the use of protocols, the authors established that the composing process of a writer can be broken down reliably into "units of concentration" or "composing episodes" (p. 235) which are apparent from patterns in the writer's verbalized thought. They stated:

Episodes are not like paragraphs of a text, organized around a central topic which a casual reader can easily follow. Instead, episodes seem to be organized around goals, so that one episode could include various topics and various processes from planning to editing - all tied together by their relevance to the writer's current plan or goal. (p. 238)

Episode boundaries were considered important points for planning, first, because they were times at which writers broke concentration and changed focus (p. 238) and second, because they seemed to be "the source" (p. 238) of many of the longer pauses noted in earlier research during which it was assumed planning took place. Although Flower and Hayes attested to the importance of both (a) linear, sentence-level, text-based planning and (b) hierarchical, goal-related planning in composing, they wanted to see which was a better predictor of these major boundaries in their writers' composing processes. Goal-related activity was found to be a stronger predictor of episode boundaries than either paragraphs or topics in the text, suggesting that broad content and process goals take up the long pauses in composing much more than "decisions of 'what to say next'" (p. 241).

No information was provided on the characteristics of the sample nor the setting or conditions in which the research took place. However, from the one protocol sampled in the text of the article, it appears to be the sample utilized in Flower and Hayes (1980a).

Generalizing from these results to other writers is ruled out because of the small size of the sample. However, the study did provide insight into the nature of planning in composing which is rarely expressed in a text but which nevertheless gives the text its structure. It also provided a tentative indication of a difference between the composing process of good and poor writers. The authors cited their own earlier work as well as that of Perl (1979) and Shaughnessy (1977) to suggest that "exclusive dependence on sentence-level planning" (p. 231) is one of the marks of a poor writer. They noted some evidence from this study to suggest that some of the "crucial" differences between good and poor writers is "in the kind and quality of goals writers give themselves and in their ability to use this planning to guide their own composing process" (p. 243).

#### The Composing of Adults in Work Settings

The studies reviewed so far have investigated composing in educational settings only. Odell and Goswami (1982) and Odell, Goswami and Herrington (1983) conducted research into the writing of adults in work settings and developed the methodology of the "discourse-based interview" to broaden the framework of composing inquiry and research procedures. Of particular interest to this researcher was understanding the nature and depth of the "tacit personal knowledge" that these writers bring to their writing tasks (Odell et al., 1983, p.

222).

The element of most import to this study is the means the authors developed to uncover some of the writers' composing decisions, which in turn reflected upon their composing process. The authors posed alternatives to the workers for substantive and stylistic choices they identified in the workers' writing on the job and asked the reasons for their preferences. These discourse-based interviews, which had their foundation in the choices identified in the writers' texts, were found to yield a substantial amount of information about the rhetorical and occupational context for the text. Most of the choices reflected a broad concern "for elements of the rhetorical context: speaker, subject and audience" (p. 211). Odell et al. (1983) compared the efficiency of composing aloud and the discourse-based interview as research procedures and found them complementary, recommending that both be included in the researcher's repertoire.

Aldrich (1982) conducted a survey of 254 top and mid-level managers in the American military, Federal civil service and firms consulting with government to gather "information about the problems of adult writers" (p. 298). Because she did not provide sample questions, it is impossible to judge the validity of her conclusion that the factors that interfere with adult writing are "little or no advance planning of writing tasks, inability to organize content, and fear and avoidance of writing" (p. 298).

In spite of shortcomings inherent in survey research, Aldrich's findings can be useful in highlighting aspects of the composing process to be investigated in more detail with other adults. Questions such as the following are of interest in the context of this study: How much and what type of planning does the writer do? Are there perceptible effects of the planning apparent in other dimensions of the composing process or in the text produced? In what ways does the writer organize content? Is organization an internal, tacit process or does it have external, explicit elements? What are the writer's attitudes toward writing? Does she fear "blocking" or "drying up"? Does she postpone getting started? Once started, are there perceptible effects of her attitude apparent in the way she works?

#### Summary of Research into the Composing Process

Now that selected studies of the composing process have been reviewed, a brief summary of their characteristics and findings is provided.

Research on the composing process has been carried out only in the last fifteen years, usually with students in school settings. Emphasis has been upon collecting basic information, and a case study approach has been accepted as an appropriate method of research. In terms of procedures, researchers have accepted the principle that analytical categories should arise from the data collected and not be

imposed a priori, from outside, in order that a holistic view of composing might be achieved. Composing aloud or thinking aloud, has proved useful in externalizing some of the inner thought processes of composing. Although researchers have developed several techniques for recording the behaviors of writers during a writing episode, basically they all entail recording verbal and nonverbal behavior. The discourse-based interview, which draws upon choices that can be identified within a text, has been shown to illuminate composing decisions that may not be apparent through thinking-aloud protocols. These protocols and discourse-based interviews can be considered complementary procedures, adding power to the design when used in tandem.

Composing has been found to be a process with many recursive elements. The behaviors observed during a writing episode have often been assigned to three general stages of composing which may be called planning, writing and revising (although researchers have assigned them various names). Recursion has been noted within and among these stages.

In recent research, the planning that takes place during pauses in writing has been selected for scrutiny. Some researchers have tried to differentiate between the composing processes of students whom they have classified in various ways, but except for studies by Flower and Hayes, this has been largely unsuccessful. Emig's (1971) distinction of composing processes in terms of self- and school-sponsored

writing remains the main distinction of composing in terms of task. However, Odell and Goswami (1982) and Odell et al. (1983) have studied elements of the composing process of adults in work settings on a number of writing tasks and Matsushashi (1981) studied planning in relation to the level of abstraction in the writing task. With the exception of Graves, there has been no direct observation of what could be termed self-sponsored writing.

At this juncture, it can be stated that composing studies are growing more numerous and sophisticated, but on the whole, composing research remains exploratory in nature and rather narrow in focus.

### The Nature of the Composing Process

This section of the literature review is concerned with the theoretical framework for composing within which this study was conceived. So much has been written about the nature of the composing process that its importance and inherent interest to people are self-evident. However, the ideas put forth are bewildering in number and contradictory in nature. In addition, most of them do not provide a conception of composing that is helpful in research. By way of illustration, a few examples of the common perceptions of composing are given below.

Composing has been seen as a humanistic activity that fosters intellectual and emotional growth and as a social

activity that allows communication across time and space. It is viewed as a creative activity, mysterious in its origins and development and as a straightforward practical activity essential to educational and professional success. Depending upon the writer, composing is a set of skills, a series of stages, a number of thought processes, or an interaction among writer, task and various elements in the writing environment. In nature, its components are linear, a linear, recursive, embedded or hierarchically arranged. Composing is a natural, developmental activity; composing must be systematically taught. In the minds of some, a writer strives to represent reality; to others a writer creates reality. To the former, composing is learning rules and manipulating words to correspond to the "real" world, while to the latter, composing is a way of thinking and creating meaning in the world by structuring and organizing thought.

Numerous and varied as these ideas are, none provides a sufficient answer to the question: What is the nature of the composing process? In an effort to structure an answer to this question, this section traces the transition from a stage model of the composing process to a cognitive-process model. The cognitive-process model is not complete or universally accepted. Indeed there are still many references to the pre-theoretical nature of composing research (for example, Matsubashi, 1981; Mosenthal, 1983) and to the crude nature of the models that exist (Hayes and Flower, 1983).



### Stage Model

From the review of literature and from knowledge of composition texts and theoretical papers, it seems clear that the stage model was the accepted way of looking at composing before systematic research on composing processes was implemented and, in fact, at the time that the early observational studies of students' composing processes were carried out. Essentially, the stage model maintains that composing takes place in three discrete stages in a linear arrangement. Critics of the model have contended that it presents an artificial picture of composing (Sommers, 1979) and reflects the development of a product not the process which produced it (see Figure 1).

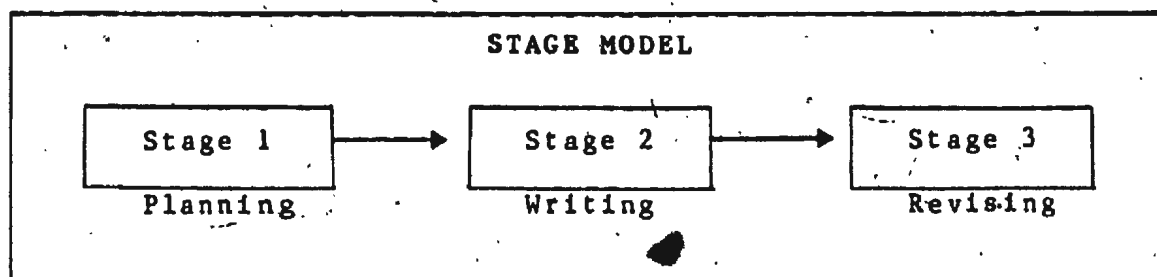


Figure 1. The stage model of composing.

Emig (1967) noted the prevalence of this concept of writing. Most descriptions available at the time she wrote presented writing as a process "inexorably" made up of three stages: planning, writing and revising which occur

in a lockstep, non recursive, left to right sequence. In other words one always plans, then

writes, then revises with no backsliding, no returning to a previous "stage". The straight line is the metaphor implied or stated throughout these descriptions. . .one starts at the beginning of the process and moves without confusion or diversion to the end. (p. 131)

Rohman's (1965) "pre-writing /writing/ re-writing" (p. 106) model of the composing process exemplifies the perception that one stage of the process must be completed before another can successfully begin. Concerned with the need for good preparation for writing, Rohman stressed the importance of pre-writing activities that put writers in touch with their experience. He noted: "(a) Thinking must be distinguished from writing. (b) In terms of cause and effect, thinking precedes writing. (c) Good thinking can produce good writing; and, conversely, without good thinking, good writing is impossible" (p. 106).

Similarly, Britton et al. (1975) presented a model of writing in three stages which they called conception, incubation, production (pp. 19-49), while King (1978), writing for an international group of researchers, saw the process consisting of pre-writing (preparation), articulation (production of text) and post-writing (verification). The inadequacy of the stage model in providing a true picture of the composing process was illustrated in King's description of post-writing. She wrote, "What happens to the writing after closure in stage three, post-writing, covers the valuation and editing that often occur as a piece of writing is revised and shaped to fulfill the author's purpose" (p.

199). True to the concept of finite stages, post-writing occurs "after closure." However, the researchers could not really accept this notion for King added, "By placing evaluation in a third stage, we do not mean to imply that valuing comes only at the conclusion of writing. Instead we assume that valuing and judging operate from the very beginning in selecting a topic, organizing ideas and information, and in deciding how to express these ideas in language" (p. 199).

One can see that the stage model is a poor fit for the process even in the eyes of those who used it. They did not have the confidence in the model that text-book writers such as Warringer (quoted by Emig, 1971, p. 21) showed twenty years before, when he wrote:

These three basic stages of composition [Subject, Preparation, Writing] are almost always the same for any forms of writing. Each of the three stages proceeds according to certain definite steps, listed below in order:

- |                                      |                |
|--------------------------------------|----------------|
| a. Choosing and limiting the subject | 1. Subject     |
| b. Assembling materials              |                |
| c. Organizing materials              | 2. Preparation |
| d. Outlining                         |                |
| e. Writing the first draft           |                |
| f. Revising                          | 3. Writing     |
| g. Writing the final draft           |                |

For King's group, the stage model may have been the best they could think of at the time, but research was proving the model inadequate. The next section will show that in fact many writers had moved beyond the stage model.

### Transition Phase

It would seem that the initial movement away from a stage model of composing coincided with the initiation of research into the composing process. Once researchers became dissatisfied with pronouncements about the process of composing that were based entirely on the study of compositions, they also became dissatisfied with a strict adherence to the stage model which reflected the products of composing but not the process by which they were produced. The research of Janet Emig provides an illustration.

Emig (1967) reacted against the conception of composing as a fixed three stage process because she believed this conception of writing ignored the realities of the writing process as expressed by many authors. She envisaged a process that could be recursive, "a loop rather than a linear affair", a process whose length and nature could be affected by the following five variables: sophistication of the students' skills, their temperaments, ego-strength, nature of the modes in which they wrote and the nature and timing of interventions in the writing process (pp. 131, 135). Although her study in 1971 researched the composing process and allowed for recursion, interaction and layering of its elements, the next paragraphs will show that her research was in fact conceived in terms of and based upon a concept of writing that proceeds in a series of discrete stages.

Emig (1971) derived her concept of composing from

writing on the creative process. She noted Graham Wallas' four stages of creative thought: preparation, incubation, illumination and verification (p. 17) and stated:

Many students of creativity as well as creators across modes - painting, composing - share this view of the creative process. Writing, for example, which can be regarded as a species of creative behavior, is often described in quite similar terms. (p. 17).

Emig proceeded on the premise "that there are elements, moments, and stages within the composing process which can be distinguished and characterized in some detail" (p. 33). The ten categories she derived from analysis of her case studies included a mixture of cognitive processes (for example, planning), observable behaviors (for example, stopping) contextual factors (for example, seeming teacher influence) and stages related to the progress of a written product (pre-writing).

This represented the beginning of a transition from a conception of composing couched strictly in terms of stages to a representation based upon observable behaviors and inferred processes. Emig (and the researchers who followed her) straddled both representations, so that much of her framework for composing was derived inductively from her findings, but some of it came a priori from the stage model. Thus Emig's evidence and personal knowledge of writing told her that composing is "laminated and recursive" (p. 33), that planning could recur throughout the process, yet she

maintained the stage model notion of a distinct pre-writing stage.

Perl (1979) moved composing research a step further away from the stage model when she set out to develop "a meaningful and replicable method for rendering the composing process as a sequence of observable and scorable behaviors" (p. 318). Although she discussed her case studies under the familiar terms of pre-writing, writing and editing, she utilized the two latter terms in the sense of behaviors, not stages, and in all three cases she emphasized the processes going on. Perl stressed the recursive nature of the composing she observed and pointed to sequences of planning - writing - clarifying - discarding - writing throughout the process.

Perl (1980) specified three types of recurring features in writing: (a) rereading bits of discourse significant to the writer in a semantic sense, (b) returning to review the notion of the topic, and (c) moving inward to the writer's "felt sense" - the "images, words, ideas, and vague fuzzy feelings that are anchored in the writer's body" and evoked by the topic (p. 365). Perl's notion of the composing process began with attending to what a topic, assigned or self-initiated, evokes; waiting for a felt sense to form; matching words to the felt sense; checking to see if the words correspond to intentions; going on if they match or waiting again for a felt sense to form if they do not (pp.

366-367). Thus she believed composing to be retrospective "in that it begins with what is already there, inchoately, and brings whatever is there forward by using language in structured form" (p. 367). At this point it can be seen that the description of composing has moved beyond stages to observed behaviors and inferences about the cognitive processes that underlie some of them.

Purely theoretical papers have shown a similar trend. For example, Lauer (1980, 1982) presented writing as a means of inquiry. In her view, the writing process extends from a writer's sense of dissonance through insight, "to development and revision of discourse and on to interpretation by the audience." Writing proceeds through "identifiable stages", some conscious, others unconscious, which are "neither mechanical nor totally linear, but often recursive and overlapping" (1980, p. 54). Lauer (1982) elaborated on the nature of the process of inquiry. Arising from a sense of dissonance, inquiry involves a conscious effort to articulate the "known unknown". This effort directs conscious and unconscious exploration which prepares for insight, and is followed by deliberate verification. The mix of stages, behaviors and inferred processes in complex interrelationships is apparent in Lauer's conceptualization.

The movement away from a linear concept of the composing process mirrors a movement away from a linear concept of language itself. Bruffee (1979) noted that before Chomsky's (1957) Syntactic structures, it was generally assumed that

language is "linear and continuous", a position which is compatible with a stage model of composing. In his view, "Chomsky's lasting contribution may be an implication inherent in his transformational grammar, the implication that language is non-linear and discontinuous" (p. 53). To Bruffee, this led to the principle that "what we say and the way we say it may be based in some way not only on what we have just said and what we said a few moments ago, but also on what we anticipate saying sometime later" (p. 54). He related this type of planning not so much to conscious forethought (as in a pre-writing stage) as to "an understanding at the threshold of awareness, a sense of the structure of the whole thing we intend to say" (p. 54). This is similar to the "known unknown" cited by Lauer (1982) and Gendlin's "felt sense" cited by Perl (1980).

Sommers' (1980) criticism of a stage model of composing arose from a slightly different concern. She believed the linear models go awry in that they are based on speech, which is irreversible. This concept, applied to writing, means that the important part of composing ends with enunciation or production, with revision reduced to "no more than an afterthought. . . . Revision, in Rohman's model, is simply the repetition of writing; or to pursue Britton's organic metaphor, revision is simply the further growth of what is already there, the 'preconceived' product" (p. 379). By way of contrast, Sommers believed, with Roland Barthes (in



Sommers, 1980), that the possibility of revision is the essential difference between speaking and writing. Revision, in the sense of recursive shaping, renders the linear model of composing inadequate and incorrect.

The debate about the linearity or alinearity of composing is rendered meaningless by adopting a cognitive-process model of composing because it accommodates both: (a) the linear planning-to-writing noted by Gebhardt (1982) and (b) the recursive and embedded arrangements noted by Perl (1979) and Sommers (1980).

#### Cognitive-Process Model

The cognitive-process model was developed by Hayes and Flower from generalizations based on the analysis of thinking-aloud protocols in their composing research. The theory was explained in articles by Hayes and Flower (1980, 1983) and Flower and Hayes (1981a). It was termed "provisional" (Hayes and Flower, 1980, p. 10), a "working hypothesis" and a "springboard for further research" (Flower and Hayes, 1981a, p. 366). An outline of the major elements of the theory is presented next.

The theory rests on four points:

1. The process of writing is best understood as a set of distinctive thinking processes which writers orchestrate or organize during the act of composing.
2. These processes have a hierarchical, highly embedded organization in which any given process can be embedded within any other.

3. The act of composing itself is a goal-directed thinking process, guided by the writer's own growing network of goals.
4. Writers create their own goals in two ways: by generating both high-level goals and supporting sub-goals which embody the writer's developing sense of purpose, and then, at times, by changing major goals or establishing new ones based on what has been learned in the act of writing. (Flower and Hayes, 1981a, p. 366)

This model describes the writing process within the context of the task environment and the writer's long-term memory. Flower and Hayes (1981a) provided a diagram of the structure of the cognitive-process model which shows continuous interaction between (a) the writing processes and the task environment and (b) the writing processes and the writer's long-term memory.

Task environment. The task environment includes everything outside the writer's skin that influences the performance of the task, "starting with the rhetorical problem or assignment and eventually including the growing text itself" (Flower and Hayes, 1981a, p. 369). Flower and Hayes (1980a) stated that a rhetorical problem is never a given. Instead "it is an elaborate construction which the writer creates in the act of composing" (p. 22). Because writers do not adopt a given problem but always define it for themselves, writing can be "utterly unpredictable" (p. 22). The text produced also forms an important part of the task environment, "Each word in the growing text determines and limits the choices of what can come next" (Flower and Hayes,

1981a, p. 371). In directing the composing process, the growing text is in competition with the writer's knowledge stored in long-term memory and the writer's plans for dealing with the rhetorical problem.

Long-term memory. The writer's long-term memory is the other element of the writing context. Analogous to Smith's (1982) "background knowledge", it is a store of knowledge either in the mind or in outside resources "about topic and audience," as well as knowledge of writing plans and problem representations" (Flower and Hayes, 1981a, p. 371). The authors pointed to two problems for the writer: (a) how to access useful information and (b) how to reorganize or adopt the information to fit the demands of the rhetorical problem as the writer has defined it (p. 371).

Writing processes. In the framework of this theory, writing consists of three main processes: planning, translating and reviewing. The relations among the processes, that is, the dynamics of writing are explained through the construct of the monitor. "The monitor functions as a writing strategist which determines when the writer moves from one process to the next" (Flower and Hayes, 1981a, p. 374). The movement is determined by the writer's goals and by individual writing habits or styles. Thus the monitor may function differently from writer to writer and task to task. The three main processes will be discussed in the following section.

Planning is a very broad activity that proceeds throughout composing and "includes the whole range of thinking activities that are required before we can put words on paper" (Hayes and Flower, 1983, p. 209). It is a process in which information is taken from the task environment and from long-term memory and used to set goals and to establish a writing plan to guide the production of a text that will meet those goals. The plan may be drawn in part from long-term memory or may be formed within the planning process (Hayes and Flower, 1980, p. 12). In this process, writers form an internal representation (not necessarily in the form of language) of the knowledge that will be used in writing (Flower and Hayes, 1981 a, p. 372).

The planning process consists of three sub-processes: generating, organizing and goal-setting. Generating refers to generating ideas. It includes "retrieving relevant information from long-term memory" (p. 372) which may be in the form of fragmentary thoughts, images or structured language. The function of the organizing process is "to select the most useful of the materials retrieved by the generating process and to organize them into a writing plan" (Hayes and Flower, 1980, p. 14). The purpose of organizing is to give structure to the writer's ideas. Organizing takes place at many levels within the composing process. Goal-setting may be procedural and/or substantive. Goals are created by the writer and are developed and refined throughout composing. Some goals may be drawn from long-term

memory but most are "generated, developed and revised by the same processes that generate and organize new ideas" (Flower and Hayes, 1981 a, p. 373).

Translating is the process of putting ideas, into written language. These ideas may have been represented in "a variety of symbol systems other than language" or "embodied in keywords and organized in a complex network of relationships" (p. 373). The act of translating the encoded representation of meaning to linear written language "can add enormous new constraints and often forces the writer to develop, clarify, and often revise that meaning. For that reason, the act of translating often sends writers back to planning" (Hayes and Flower, 1983, p. 209). Planning and translating frequently alternate with each other from minute to minute.

Reviewing may be a conscious process in which writers choose to read what they have written as a springboard either to further translating or to systematically evaluating and revising the text. But it can also be unplanned, set off by an evaluation of the written text or the writer's unwritten plans. The sub-processes of reviewing, evaluating and revising may interrupt any other process and occur at any time during the composing process.

The cognitive-process theory attempts to model the dynamic organization of thinking processes during composing. The authors list as one of the model's central premises that

"writers are constantly, instant by instant, orchestrating a battery of cognitive processes as they integrate planning, remembering, writing and rereading" (Flower and Hayes, 1981a, p. 387). More details of the theory will be presented in conjunction with the analysis of the findings from this study. At this point, a brief comparison is presented of how well the stage model and cognitive-process model (a) represent the composing process and (b) serve as a theoretical framework for research.

### Comparison

Kerlinger (1978) defined a theory as "a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena" (p. 9). The cognitive-process model is superior to the stage model of composing in terms of all three parts of Kerlinger's definition: (a) the set of propositions that are provided to present a view of composing, (b) the ability to set out the interrelationships among the constructs and propositions and (c) the ability to explain composing and predict it on the basis of specified variables. These will now be considered in the order presented.

Propositions. In the stage model, composing is an orderly process that takes place in three distinguishable, discrete stages over time, one stage giving way to the next

in an inflexible, linear fashion. Each stage is characterized by behaviors specific to it. Warringer's model, presented earlier, is representative.

Sommers (1979) noted that hypotheses about such stages were constructed a priori "without really questioning whether such stages exist" (p. 47). Evidence from established writers has long suggested that discrete stages of writing do not, in fact, exist in terms of their composing processes, but the labels have persisted as a convenient way to talk about composing. In this review it has been shown that many researchers discarded propositions of the stage model as they found evidence in their composing studies that contradicted them. Again, they retained some of the labels to give structure to their discussions.

One might well ask whether too much is being made of labels. Sommers (1979) believed not, contending that the stage concept became fixed and reinforced by composition textbooks which were "arranged linearly and chronologically according to the three stages of the composing process" (p. 48). Sommers illustrated her point by showing how this arrangement affected the popular conception of revision. She stated: "The medium becomes the message as the idea is communicated that revision is that interlude after you finish writing and before you type the paper" (p. 48). The propositions of the stage model therefore distorted the process of composing and did not provide an accurate

framework for research or teaching.

The four main propositions of the cognitive-process model have already been presented. They have been derived from systematic studies of the composing process and have been structured to reflect what writers do. Cooper and Holzman (1983, 1985) claimed that the propositions, and the terms they embody, are too underspecified to be testable (1983, p. 287). In particular, they pointed to the lack of a clear distinction between goals and plans. In addition, they maintained that the propositions and, indeed, the relationships by which they are governed, are based upon research conducted with a highly selective group in artificial writing situations (1985, p. 98). Proponents do not suggest that this model is complete nor that it has found its ultimate form, merely that it reflects the state of knowledge about composing better than a stage concept and serves as a more accurate framework for research. This present study utilizes ~~the~~ model in a more natural situation and in some ways may serve as a test of how well it serves as a framework for composing.

Interrelationships. The interrelationship among the constructs of the stage model is linear. This, more than any other feature of the model, has caused dissatisfaction, since this is not the relationship of the elements of composing as evidenced by published writers or by researchers investigating composing.

The linearity of the stage model presents a relatively



static picture of composing since it does not account for shifts in activity during composing. This model states that writers move from one stage to another but provides no answers as to how or why. Sommers (1979) noted that if composing were a linear activity then we should be able to construct a behavioral checklist by which to predict the point at which a writer would be thinking, then gathering information, then writing, then rewriting (p. 47). This has not been possible. Gebhardt (1982) wrote about a linear/alinear controversy in composing theory and presented evidence to show that a theory of composing must allow for both linear and alinear relationships. The stage model does not.

The cognitive-process model can accommodate linear and alinear relationships in composing. It proposes a complex network of relationships among the thought processes that underlie the observable behaviors of composing and in this way is able to reflect the dynamics of composing from minute to minute.

Although Flower and Hayes talked of their theory as a "model," Cooper and Holzman claimed they have treated it, instead, as a literal description of the cognitive processes writers employ. Cooper and Holzman saw the cognitive-process theory very much as a model, one that has been built upon indirect evidence of cognitive processes, as inferred from observable actions. They have charged Flower and Hayes with

ignoring the question of whether their model is valid and added: "Flower and Hayes do not test details of their model with their research, but instead merely use their model as a source of labels for data in the protocols, labels that thus have no explanatory power" (p. 288).

Predictability. Within this review it has been shown that the stage model has been unable to predict composing processes and has been gradually discarded by researchers. On the other hand, the cognitive-process model has shown some success in predicting the performance of different writers and in accounting for performance on differing writing tasks. It has been utilized as a theoretical framework (although this has not always been specified) by researchers such as Sommers (1980), Matsushashi (1981) and Flower and Hayes (1980-83).

There is clearly some validity to the criticisms put forth by Cooper and Holzman. The cognitive-process model lacks specificity and requires clear definitions that will allow relationships to be tested. However, Cooper and Holzman would have the model tested in tightly controlled (yet non-intrusive) settings on specific variables in the composing process. This seems like putting the cart before the horse. The purpose of the model, as stated by Flower and Hayes, has been to "lay the groundwork for a more detailed study of thinking processes in writing" (1981a, p. 366). They have attempted to provide a broad picture, the details of which can be more specified, reinforced or rejected over

time. What Cooper and Holzman have called for would amount to testing the pieces without attempting to get a picture of where the pieces might fit. In fact, Flower and Hayes have invited challenges to their paradigm in the form of "alternative hypotheses supported by substantive arguments about the process of writing itself" (1985, p. 97).

It will be clear by this point that the cognitive-process model is seen as the best-available model for composing and will be adopted as the theoretical framework for this study. However, the theory is quite new and this study will be a further test of its suitability as a research framework.

The review of literature has presented a critical analysis of related studies of the composing process and an analysis of an emerging theoretical framework for composing research. The next chapter will deal with methodology, including the specific theoretical framework adopted.

### CHAPTER III

#### METHODOLOGY

This chapter will outline the theoretical framework for this research, the form the study assumed, the method of selecting the sample, the data collection and the analysis procedures.

#### Theoretical Framework

The theoretical framework for this study has been built through the literature review. The effect of adopting a theoretical model is that expectations are established that serve to influence the observations that are subsequently made. This was as true for this study as for any other. The cognitive-process theory developed by Flower and Hayes (1981a) and Hayes and Flower (1980, 1983) which describes composing as "a set of distinguishable processes that the writer must orchestrate in the act of writing" (1983, p. 208) was accepted as the most viable explanation for composing. The principal features of the theory were described in the review of literature.

In the cognitive-process model the units of analysis are elementary mental processes. In contrast to a stage model paradigm which assigns all elements - cognitive and contextual - a place in terms of position and function within a distinct stage of composing, a cognitive-process approach organizes the contextual factors and writing processes around

the inferred processes that underlie them. Thus the centre of focus of each model is different. By delving into composing a step deeper to the processes which underlie the surface behaviors, the cognitive-process theory allows more meaningful and direct comparisons between different writers and writing tasks.

This research has taken the form of a case study. Graves (1973) cited strong support for the case study method and endorsed it on the basis of his own results. He stated:

In order to improve both procedures and study scope, future research in writing should continue to explore the feasibility of the case study method. . . . In a profession where there is a commitment to the teaching and understanding of the individual child, it is ironic that research devoted to the full study of single individuals is so rare. (p. 222)

The findings from case studies cannot be generalized because small numbers of subjects are studied in largely uncontrolled conditions. However, the concentration on individuals in natural surroundings is the very characteristic to recommend the case study method when the purpose is depth and breadth of basic knowledge. The complexity of composing has been attested to many times. It is not a straightforward set of skills or procedures unrelated to the characteristics of the individual writer or the environment. Because of this Graves (1973) wrote:

There is more to a writing episode than the child's act of composing and writing down words. The observation of writing at only one point in time

limits an analysis of the writing process and may result in conclusions which overlook important variables. Therefore, to understand even a single writing episode a researcher must broadly reconnoitre territory before, during and following the composing. (p. 54)

The case study method allows an exploration of the multitude of factors which may impinge upon the writer's composing processes.

### Sample

Helen Porter, a professional writer for more than twenty years, was chosen to take part in this study. There has been considerable research on the composing processes of students in school settings and some research with adults in work settings where the writing tasks were prescribed by the job. By choosing an established adult writer who exercises considerable choice in the writing tasks she undertakes, this study broadened the framework of composing research. The choice was based upon the investigator's knowledge of the writer's work, accessibility to the writer, and the writer's willingness to participate in the study.

### Procedure

This study, which attempted to externalize and analyze the processes by which an adult writer composes, took place over a period of four months and proceeded in four phases: (a) preliminary, (b) observational, (c) retrospective, and (d) analysis.

### Preliminary Phase

The preliminary phase consisted of two meetings between the investigator and the writer. The purpose of the first meeting was to introduce the writer to the specific intent of the study, to discuss her part in it, and to set the scene for the recorded interviews and observation of composing which followed. The investigator also collected successive drafts of some of Helen's writing for later analysis of revisions. The next meeting took the form of an audiotaped interview which centered on the author's background and experiences in writing and the influence of family, teachers and other writers, as well as the author's attitudes to writing and her approach to her work.

### Observational Phase

During the observational phase of the inquiry, the researcher met with Helen three times at her home. Meetings varied in length from approximately two to four hours. At the beginning of each session, researcher and writer went to the writer's study where she worked on one article until she chose to stop. This period varied from one to one and one-half hours. In each session Helen worked on the same article, which she tentatively entitled "Cats," completing approximately one typed page per session. In all she completed one typed draft of the article.

Helen was asked to "think aloud" as she composed, in the

manner developed by Emig (1971) and Flower and Hayes (1980a, 1981a,b). This is a process-tracing method in which writers are asked to say aloud everything they think and everything that occurs to them while they are writing. Writers are asked not to reflect on what occurs to them nor interpret what they think but to verbalize thoughts, concerns and ideas as they come to mind. But there is disagreement in the literature over the whole question of how to illuminate and externalize an internalized process and, in particular, over the merits of thinking aloud. The following discussion addresses some of the disparate views.

Afflerbach and Johnston (1984) found several advantages to the use of verbal reports, such as thinking aloud, in reading research. These included providing "veridical descriptions of cognitive processes which otherwise could only be investigated indirectly," providing "access to the reasoning processes underlying higher level cognitive activity" and allowing "analysis of the affective components of reading processes" (p. 308). The same advantages could be claimed for the use of verbal reports in composing research. Indeed, since Emig's utilization of the verbal reporting procedure that she called "composing aloud", it has become an accepted and emulated procedure (for example, Mischel, 1974; Perl, 1979) for affording insight into the ways writers think while they compose. Flower and Hayes (1980a, 1981b) have systematized the procedure of composing aloud along the lines of thinking-aloud protocols used by cognitive psychologists.



The protocol in a composing situation is a listing of all the writer's verbalizations presented in sequence. Flower and Hayes (1981b) stated:

If accurately handled, thinking-aloud protocols yield enormous amounts of information without significantly changing the focus or content of thought. Giving a protocol is much like talking to oneself while writing. . . . Protocols give us an extremely detailed, blow-by-blow record of a writer's constantly shifting conscious attention, and by capturing the flow of concurrent thought processes, protocols avoid the unreliability of retrospective generalization. (p. 233)

Nevertheless there are difficulties and disadvantages in using verbal reports such as thinking aloud. Emig (1971) and Odell et al. (1983) noted that thinking aloud can prove distracting and difficult for some writers and in some cases provides little beyond verbalization of the text produced. Afflerbach and Johnston (1984) indicated some reasons why this may be so. First, verbal reporting is "novel" for most subjects, leaving them unsure of what they are to do. Second, verbal reporting requires subjects "to allocate attention to both processing and reporting of the process" (p. 309). While the first point may be addressed through a process to familiarize the subject with the reporting task, the second is not so easily approached and bears elaboration.

Afflerbach and Johnston noted that some tasks are more compatible with verbal reporting than others because of the differing cognitive demands that may be inherent in each activity. Utilizing a "cognitive workbench" model of working

memory (developed by Britton, Glynn and Smith, in press), they explained the tension that may develop between the demands of performing a set task, on the one hand, and reporting on it, on the other.

Cognitive operations are performed on the workbench, which is of relatively limited size. Because of the limited space available, the more crowded the workbench becomes (in this instance having to perform processes and report on them), the greater the possibility of system failure because of too many things going on at the same time. (p. 311)

Flower and Hayes utilized thinking-aloud protocols in the research on which the cognitive-process theory was based. They have been criticized by Faigley and Witte (1981) and Cooper and Holtzman (1983, 1985) on the grounds that thinking aloud may have distracted the research subjects and may have altered the cognitive operations involved in the subject's composing. Should thinking aloud indeed have had these effects then a distorted picture of composing may have emerged from the research. Cooper and Holtzman apparently believed this to be the case. They spoke of thinking aloud as an "odd thing" and a "trick" (1983, p. 289). They also questioned whether "protocols 'capture a detailed record' or invent one" (1983, p. 290), and wondered whether thinking aloud contributes to making a writing situation so artificial that results are inapplicable beyond the research setting.

However, as Flower and Hayes (1985) have countered, Cooper and Holtzman equated thinking aloud with introspection

which puts "severe constraints on how subjects observed and on what they observed" (p. 94). This indeed could crowd the cognitive workbench since it calls for subjects to change their perceptions as well as report on them. Flower and Hayes cited evidence assembled by Ericsson and Simon (1980) to show that the act of reporting about mental processes while they are going on alters the structure and course of those processes only when it "directs subjects in how they should attend or what they should attend to" (p. 96) and "forces subjects to attend to information they would not ordinarily attend to in doing the task" (p. 95).

Cooper and Holtzman (1985) were still not satisfied, however, for they interpreted the same evidence as showing that "any processes that do not make use of short-term memory and any situation that overloads short-term memory will result in a distorted verbalization of the processes" (p. 99). They concluded that cognitive processes are "unreachable" through thinking aloud in either laboratory or non-laboratory conditions.

The arguments in favor of and against the utilization of thinking aloud were weighed and it was decided to use it, as Flower and Hayes did, without directing the writer toward what to perceive or how to perceive. Under these conditions it was thought that thinking aloud could provide insight into Helen's cognitive processes without adding significantly to her cognitive load. In addition, this method was used in

conjunction with retrospective interviews so that the analysis was based upon converging evidence.

The sessions were audio-recorded on a small tape recorder placed out of the writer's way. From a corner of the room the researcher noted the writer's non-verbal behavior. The investigator intruded as little as possible upon the writer's work space bearing in mind the caution of Tamor and Bond (1983) that "hovering over a writer can have a significant influence on the quality and quantity of what is written" (p. 118). At the end of each session, the researcher collected the text that had been written.

#### Retrospective Phase

This phase consisted of two types of interviews: (a) retrospective interviews, to clarify and expand upon the observations of composing, and (b) a discourse-based interview, to elucidate revising decisions in articles written outside the research setting. Both types of interviews were audiotaped. In addition, a taxonomy developed by Faigley and Witte (1981) was used in conjunction with the discourse-based interview for analyzing the revisions.

The retrospective interviews took place immediately after Helen finished writing. They were informal in nature. While the researcher asked questions about the composing that had been observed, Helen raised points from her past experience that often provided a broader context for the

immediate situation.

Although it was apparent that retrospective interviews could be a rich source of information about composing, researchers such as Emig (1971) and Hayes and Flower (1983) have urged caution in using them as the primary research method. Emig noted the probability of inaccuracy caused "in part, by the time-lag between the writing and the description of that writing" (p. 9). In this study, the retrospective interviews occurred immediately after composing so time-lag was not a serious factor as long as Helen addressed the writing she had done in the research situation. When she reached back to past experiences it may have become a more important consideration.

Hayes and Flower raised additional sources of concern about retrospective interviews. They indicated that such accounts may have built-in unreliability because they are filtered through the writer's other experiences, knowledge, outlook on the world and even attitude toward the investigator. Because of these factors, the accounts may be intentionally or unintentionally inaccurate.

In this study, the retrospective interview was one of several research approaches. The purpose in using it was to obtain evidence that could be compared to that obtained from the protocols and discourse-based interviews. These methods were viewed as checks on any potential unreliability of the retrospective accounts.

The discourse-based interview took place after the last

composing session and retrospective interview. This type of interview was developed by Odell and Goswami (1982) and Odell et al. (1983) for use with adult writers in work settings. It is based upon a researcher's identification and selection of stylistic and substantive choices made by writers within one sample or across a number of samples of writing. (One very simple example of a choice could be the use of the passive voice in one piece of writing and the use of the active in another. The interviewer would hope to uncover the author's reasoning behind the decision in each case). Interview sheets are prepared with selections that reflect the choices and one or two roughly comparable alternatives that appear in other places in the subjects' writing. Subjects read the samples of writing and are asked (depending on the nature of the choice identified) about the reasoning that led to the preference of one alternative over another, whether they would be willing to substitute one alternative for another, or include or exclude a statement.

Odell et al. believed the discourse-based interview helped tap "the tacit personal knowledge that writers bring to bear on their writing tasks" (1983, p. 222). This is knowledge derived through repeated experience which can be used without writers "having to formulate it consciously each time they write" (p. 223). They assumed that asking writers to consider alternatives "might create a cognitive dissonance that would enable a writer to become conscious of

the tacit knowledge that justified the use of a particular alternative" (p. 229).

The researcher planned to identify the choices to be followed up in the discourse-based interview by comparing the text Helen composed during the research sessions with some of her published work. It was hoped that Helen's explanations of her choices would provide evidence about her composing that could be compared to the protocols. However, when it became clear that Helen intended to produce what she very definitely thought of as a "first draft" in the composing sessions and no more, the idea of identifying choices from a comparison of that text to published work was discarded. The rationale behind this was that Helen had delayed making final decisions on many aspects of her composing because she was operating under a "first-draft strategy" (This will be discussed in detail in Chapter IV, Analysis and Discussion of Results). Her basis for a great many of the choices that she made could well have been that they were adequate for a first draft in which her goal was to get a written record of her ideas, but they were all to be subject to review in subsequent drafts. There are many instances in the protocols that point to this conclusion. For example, in the first composing session Helen stated: "Now, I'm putting message down twice but when I go over it I'll think of another word . . . . But for now I'll just leave it" (1, p. 1). In the third session, Helen remarked: "No I can't get this. Right now I'm just going to say . . . ." (3, p. 13).

This strategy also meant that revising could not be studied in the same way as the other processes in composing, because Helen, in fact, was seen to be postponing many revisions until a later time. This meant, in effect, they would be lost to this investigation. Therefore, it was decided to undertake a separate revision analysis. The author had made successive drafts of two of her published articles available to the researcher. Although the discourse-based interview was not designed to be used specifically with revisions, it was felt that revisions were certainly choices that had been made by the writer within the body of her text. The interview, therefore, could play a valuable role in analyzing those choices.

Accordingly, examples were drawn up by juxtaposing two or more versions of selected parts of the text as they had appeared in the writer's revisions. The writer was asked which version she preferred and why. The revisions represented additions, deletions, substitutions and permutations (as they are defined by Faigley and Witte, 1981). Since the articles had been published some months before, the author often could not remember what her final decision had been and so could not make her choice on that basis alone. The examples chosen represented stylistic and semantic changes but excluded examples which represented corrections of grammar and mechanics since these were assumed to have been made on the grounds of correctness and



acceptable form.

In actuality, the choices identified for discussion in the discourse-based interview led the writer to discuss many other examples of her writing. Thus this interview also contributed to a broader view of Helen's work and her attitudes toward composing.

It was unfortunate that the thinking-aloud protocols and discourse-base interviews could not be used together to obtain insight into Helen's composing in this research context. The discourse-based interview did indeed prove a rich source of information about her composing. Most of it fell outside the scope of the present study, however, and will not be presented at this time.

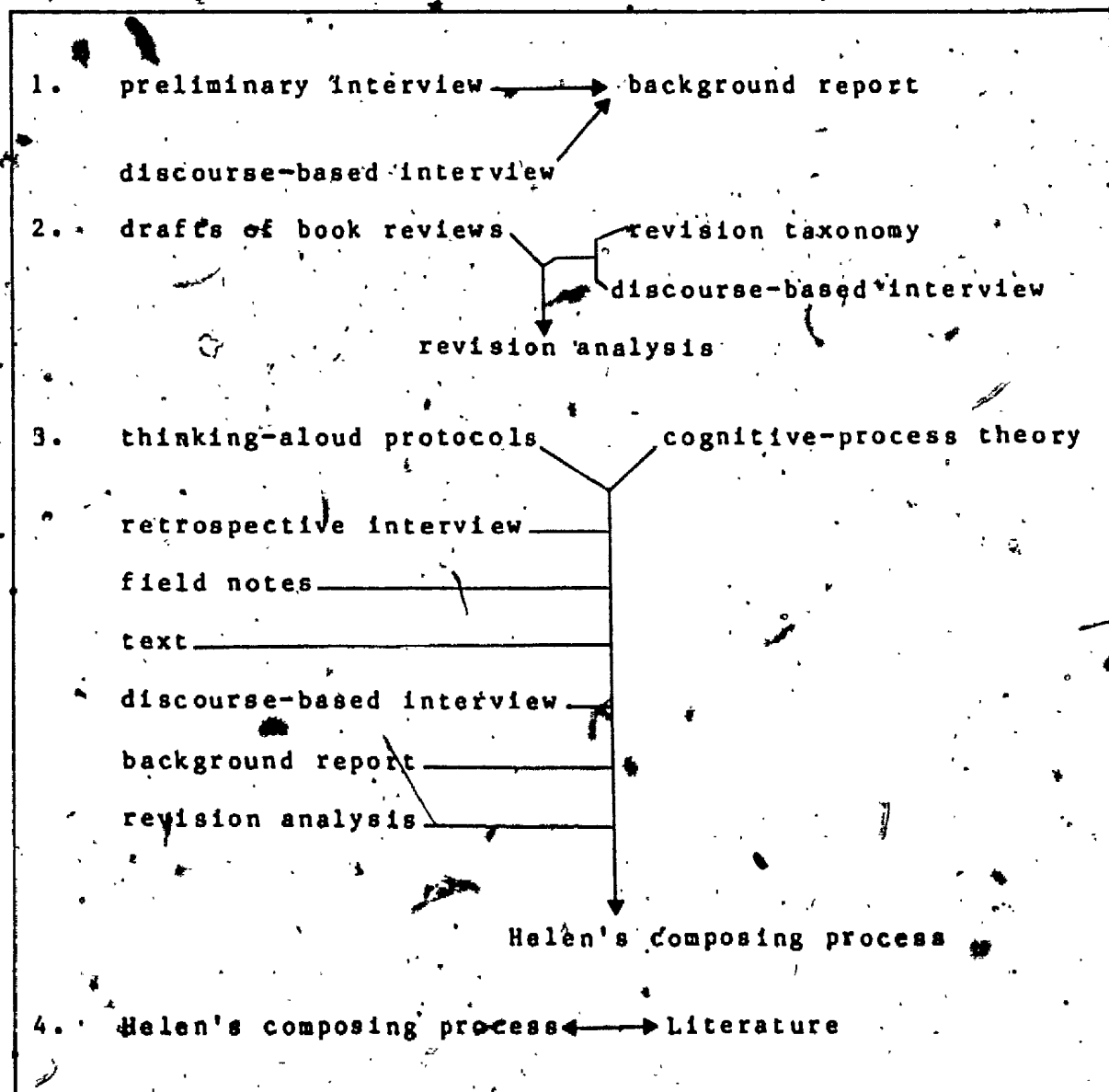
The taxonomy that was used in conjunction with the discourse-based interview was designed specifically to analyze "the effects of revision changes on meaning" (Faigley and Witte, 1981, p. 401). It was based on "whether new information is brought to the text or whether old information is removed in such a way that it cannot be recovered through drawing inferences" (p. 402). Changes that do not bring new information or remove old information were called "surface changes", while changes that do affect concepts in the text were labelled "meaning changes" or "text-base changes" (p. 402). Surface changes can be of two types: (a) formal (copy-editing operations) and (b) meaning-preserving (changes which may paraphrase the concepts in the text but do not alter them). Meaning changes can be (a) microstructure

(changes that do not alter the summary or gist of a text) and (b) macrostructure (changes that do alter the gist of a text).

The researcher chose the revision taxonomy for this study because it provided information that complemented what could be learned through the discourse-based interview. While the taxonomy could provide insight into what was done during revising and how it affected the text, the discourse-based interview could probe the writer's general purposes in revising and the specific reasons behind selected revisions.

#### Analysis

Transcripts of all the interviews and protocols of the thinking-aloud tapes were produced. Revisions within and between the successive drafts of two articles written outside of the research context were noted. Analyses were descriptive. Categories for analysis were derived from the cognitive-process theory, from the observations of composing, and, in the case of revisions, from the system devised by Faigley and Witte (1981) and the rationale developed for the discourse-based interview by Odell and Goswami (1982) and Odell et al. (1983). Figure 2 is a schematic representation of the ways in which information gathered in the research was used in analyzing Helen's composing.



**Figure 2.** Schematic representation of the ways in which information was utilized in analyzing Helen's composing.

Figure 2 indicates that the central and most detailed analysis was of Helen's composing process. This was carried out within the framework of the cognitive-process theory of writing. In this analysis the researcher utilized several

sources of information obtained during the composing sessions, namely, (a) the thinking-aloud protocols, (b) the retrospective interviews, (c) the researcher's field notes and (d) the text produced by the writer. Additional sources of information from without the composing sessions, namely, (a) a preliminary interview, (b) a discourse-based interview, (c) drafts of book reviews written by Helen previously and (d) the revision taxonomy devised by Faigley and Witte were utilized in producing a background report and an analysis of Helen's revisions. These two products were then used to provide more breadth to the analysis of her composing. Finally, the findings about Helen's composing were compared to previous findings about composing in the literature. The following paragraphs provide more detail about (a) the analysis of Helen's composing process within the research sessions, (b) the background report and (c) the analysis of revisions.

Composing process. The thinking-aloud protocols were analyzed in terms of the structure provided by the cognitive-process theory. All statements which identify cognitive processes within the composing process were founded upon inferences which, in turn, were based upon Helen's protocols. Quite often these inferences were substantiated by reference to the interviews, the researcher's field notes (made when the writer was composing) and the text produced during the research sessions.

Consideration of Helen's composing was divided into

three main sections: (a) the writing processes, (b) goals, strategies and plans and (c) the context for composing.

Background report. Excerpts from the preliminary and discourse-based interviews were integrated into a report to provide background for the analysis of composing.

Revision analysis. The researcher used the taxonomy developed by Faigley and Witte to categorize and analyze revisions made on and between successive drafts of two articles. The taxonomy extends to the operations involved in the four types of revision changes, but these were not considered. Because text-based revision analysis has an ancillary role in this study, analysis of selected aspects of the revisions in one article written by Helen are reported. Some of the writer's revisions were then chosen for further investigation through the discourse-based interview in the manner that has been described previously.

This concludes the discussion of the methodology of this study. The analysis and discussion of results follow next.

## CHAPTER IV

## ANALYSIS AND DISCUSSION OF RESULTS

The analysis and discussion of results will assume the structure outlined in the last chapter. Following that, a section titled "Summation and Comparison to the Literature" will conclude the chapter.

The evidence presented is drawn from the transcripts of Helen's protocols and interviews. The full transcripts are not contained in this manuscript but a key to those sources quoted is presented next.

## Key to Sources

<u>Source</u>	<u>Symbol</u>	<u>Example : Explanation</u>
Preliminary Interview	P	P, p. 1 : Preliminary interview p. 1
Thinking-aloud Protocols		
Session 1	1	1, p. 22 : Thinking-aloud protocol, session 1, p. 22
Session 2	2	
Session 3	3	
Retrospective Interviews		
Session 1	R1	R3, pp. 22-23 : Retrospective Interview, Session 3, pp. 22-23
Session 2	R2	
Session 3	R3	
Discourse-Based Interview	D	D, p. 6 : Discourse-based Interview, p. 6
Field Notes		
Session 1	F1	not paginated
Session 2	F2	F2 : Field notes, Session 2
Session 3	F3	

### Background Report

The objective in drawing together excerpts from the preliminary and discourse-based interviews was to add depth to the picture of Helen Porter, the writer, that would emerge from the analysis of her composing.

Helen began to call herself a writer when she had her first piece of work published.

I felt a bit self-conscious about it at first but with the census or the voter's list I stopped saying housewife. . . . It felt as if I didn't deserve the title for a while but now it's just so natural it's the same as saying I'm a woman. I don't have any hesitation now because I really feel that is what I am. (P, P. 9)

In fact, Helen has written many magazine articles, book reviews, radio plays, poems and short stories, a book-length memoir and a novel (which is as yet unpublished). Her stories and poems have appeared in anthologies; her articles, many of a light, humorous nature, have been picked up by magazines as far away as South Africa and Australia. Many of her articles and reviews are written in response to assignments from periodicals, while her stories, plays, songs and poems are usually self-initiated and unsolicited.

Helen Porter was born in 1930 on the South Side (a community on the south side of the harbour in St. John's, Newfoundland). As a child she was an avid reader. "I was always reading," she said, "I'd have a book on my seat or in

see writing as a career.

It seemed that as a writer you did a job and then you did writing. This was the way I saw everything like painting, music. Everybody did their job and then they had an interest. . . . I did try for a job one summer at the Evening Telegram. I thought I wanted to be a reporter then. . . . they just said at the Telegram that they didn't hire women. So that was it. You know that didn't even seem strange. I just said well they don't hire women, so I just went on from there. This was quite accepted in the forties and fifties. (P, p. 6)

While her children were small Helen wrote very little.

We moved around a bit because John, my husband, was a teacher. I had very little time. I was always tired. All I wanted was to get a good night's sleep. I used to have things in the back of my mind about writing and once in a while I'd see a column. . . . and I used to think now if I could do something like that that would be great because I could do it at home you know. I used to try to do a column sometimes just for myself to see what would I write about and so on. (P, p. 7)

During this time Helen enrolled in a creative writing class. There she received feedback on her work, "We had a good teacher who seemed to like what we were doing. He was encouraging and talked to us about how to get things published" (P, p. 7). She also met people who were in her position, "trying to get at writing seriously having wanted to do it for years" (P, p. 7). Some of these people have continued to this day to serve as a forum for her writing.

Helen began to sell scripts to CBC radio and to search out markets for her stories. She recalled: "From 1963 I started to look at it as something really serious" (P, p. 7).



my desk. . . .When I was supposed to be doing something else I would be reading a book that had nothing to do with school" (P, p. 2).

She recalled several teachers who felt she had a talent in writing and who encouraged her to continue. Her father, too, valued her reading and writing; she remembers him writing for his union and reading a lot himself. But her mother was not so supportive perhaps because she had five children to care for and would have liked more help from Helen. "She didn't see the value of it as much as dad did and she would sometimes consider it a waste of time especially when she was trying to get me to do anything because I had no inclination to do the things that had to be done around the house" (P, p. 4). Her mother's concerns were pragmatic: "How are you ever going to manage in your own house?"

Against the advice of her teachers who wanted her to go to university, Helen took a commercial course, then went to work at the provincial justice department. During her free time she wrote poems and stories.

Around that time I won a couple of prizes in poetry contests. . . .It was an honorable mention of \$25.00 both times. So that was the only thing that was recognized that I did. Sometimes I'd send stories to places and they'd come back but I'd be sending them to big American magazines. I had no idea of what you did, you know, and my stories at that point were just like everyone else's. There was nothing original. (P, p. 5)

Although Helen wanted to publish her work, she did not

Although she had found work in a library, the only work Helen wanted was writing: "After a couple of years all I could think about was when I get enough money I'll stay home again and write all the time" (P, p. 8). Still, even with a family and a job, Helen and some of her friends wrote and sold a lot of material, especially commentaries and reviews for CBC radio.

We'd be doing things like running down from work in our lunch hour to record it and probably write it the last thing before we went to bed in the night. Things like that and sometimes staying in to lunch at the library and going down to the basement and writing things. I actually got more done then than I do now. It was really amazing. I think you're so enthusiastic when you start that nothing is going to stand in your way. (P, p. 8)

Helen explained the impulse behind her writing at that time:

I wanted people to know what I knew. Sometimes things would hit me, like a revelation and I wouldn't be able to rest until someone else knew it too. Maybe they did anyhow but I didn't think they did. Of course money was a consideration but I think money was the secondary consideration. . . But now I've been at it for over twenty years so I've said a lot of the things I wanted to say. So it's not so important to get them out. (P, p. 8)

She perceived a theme common to the topics she has written about over the last twenty years.

I would say that my main subject has always been the family, relationships within the family or between a man and woman who are very close. . . The other thing I've always done is humour, making fun of things, especially fads. (P, p. 9)

It was difficult for Helen to be definitive about her own style but she did say this: "It's very personal I think. . . in the sense that I'm telling things very much from my point of view. But I'm hoping that it'll hit somebody else's. I mean it's not just a matter of feeling that whatever happens to you is important" (D, pp. 105-106).

Although there are a number of writers she admires, Helen would most "like to be like" Alice Munro.

I think it's because she gets underneath things so much. She gets down further than almost anyone else can go into people. She presents it in a very readable, straightforward fashion. She never uses gimmicks. . . . And another thing I really love about her is that no matter how bad anyone is, there's nobody who is absolutely hateful in every respect. . . . You know two things happen when I read something by her. I get inspired in the sense that I'd like to be able to do things more like she does them. But I also get discouraged because I think I'll never be able to do anything as good as that. (P, p. 15)

Helen has written in several genres. Songs and poems come with relative ease, but the short story, which she finds more difficult, is her preferred form:

They're hard to sell but that's where I like to express myself best, in that length. . . . The short story is hard though, harder than an article, for instance, because I find atmosphere and description hard. I really have to work at that, I can feel myself working at it. An article is usually just a matter of getting an idea. (P, p. 16)

Several comments provided insight into the way Helen

works. For example, she remarked:

I don't do outlines but I certainly take notes. I don't think I've ever done a short story or anything without a few things written down about the kind of person it is about and every now and then I think of something else and I'll write that down. . . . I never sit down and say "Now I've got to think about this character." No, things can occur to me anywhere. That's why wherever I go I keep a notebook. (P, p. 22)

Through her reading, her own writing and feedback from editors and other writers, she has developed a stock of general writing guidelines and more specific strategies to aid her. For example, Helen commented on the difficulty of beginning a new assignment and the approach she takes. "Anything to put it off, you know. Well all writers will tell you that. Anything to put off getting to the typewriter" (D, p. 16). To begin she frequently tries to suspend criticism and just get something down on paper to act as a stimulus. Often she starts with a quotation, "Sometimes I find when I get a few things down on paper then it's almost like my first paragraph and so I can sort of start off with my second paragraph. The beginning is always hard" (D, p. 18).

Helen is accustomed to working with the constraints of time deadlines and word limits. While adhering to a word limit can be very difficult, Helen also saw positive effects on her writing. "You have to make decisions and it's good for your work in some ways because you end up still saying what you want to say" (D, p. 34). Later she stated: "It's amazing how many words you can cut. You think, I can't, it

will make no sense, but it does" (D, p. 66).

Nevertheless, the obligation to deliver a specified product at a specific time causes her some anxiety and creates a double bind since the anxiety makes the writing more difficult to begin.

When I know I've only got time enough to do it I think, oh, my, imagine if I can't pull it together. . . . Now I'm not like that if I just say I'll write a short story. Then I can get started because then it doesn't matter. I think what's behind it is that if this doesn't work then I don't know what I'm going to say to them." (D, pp. 11-13)

Helen also spoke about the ways in which her ideas originate. Like many other writers, she is a keen, alert observer of life, noticing and finding significance in people and events that many others miss. Riding on the bus and sitting in restaurants have been two of her principal sources of ideas. She reflected:

A bus is a place where you're with people but you don't know them, you don't know their names and you can kind of give them a life because you don't really know them. . . . I remember one day there was an old man sitting right up in front of the bus and he looked out the window as we were passing a furniture store and he said to the driver, "That's a nice chesterfield suite if anyone had a house to put it in." Then right away, I never have written about it but you start thinking, well has he got a house or what is it? This is the kind of thing my stories always come from. (P, p. 12)

Helen spoke of the difficulty of making enough time in her life for writing: "I think one of my problems is that I

am interested in too many things." Although she believes some writers isolate themselves too much, to the detriment of their work, she does not think she shuts herself off from involvement enough. The structure and seclusion imposed upon her when she has occasionally gone away to a writers' retreat have been welcomed respites.

Those were the only times in my life that I've ever had time set aside for writing and it really worked. I did more in that two weeks both times I was there than I would do in more than two months, maybe in six months, if I was home. So, there is something about it and you know this is the discipline I should have. I should be able to say that when I'm not at the retreat, you know, that every morning I will go in there and whether I think I have anything to say or not I've just got to sit down and put the paper in. But I really haven't worked like that much in my life. It's either doing it because something is absolutely going mad to get out or it's doing it because it has got to be in by a certain date. But, that time it was I'm here to write so I've got to write. (P, p. 24)

Although the idea of more time for writing appeals to her, a reclusive life does not. Writing will likely continue to be one facet, albeit a very important facet, of a very busy life. She explained:

I do have an interest in politics and just in things that are going on. And then there's my family. . . All those things take you away. But then again I feel there wouldn't be much of a life without them. I certainly wouldn't want to be the least bit of a hermit. (P, p. 19)

This section has drawn on the information provided by Helen Porter in her interviews to construct an image of her

background as a writer and to provide a backdrop against which to consider the analysis of her composing processes. A descriptive analysis of Helen's composing process follows next.

### Composing Process

It has been difficult to create an adequate written depiction of Helen's composing. Linear, written language provides a weak representation of the complex interactions within it. Several diagrams are presented to help portray the dynamic nature of the composing process but, of course, the diagrams are also static by nature. While they can depict relationships, they cannot fully capture the movement and flow within composing.

During the observational phase of the study Helen worked in her usual setting. She composed on a small manual typewriter, surrounded by shelves and stacks of books, notebooks and memorabilia. It seemed a comfortable, personalized work environment. Within the three sessions, Helen made revisions to her text on the typewriter. If she spotted something that she wanted to change after she had removed the paper from the typewriter, she wrote on the draft in pen. The same pattern was observed in the drafts of articles that were completed out of the research setting and made available to the researcher.

The analysis of Helen's composing will be divided into

three sections: (a) the writing processes, (b) goals, strategies and plans and (c) the context for composing. This division is adopted for clarity and ease of presentation. It does not indicate that Helen's composing was divided into discrete segments.

### The Writing Processes

The researcher's initial impressions of the composing sessions were that each one differed from the others in terms of the patterns of processes that predominated but all sessions were similar in that (a) all processes predicted by the cognitive process model were apparent in each session, (b) processes recurred within sessions and (c) processes often assumed hierarchial and embedded structures.

The relationships of the writing processes were considered in each session individually, but it is indicated when the characteristics of the relationships transcend sessions.

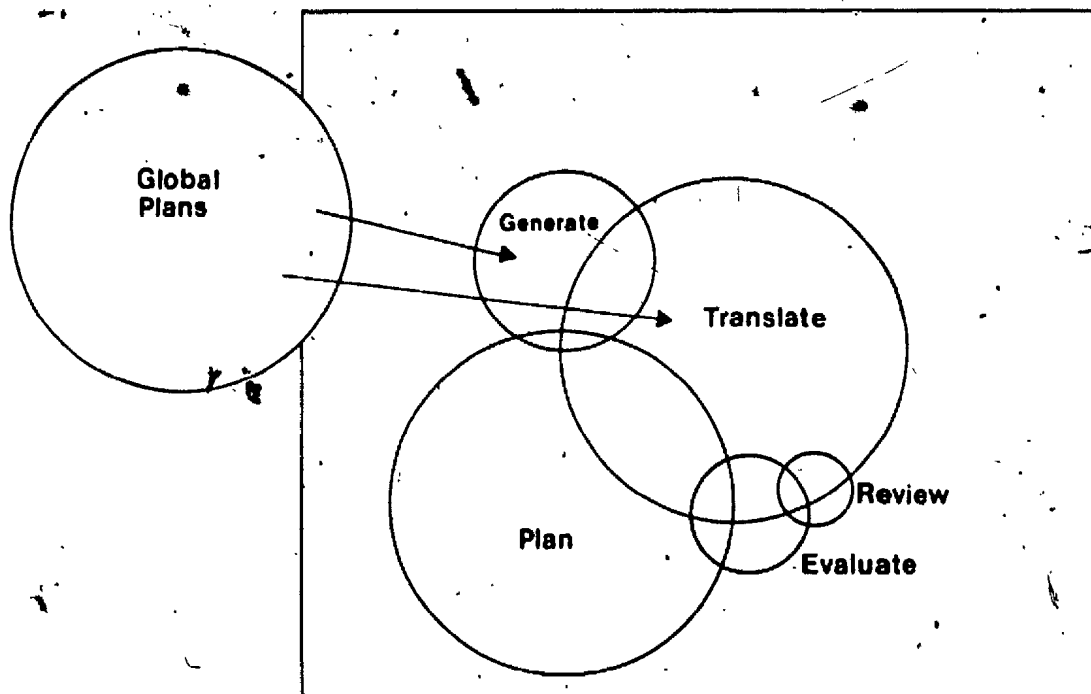
First session. The researcher's initial impression was that Helen had thought beforehand about what her topic, audience and even her first few lines of text would be. After collecting some information from source books, she appeared to move directly to translating her ideas into text.

This conception of the session was borne out in the analysis of the protocols and field notes. Figure 3 is a schematic representation of the relationships of the processes which were in evidence during session one. The



rectangle represents the time and "space" occupied by the composing session. The relative size of components within the rectangle is meant to indicate their relative importance (or the relative "space" they occupied) during the session. Overlapping of circles indicates overlapping of the processes whereas the connection of one circle to another by arrows indicates an insertion of one completed process into an ongoing process.

Figure 3



**Figure 3.** Schematic representation of the relationships among the writing processes within the first composing session.

Helen's comments showed that she had a topic and title in mind when she sat down but was unsure whether she had

enough information to "carry it through." In a later interview, Helen remarked "All I had really was the idea of cats being maligned and I didn't know where I was going from there" (R2, p. 5). She spent approximately fifteen minutes searching source books for quotations about cats, and commented: "I don't always do this. Sometimes I have enough in my original notes or in my head" (F1).

Close inspection of the protocol and field notes showed that after this Helen had little additional need to generate information. Most of her time was spent moving between planning and translating. For example, Helen spoke as she typed:

I liked Michelle's little verse, perhaps because I like Michelle and I also like cats. So does she, obviously. Now, I'm just trying to lead into the next paragraph which is always hard. [pause] Uhm. I'm kind of connecting Michelle up with the cats here for a minute. Uhm, uhm [cleared her throat]. Now uh [pause] I've got to try to get into this bit about, uh, a lot of people like cats and a lot of people don't like them or didn't like them at least, because almost everything, almost every quotation you find about a cat is not complementary. Uh [pause] I could put in something about, uh, Elliot's book, uh, about cats and, uh, the play, musical, that's been made from it. (1, pp. 2-3)

There were also a few instances of evaluation and three brief periods of review. The following is one example: "Now, okay so I've got, uh, that's spelled wrong. [Helen altered a spelling and read from her text]. Cat-like or feline, which sounds okay, and slyly malicious, which doesn't. Uh, that's okay because, uh it's a good contrast,

uh, uh, now let me see. . ." (1, p. 6).

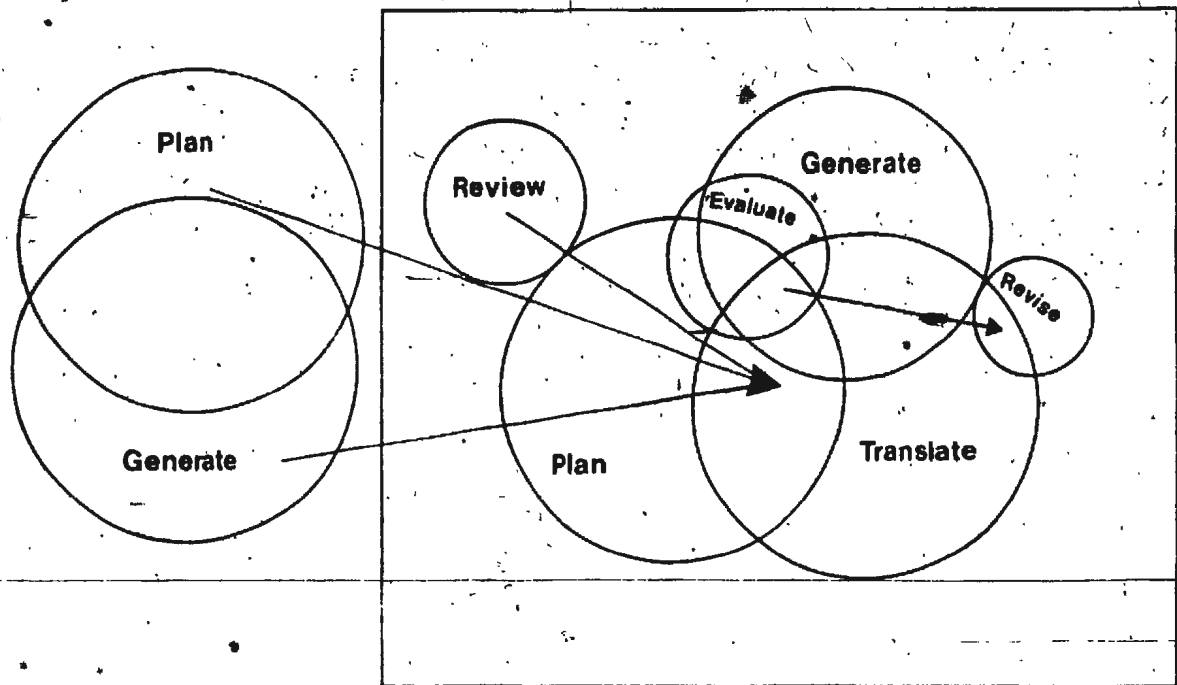
Intuitively, one might expect that a writer might spend some time, initially in planning about the topic, for example making tentative decisions about how to define it and how to proceed to develop it. Helen's composing made it clear that this type of planning had been done, but it is not present in the protocol because she had thought about her topic and made initial, general plans for it before the session. Within the session she was able to move quickly to translating and planning that was related to the moment by moment production of text.

In the interviews after composing, Helen indicated that the amount of informal planning before "sitting down to write" can vary greatly. At times, there is a lot more than was indicated here. She contrasted composing this piece to ones that have been running through her mind for months. These are "things I have really wanted to write" and come "really easily" (R2, p. 4). Over that time, goals, plans, even specific information may have been developed, evaluated and refined and translated into some form on paper. These could be seen as instances of the entire composing process being embedded within planning.

Second session. On first view, planning (plans about what to say, how to organize and how to compose) and translating appeared to predominate in the second composing session. Analysis of the protocol suggested that this

impression was sound and supplied detail to fill it out.  
Figure 4 is a schematic representation of the relationships  
among processes evident in session two.

Figure 4



**Figure 4.** Schematic representation of the relationships among the writing processes within the second composing session.

Helen began by reviewing what she had written in the first session, making several revisions that changed wording but maintained the meaning of the original draft. Between sessions one and two Helen had noted a number of ideas she wanted to follow up and had listed quotations and definitions she wanted to utilize. In analyzing her composing, these could be understood in terms of generating information and plans for her writing.

There were two apparently opposing forces at work here. On the one hand, Helen felt that she should work on all aspects of composing the article within the research session but, on the other hand, the ideas that came to her ("pushing at me") were not governed by the timing of the observed composing sessions (R2, p. 16) and so could occur to her when she was alone. After reviewing what she had written in the first sitting Helen remarked, "Now I didn't touch anything but I did take notes." She laughed, "I don't know if that's allowed. I had to write things down, you know, because that's the way I write" (2, p. 2).

After this meeting Helen commented: "When I got some of these ideas I could have done them in the piece instead of just writing them down in notes the way I did" (R2, p. 26). This indicated that under different circumstances Helen may have translated these directly into text. But within this task environment Helen referred to her notes and to the text she had already written to orient herself within her

composing task.

Helen's next comments suggested planning operations.

She said:

So what I've got to decide now is how am I going to start, what do I do next? [pause] and I think I'll go into the bit about seals [one of her notes between sessions concerned seals]. I think that's what I'll try. Now, number my page, put my name on top, get me going [types]. And I ended [looks back at text]. Okay, so I've got to start a new paragraph. Uh. . . . (2, p. 5)

This led to translating interspersed with evaluating and some editing. At one point the translating slowed down and appeared to be getting very difficult. She said: "There's more than one way [pause]. There's more than one way to swing a seal, or [pause], let's see, uh, uh [pause] he [pause] uh, uh" (2, p. 10). Then Helen's comments began to reflect the generating process interspersed with several types of planning. She commented:

I think I'll just uh, he uh, I don't think there's one [a quotation] there about a cat house. I just, see now I'll look it up in the dictionary cause I'd really like to use that, could be there, I'd like to use that in reference to the seal, too. [Consults dictionary]. I don't really know where I'm going with this yet. Hope it will come in time. Just a matter of getting everything down and then once I get the first draft made I'll see if it's going to work out or not. [Still consulting dictionary] Cat [pause] it's not there, so I'll have to make one up. (2, pp. 10-11)

When she appeared to reach a point where she had sufficient accessible knowledge to proceed, translating became predominant and remained that way for the rest of the

composing session. Other processes intervened frequently, but Helen always returned to translating. Of the processes that interrupted translating, planning was foremost but there were also numerous instances of evaluating, revising and generating. These findings agreed with what one would expect intuitively. The article was well underway at the start of this second session; the writer's goals were to translate her ideas into text. The following excerpt from the second protocol illustrated the nature of Helen's composing at this time. In the midst of translating, Helen asked herself,

Now, what am I going to do? One of those days I'm going to do a study on, uh, how cats come to be scapegoats, if you'll pardon the metaphor, mix my metaphor. One of those days [types] on [types] how such innocent creatures as cats came to be scapegoats, if you'll pardon the mixed metaphor, and for, uh, scapegoats, got to be scapegoats for something else, scapegoats, I think I'll just say in all the situations I've mentioned and dozens of others. Uh [pause]. Perhaps [pause]. Let me see, have I got anything here [consults her notes]. Perhaps cats like women [pause] have been victims [pause] of uh [typing] have been victims of other people's [pause, indistinguishable murmur] of, uh, false, been victim of [pause] let me see, can't say false myth, I suppose because a myth is false is [pause] far as I can see [looks up definition of myth and reads it out] uhm, so I could probably say, I think I'll put false myths anyway and I can change it after because it doesn't seem to necessarily say here that myths are false, [types] false myths, false myths, uhm developed over the years? by people who don't know, developed throughout history by people who don't know what they're talking about and, uhm, don't attempt to find out, and make no attempt [types]. (2, pp. 18-21)

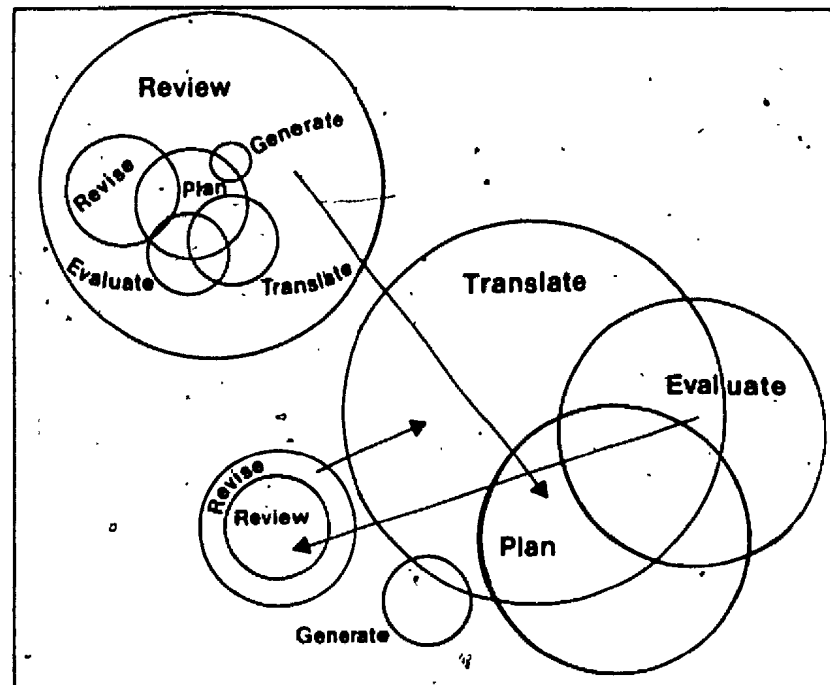
When Helen reached the point where she had utilized all



the information she had amassed, she stopped and stated: "Yeah I think that's about all I can do now. I'm sort of getting into something else and I really haven't thought about it yet" (2, p. 26). It seemed that Helen needed to generate ideas about what she would say and how she would proceed but she was too tired to proceed at that time.

Third session. The researcher's impression of the third session was that the process was characterized by a lengthy review followed mainly by extended translating of ideas into text. Analysis of the protocols again confirmed this basic impression and added details to augment it. Figure 5 represents the relationships among processes evident in session three, as based on this analysis.

Figure 5.



**Figure 5.** Schematic representation of the relationships among the writing processes within the third composing session.

Helen began with an extended review which covered the text she had written in the two previous sessions. Other processes were embedded within the review, making it unlike what would be expected from a linear model of composing. Indeed, the review appeared to be a microcosm of the entire composing process since the comments that were interspersed with the reading of the text were indicative of most of the elements of composing: generating, revising, translating, organizing, evaluating and planning. This review provided an illustration of two central features of the cognitive-process

model: (a) the deployment of cognitive processes is directed by the writer's goal(s) and (b) the cognitive processes within composing often assume an embedded structure. At other times Helen appeared to utilize the same processes in different relationships and to different ends.

The following excerpts from the third protocol illustrated how some of the writing processes were marshalled by Helen for the purposes of review. After reading one section of her text in which she had taken some of the negative sayings that are made about cats and ascribed them to seals, Helen commented:

Well now, I'm changing that because that was what I found when I looked it up, but, uh, my friend just said it's more common to say "there's more than one way to skin a cat" and that's what I'm going to use. There's more than one way, it's not in the quotations but it's often said there's more than one way to skin a seal. (3, p. 3)

Later in the review, Helen asked herself:

Oh, now what am I going to do with that? Killing a seal by choking her with cream? So maybe I need that after all. Uhm. Wait now, uhm. More than one. Yeah. I think I'll just change it to more than one way to skin a seal. Wait now, though. I like that "cream" bit there. So perhaps I'll, I'll leave that in. More ways of killing a seal than choking her with cream. I'll leave that in so then I'll put a little stet mark there to show that I want to leave that in. (3, pp. 5-6)

In the rest of the protocol there were many instances of planning and of translating (some of which were extended). Translating was frequently interrupted by planning and by

evaluating. The following are some statements which evinced plans and which are representative of planning statements in all three sessions: "I've got to carry on from there" (3, p. 9), "must check that" (3, p. 12), "Now I'm just going to say" (3, p. 13), "I'll probably change that after," (3, p. 13), "I'll just make it two [examples]; there doesn't always have to be three" (3, p. 20). Statements such as those which follow were taken to furnish evidence of evaluation: "There's one too many" (3, p. 8), "I can't get this right" (3, p. 13), "I need an adjective there" (3, p. 18). The following comment was interpreted as a combination of an evaluative statement and a process plan: "Now this is pretty mean but I'll put it in anyway and then take it out after" (3, p. 18).

Near the end of the session there was a second instance of reviewing, this one of much shorter duration than the first. It began with a written planning statement in which Helen made a note to herself to try to work another quotation into the text later. Then she continued: "Oh, maybe I can get it in there now. Wait, I'll just put it up here" (3, p. 23). She followed these statements with a sequence of translating. But this episode in its entirety represented a revision because the text produced was then quickly integrated by the writer into the existing text. Once again this was an example of both the embedding of processes within a process and the utilization of a combination of processes

to further a specific goal.

Helen concluded, with a rhetorical plan in the form of a note to herself which she would implement when she returned to work on a second draft of the article.

In this session as well as in the two previous sessions the writer's process of translating her ideas and knowledge into written text was interesting to analyze since it showed considerable variability. For example, in all three sessions, instances of translating varied in the extent to which there was evidence of: (a) reviewing, evaluating and revising interrupting the translating process and (b) revising or reformulating on a verbal level within the translating process. In the instances in which reviewing and evaluating interrupted the translating process the writer stopped translating to reconsider what she had done. Sometimes written revisions followed, often they did not. In other instances Helen did not appear to stop translating to review what she had written but she was observed trying out different wordings as she was translating. In these instances the process of making changes was more aptly termed reformulation than revision since the changes occurred "in process" on a verbal level. They were usually not accompanied by evaluative statements and did not, in this researcher's opinion, represent an interruption of the translating process. Reformulating appeared to vary in frequency with the degree of difficulty the writer found in getting her ideas "down" and may also be a feature of her

particular composing style.

There were many examples in which translating did not proceed in a straight line forward and involved verbal reformulations but no evaluation or written revisions. The following might be typical examples. The first is drawn from the second protocol.

Uhm. Killing a seal by choking her with cream. They'd say that's even more inhumane than the way, killing seals by choking them with cream, they'd say that's even more humane, more inhumane or less humane, less humane than the way they kill them now. (2, p. 12)

This next excerpt is from the third protocol and comes from the beginning of a long period of translating.

Some, some researchers, uh, some researchers uh maintained, uh, that the fear of women, that the male, the male fear of women, of women is based on, uhm, is based on, uhm, woman's mysterious menstrual cycle, mysterious moon-dominated menstrual cycle and the uh, and, uh, the mystery of the birth process itself, self. Some uh, wait now. Feminists and others have uh, feminists and others, uh. Some, a few feminists. A few feminists and others, uh, feel, feel that the fear is based on jealousy, this fear. (3, pp. 9-10)

Here again, there was considerable reformulating but no written revision.

Often it would be necessary to observe the writer composing or have a copy of the text produced to compare with an audiotape or transcript in order to distinguish written revisions from reformulations. This example is from the second protocol and contains both verbal reformulation and

written revision, as well as evaluation and planning.

Now let me see, the reaction to (pause) such statements if they applied to seals would be good, would surely be good enough for an extra for a few extra millions in contributions uhm reaction, reaction, reaction to statements, statements (sigh) such as those above (pause) that's not very good but I'll put it in for now. I think I can put careful manipulation of (humming) statements, and like those above instead of such as those above, uhm, would surely be good for a few extra million, millions in donations from seal lovers the world over. (2, pp. 17-18)

In this example Helen revised "reactions to" to "careful manipulation of" and "such as" to "like" on a written level. The sentence which she left within the text read: "Careful manipulation of statements like those above would surely be good for a few extra millions in donations from seal lovers the world over."

At other times, in the midst of translating, Helen evaluated what she said and made plans to reevaluate it later. This was all in a verbal level and would not appear at all in the text. An example from the third protocol would be:

I can't get this right now. I'm just going to say "to give the comfort and to, to provide the com. .to provide the comfort of another living creature in the house, uh, I'll probably change that after, (pause) living creature in the house. (3, p. 13)

These examples were provided to give some indication of the flavour of Helen's translating as well as an idea of the

subtleties of composing that never appear in a written draft.

Summation. Flower and Hayes (1981a) stated:

A process that is hierarchical and admits many embedded sub-processes is powerful because it is flexible: it lets the writer do a great deal with only a few relatively simple processes - the basic ones being plan, translate and review. (Flower and Hayes, 1981a, p. 378)

This statement sums up the elements of Helen's composing (as they were inferred from her protocols) in the three composing sessions. Her writing processes did appear to assume a variety of hierarchical and embedded arrangements within a flexible framework. The most striking feature was the flexibility, which was achieved through the ways in which the three basic writing processes and their sub-processes were deployed. While the numbers of processes involved in writing were not large, their permutations and combinations were. In fact, Helen exercised considerable latitude in how she marshalled the writing processes.

This latitude highlights the dynamics of composing, which, in this investigator's opinion, is where a very effective emphasis in studying composing lies. From the analysis of Helen's composing over three sessions, it was obvious that a writing process cannot be assigned to any one time, place or purpose in composing. The sessions were marked by an ebb and flow movement; processes in various combinations came into and faded out of prominence over the course of each session.



The observation of this type of movement leads to the question of whether there was direction for the movement, and if so, "who turned the wheel?" Although the discussion in the section which follows on Goals, Strategies and Plans will deal with the issue of direction, in detail, it can be stated simply that the movement was directed and the concept of the monitor as a "writing strategist which determines when the writer moves from one process to the next" (Flower and Hayes, 1981a, p. 374) was a useful one for understanding where the direction originated. It is important to remember however, that with a competent writer like Helen, who could call upon a wealth of writing plans and experiences, much of this direction would be unconscious and instantaneous, proceeding on several levels or in several directions simultaneously.

The three sessions that have been described were separated over time, but they were all directed by the same goals and strategies toward the production of one piece of text. Thus the three are part of a whole. Each session must be seen in relationship to the one before because it was evident that Helen proceeded each time in view of what she had already done. This was as true for the first session as for the third. Helen began the first session by generating information for her article. But she did this within the purview of the global plans she had formed in her mind before the session.

The review with which session two began was an obvious link back to session one. But this session was also

predicated on the plans and information Helen had generated between the sessions. Session three began with a large-scale review which related this session back to the two previous sessions. Helen based the moment to moment plans which guided the completion of the draft squarely upon what happened in that review. Reviewing was probably more prominent in this composing than it would have been if the article had been composed over a shorter period of time. But then it could also be said that translating might have presented more difficulties if the topic chosen had been highly abstract. What this points up, of course, is that the deployment of the writing processes was affected by various elements of the context for composing. The sessions can be described as they occurred, but one cannot say they would be the same in other circumstances, (Some of the circumstances which may have affected the composing in these research sessions are discussed in a later section under The Context for Composing).

At this point some observations about each of the basic writing processes will be presented, beginning with the process of reviewing. The periods of reviewing, which encompassed rereading, evaluating and, at times, revising, illustrated the recursive nature of composing which many researchers have noted. The instances of reviewing were also clear examples of the embedded arrangements of processes within processes set out by the cognitive-process model.

In the course of these sessions, reviewing could be seen both as a way of initiating a new session by providing a link with the past and as a process triggered in the midst of translating or planning. In both instances, reviewing could help refresh the writer's mind about what she had already done, provide an opportunity to reevaluate it, and help direct her toward what to do next. Smith (1982) noted: "What is written (or revised) becomes in effect new information to the writer, a new basis for reflection" (p. 104). This is accomplished, in large part, through review.

Hayes and Flower (1983) remarked on the "enormous new constraints" (p. 209) that can be inherent in translating notions, ideas or structured knowledge into written language. It is likely that the ease of translating would be affected by the accessibility of the writer's knowledge, her command of the conventions of the English language and the clarity of her plans and goals. Helen is an experienced writer and the conventions presented no problems. But fluctuations in the difficulty of translating (shown by fluctuations in the amount of verbal reformulation it contained) could be traced to her knowledge and plans. Thus there were times when she was seen to be struggling with problems of creating coherent text from her store of ideas and her new information as well as some times when the process of tailoring her writing to her goal and plans (as evidenced by her evaluative comments) presented constraints.

The writing process that is most difficult to discuss is

planning. In terms of the cognitive-process model, planning is one of the three basic writing processes (planning, translating and reviewing) under the direction of the monitor. At the same time, the goals, strategies and plans formed through the planning process drive the entire composing process, including, of course, translating and reviewing. Intuitively, it would seem that the monitor would also operate under the umbrella of the writer's goals, strategies and plans.

Certainly planning was an integral part of Helen's composing in all sessions, before session one and between sessions one and two. Planning occurred on several levels. First, it proceeded at an immediate, local level to guide moment by moment composing; these plans arose as needed, were implemented and faded away. Second, strategies (broader plans of long standing) were drawn from Helen's store of knowledge; these pervaded the three sessions. Third, a top-level goal was set in planning prior to composing and it was evident that Helen kept it in mind throughout her composing sessions. She planned and translated in light of her goal and reviewed her text in its terms. This goal, and to a lesser extent, the strategies she called on, assumed a superordinate position and all other aspects of composing were filtered through them.

There were several very clear instances in the protocols of a linear relationship between planning and translating.

One obvious example occurred in the first session, in which Helen utilized the plans she had made before the session began to direct her search for information and her writing of the first lines of text. There were also many instances in which planning was embedded within other processes, such as reviewing, and others in which it was related to evaluating, generating and translating in a variety of ways.

Taken together, these three sessions represented the composing of the first draft of Helen's article, "Cats". While the description that has been provided indicated what occurred, it has skirted questions of why it occurred and what provided the direction for composing. These issues will be addressed in detail in the following section.

#### Goals, Strategies and Plans

During the three research sessions Helen worked on an article which she called "Cats". Helen indicated that she was taking up a real writing task (as opposed to writing something to which she had no commitment beyond the research context). She followed up an idea that had been with her for some time to write an article on some of the common negative sayings about cats. She intended to submit the article to the weekend edition of a national newspaper for publication. Throughout Helen's composing, the initiation of processes and movement between them (again, as inferred from Helen's protocols and comments after composing) appeared to be purposeful. Within the research context, her composing

appeared to be directed by forces operating on three levels. These have been labelled (a) goals, (b) strategies and (c) plans to differentiate them.

First, and on the broadest level, it could be said that Helen's composing was initiated and propelled by the encompassing goal of producing a marketable article, that did not require extensive research and was short enough to be completed in the first draft within the research context. This goal encompassed the rhetorical problem as the writer defined it and had been established by the writer before the first composing session began. As composing progressed, the goal was modified and refined in a tentative manner in terms of purpose, tone and audience. Second, on a more immediate level, Helen's composing was directed by a "first draft strategy" which remained in effect throughout the composing sessions. This strategy placed priority on generating a large number of ideas related to the chosen topic and translating them into grammatical form. This was done on the implicit understanding that a tighter focus would be developed and the translation into written language would be refined on successive drafts. Third, the composing was guided moment by moment by many instances of planning about what to say, how to organize information and how to go about the detailed actions of composing. These plans were of short duration. As one was implemented, new ones were generated and put into effect.

One can look at the goals, strategies and plans that

Helen set for herself and ~~page~~ their interactive effects with other factors in the task environment by examining her protocols and interviews. In the view of the cognitive-process theory the writer's goals, strategies and plans are of crucial importance in composing since "all those forces which might 'guide' composing, such as the rhetorical situation, one's knowledge, the genre, etc. are mediated through the goals, plans and criteria for the evaluation of discourse actually set up by the writer" (Flower and Hayes, 1981a, p. 379).

Goals. There seemed to be three definitive elements to the goal Helen established for her composing. These were: (a) to write a marketable article, (b) to fulfill her promise to take part in this study and (c) to avoid a long-term commitment to the research. Helen drew on her knowledge of markets, her experience in writing articles and her perceptions of what the research context might entail in particularizing her goal so that it assumed the more tangible form of a "short", "light article", that would examine some common negative attitudes toward cats, for the audience of a national newspaper or general interest periodical.

Because Helen did not want to commit her limited writing time to the research project over the long term and because she was uncertain how thinking aloud and the presence of the researcher would affect her composing, she chose to write a piece which she had no obligation to deliver to anyone, which

took a form she knew well and which required only a short time for research and writing.

The following quotation from the second retrospective interview provided a glimpse of the body of knowledge and experience on which Helen drew in giving her goal a tangible form. She stated that this was "a 1000 word article" and continued:

I would never write 2000 words on something like this. It would get too much for the subject unless you were doing a studied piece where you had researched it and where you found out about how all this started. Then it would be more like an academic paper. (R2, p. 25)

Helen reflected back over her composing after the completion of the third session:

What I wanted was just an innocent little article about cats. . . .I wanted something pretty light too. And I'm still trying to keep the light touch but it's turned a little heavier than I intended it to be. But this is not the only time this has happened with me. (R3, pp. 8-9)

This last example illustrated two other features of Helen's goal-setting that were reflected in the protocols and interviews: a) Helen monitored her goal throughout her composing and b) she permitted some flexibility in her goal-setting, allowing her aims to change gradually as her ideas developed in writing. These will be discussed in more detail in the paragraphs which follow.

It was apparent in all of Helen's protocols that she evaluated her composing in terms of her criteria for what was



appropriate in the "light article" she had set out to write. For example, in the first protocol, Helen said, "but I've got to try to keep it light" (1, p. 5), "better not get too serious" (1, p. 8), "probably try to make that a bit funny" (1, p. 9). In the second protocol she commented, "So now I'm just going to speculate" (2, p. 5).

Although it was apparent that Helen monitored the fit between what she set out to write and what she wrote, she was flexible in applying some of the criteria suggested by her goal. For instance, Helen did not try to redirect her thinking as her ideas assumed a feminist framework and she was willing to refine both her initial concept of the audience for the piece and her initial idea of the appropriate tone for the article in line with her developing ideas. Thus, near the start of the second composing session Helen remarked, "now I don't know if this thing could even turn into a comparison between women and cats. I don't know. It didn't start out that way" (2, p. 3). And after the third session Helen remarked:

I wanted to do something kind of slanted toward "Mermaid Inn" in the Globe and Mail and this is what I was thinking about with this, or the Cats magazine. But I think since there's so much about women in it now, the Cats magazine tends to be very light and I don't think they'd want to get into this stuff. The Globe and Mail might or even a feminist magazine. (R3, pp. 11-12)

Based upon Helen's comments, this flexible manner of goal-setting and adjustment is her norm. It is not the way

that she always works, however, for she contrasted writing this article to situations in which "the whole article is in my head before I write anything down" (R3, p. 9). In those instances, presumably, the finished article would mirror the initial goal to a greater degree.

Even in the context of composing this article, there were some aspects of her initial goal that Helen did not adjust. For example, she was not prepared to alter her basic concept of this as a short, conjectural piece. She stated:

I'm not going to investigate. You know I say "One of those days I'm going to do a study." But I'm not doing that now. I'm not trying to find out why it is that cats are maligned. I'm just speculating because it's more of an essay than a studied thing you know. (R2, pp. 13-14)

Thus it can be said that Helen modified her goal as her ideas developed in the course of composing but she still kept sight of her initial goal. She was not surprised by the way the article turned out because she monitored the development of her ideas. This remark is taken from the final interview:

When I started all I was talking about was the cats and the idea of seals was in my mind as a comparison more than women. But when I started finding all those references like "catty", "she's a cat" and that kind of thing that's what made me think about the women. And then I was reading Mary Daly at the same time. She was talking about language and what language does to you. So it all kind of grew together. (R3, p. 6)

Finally, Helen's comments indicated that her process of refining and adjusting goals goes on through successive

drafts. After completing this draft, she stated:

"Once I get this far I feel better about it. I know that it will eventually be an article. It might not bear much resemblance to what I have now but the idea will be there, the cat and woman idea will be there. (R3, p. 5)

Strategies. Strategies serve the writer in that they either "decrease the number of constraints being acted on or. . . lower the level at which they are deemed satisfied" (Flower and Hayes, 1980b, pp. 40-41). Helen's main strategy in these sessions has been labelled a "first-draft strategy." It appeared to incorporate two sub-strategies: a) "partition" (divide the problems of composing into more manageable chunks) and b) "priorize and satisfice" (set priorities and adopt the first acceptable situation) (Flower and Hayes, 1980b, pp. 41-42). Most often these sub-strategies worked together.

In general terms the first-draft strategy seemed to incorporate three broad notions:

1. A first draft was preliminary and inexact. It was permissible to leave blanks and include notes about more work being required. Thus the problems of writing did not all have to be worked on at once; it was permissible to partition.
2. Priority was put on getting ideas down on paper. Best expression or full development of ideas was not necessary.
3. The criterion for satisfice or proceeding, was that the writing be in sentence form and make sense to the writer in order that she could continue to generate ideas and translate them into written text.

These notions were reflected in (a) more than twenty instances of statements expressing the intention to partition/priorize and satisfice in the protocols and (b) many statements in the interviews.

The combination of the strategies of partition with priorize and satisfice in the protocols concerned: (a) choice of title, (b) many instances of word choice, (c) decisions to leave blanks and look for information later, (d) delay of decisions on the appropriateness and accuracy of information chosen, (e) evaluation of wording on a sentence level, and (f) delay of decisions on whether to include or delete statements.

These were reflected in statements such as "Now I'm sure I won't call it 'Cats' but I'll call it 'Cats' now" (1, p. 1), "leave that blank and ask her about it" (1, p. 2), "I'll probably change that but anyhow just to get ahead leave it there for now." (1, p. 7), "What's his name, Patrick Thompson? or something like that. I'll check" (2, p. 15), "No I can't get this. Right now I'm just going to say. . ." (3, p. 13), "This is pretty mean but I'll put it in anyway and then take it out after" (3, p. 18).

In writing this draft Helen evaluated both what she wrote and the progress of her composing. But her comments, such as the last example above, illustrated that she partitioned evaluation into stages and left final evaluation for a future draft. These next examples illustrate the

extent to which Helen abided by her first-draft strategy. In the second protocol she remarked, "I don't really know where I'm going with this yet. . . . Just a matter of getting everything down and then once I get the first draft made I'll see if it's going to work out or not" (2, p. 11). After the final session, Helen said:

Everything is done the same way whether its something I've been asked to do or not, in the sense that the first draft I don't care, I don't really have much of a focus on the first draft. Now that wastes a bit of time but it's the only way I can do it. (D, pp. 26-27)

Helen's statements also contained evidence that she employed other strategies in composing. None of them seemed to exert as much influence over her writing as the first-draft strategy did. Nevertheless, they provided a measure of direction for her composing. For example, Helen purposely distanced herself from her writing over time in order to evaluate it: "Usually what I do is write as much as I'm going to in one day and put it away and don't read it over until I come back [to write another day]" (R1, pp. 1-2). In addition, she envisaged her composing in terms of at least three drafts and proceeded on that basis.

I never do less than three and I sometimes do four and I've done up to eight on one thing. Three is usual. . . . So this is the rough one, the second I'm getting more of an idea, the third one is going to be what I want or as close to what I want as it can be. (R2, pp. 29-30)

Helen also indicated strategies she utilizes for beginning a new piece of writing ("the beginning is always hard," D, p. 18), as well as strategies that govern her writing in specific genres (for example she has different criteria for the mix of quotation and narrative, and for choice of vocabulary in articles versus short stories). From her comments it was clear that these strategies have developed over time from extensive reading, writing and feedback from others.

Plans. Flower and Hayes (1980 b) saw plans as the most powerful types of strategies available to writers because they can be used to reduce and integrate constraints (p. 43). In this study plans are distinguished from strategies on another basis as well: plans are seen to operate in the short term and be related to decisions that must be made continuously throughout composing whereas strategies are of longer standing and direct composing on a broader level.

There were a great many instances of planning statements in Helen's protocols and some examples of these have already been provided in the discussion of the writing processes. The following examples have been chosen to indicate the different sorts of planning that guided Helen's moment by moment composing.

On a broad level were plans that expressed intentions to do something related to solving the rhetorical problem adopted by the writer. The following are some examples of rhetorical plans: (a) "Now I'm just going to lead into the

next paragraph, which is always hard" (1, p. 2), (b) "So what I've got to decide now is how am I going to start? What do I do next?" (2, p. 5), (c) OK. I've got to carry on from there" (3, p. 9), (d) "I'm just going to write 'Check carefully to see if the seal part should be omitted and put aside to use in another article'" (3, p. 25).

On a narrower, more immediate level were plans that represented intentions to say or express certain content (plans to say), and others that incorporated intentions to direct the composing process in certain ways (plans to compose). These next statements are indicative of plans to say: (a) "Uhm. So I probably could say, I think I'll put in 'false myths' anyway and I can change it after" (2, p. 20), (b) I'm trying to get something then about dogs. I'd like to put something in about mink too" (1, p. 9), (c) "Right now I'm just going to say. . ." (3, p. 13). The comments which follow represent plans to compose: (a) "I'm kind of connecting Michelle up with the cats here for a minute" (1, p. 2), (b) "probably try to make that a bit funny" (1, p. 9), (c) "So I've got to start a new paragraph" (2, p. 5), (d) "I think I'll go into the bit about seals. I think that's what I'll try" (2, p. 5), (e) "I need a quote there" (3, p. 4), (f) "I'll just put it in up here" (3, p. 23), (g) "I'll use three [examples]" (2, p. 10).

These planning statements are only a selection from the protocols. They were chosen to indicate both the large

number and the scope of the plans that were being formed and implemented within Helen's composing in all sessions.

The discussion thus far has centered on a description of the writing process within Helen's composing and the goals, strategies and plans that provided its direction. But composing never occurs in a vacuum. Therefore the discussion moves now to a consideration of the context in which Helen's composing occurred.

### The Context for Composing

In this study, the context in which composing occurred was considered to be a very important factor in determining the nature of the composing that took place and therefore, in affecting the nature of the composing that was observed. But one cannot assume that all research on writing treats considerations of context alike. This was illustrated by Emig (1982), who contrasted inquiry on the basis of whether it is governed by a positivistic or phenomenological outlook. She stated:

One of the major differentiations between positivism and phenomenology as governing gazes is the attitude toward the context in which phenomena appear - toward what can be called the width of one's gaze and the focus/field relation. For the phenomenologist, focus upon the phenomenon must include acknowledgement of the field; but for the positivist, there is no field, only focus, only the phenomenon to be examined a-contexturally, with no consideration or acknowledgement of setting. (p. 66)

Experimental research is based on a positivistic



outlook. Since it stresses generalizability, it sets up a controlled, laboratory setting and engages in what Mishler (1979) called "context - stripping" and in making "context - free assumptions" (in Emig, 1982, pp. 66-67). But Emig, citing Urie Bronfenbrenner (1977), noted that the controlled setting is also a context, "a context of a very powerful sort, often deeply affecting what ~~is~~ being observed and assessed" (p. 67). This point has also been made by Berkenkotter (1983) and Cooper and Holzman (1983).

Indeed, Cooper and Holzman (1985) have criticized the research on which the cognitive-process model of writing was based for ignoring the influence of the research context upon the findings. Flower and Hayes in fact gave very little information about their research subjects and the context in which they composed. There are occasional indications that their writers responded to writing tasks that were conceived by the researchers. For example, Flower and Hayes wrote: "In the following protocol, we see a subject responding to the demand for sufficiently integrated knowledge. She has probably never had to talk, much less write, about her subject before" (1980b, p. 34). The following excerpt from the protocol of one of their subjects may indicate that their subjects wrote under conditions that differed in some degree from those they were used to. One writer said, "Until the coffee comes I feel I can't begin so I will shut the door and fee, I have a bit more privacy" (1981b, p. 235). But they offered no definitive statements about the context in which

their subjects wrote, nor did they discuss the possible influence of the context upon what they observed. The intent in the present research was to understand Helen's composing from her own frame of reference: to examine what she viewed composing to be, to learn what it meant to her and to observe how she went about it. From this point of view, the context in which Helen's composing took place was an important factor when inquiring into her attitudes and observing her processes. Attention will now turn to the conditions under which this present research was conducted. How did those conditions affect the task environment? What were their likely effects on Helen's composing?

It has already been acknowledged that the setting for this inquiry was not controlled, in an effort to keep Helen's working environment as natural as possible. Yet there were some intrusions upon the writer's normal working environment. Their influence will be addressed through comments Helen made during the retrospective interviews.

The first intrusion to be considered was the presence of the researcher. After the first composing session, Helen stated:

I can't even understand how reporters can write, because there's a whole lot of people in the office. I mean I can't write, if anybody else in the house came in and sat where you're sitting. The only reason I can do it now is because you're here about it. But when my husband was alive, or the children or anything, as soon as they come in, even if they're not talking, I just stop. I always just stop. But I suppose it's something you get used to. (R, pp. 18-20)

Helen was offered a taperecorder so she could work much as Donald Murray had in Berkenkotter's (1983) study. But she felt she would be uncomfortable. She said, "No, I'd rather for you to be here because I'm sure if I was here by myself I'd feel too foolish to do it" (R2, pp. 26-27). That comment raises the second, and what appears to have been the major intrusion, the process of thinking aloud.

Pierstorff (1983) praised the cognitive process model developed by Flower and Hayes but questioned whether the writers in their experiments "were affected in as yet unidentified ways when they were being observed in the act of composing. One wonders if there is a quantum difference between the approaches used by that writer who consciously and vocally observes himself in the act of writing and that writer who writes in her normal writing environment, unobserved save by herself" (p. 217).

After the first composing session Helen said:

I'm interrupting myself because I'm doing it like this. You're not getting, you'll never get the way I really work. It's impossible. Because the way I really work is alone. I don't say anything out loud. The only thing I'll ever say out loud is if I'm doing something for the radio and I wanted to know if it's easy to read. . .so the whole thing is false." (R1, pp. 12-13)

When asked if thinking aloud had interfered with her composing, she replied, "I don't think it interfered with what I got down. . . . But for your purposes it's really hard

because it's an unnatural situation (R1, p. 14). She added:

I usually know what I'm going to say before I put it down. But it's almost unconscious in a sense. I'm about a sentence ahead of myself and that will come in a hurry and then I have to stop and think about the next one. . . . But it's just so hard to think about saying it. (R1, p. 14)

Thinking aloud seemed much easier for Helen in the second session. Her comments confirmed this perception and indicated two reasons for the change: (a) familiarity through practise and (b) the nature of the composing task. Helen reported:

It's like everything else, you know, you can get in the habit of it. . . . I didn't mind it as much today either and actually I was trying to figure out what I was going to do today too. Now the other bit [done in first session] I think came more easily so that's when it's hard to put down what you're thinking because it's coming so fast that you're thinking but you don't realize it. But today the whole way through it I was wondering how I'll do it. I hadn't decided upon the approach so that made it easier for me to talk about it. (R2, pp. 27-28)

These observations confirm the opinion of Odell et al. (1983) that thinking-aloud protocols can reflect what writers consciously attend to when they write although they may not tap the writers' tacit knowledge nor reflect all their generating and planning activities (p. 234).

During the third composing session Helen appeared at ease again with thinking aloud. When she had finished composing, Helen stated: "Now that was the easiest bit I did by far" (R3, p. 1). The character of her protocol,

infrequent pauses and the small amount of effort spent searching for both ideas and ways to organize material reflected the ease with which the last part of the text was constructed.

The intrusions into the writer's environment appeared to have several effects upon the writer. They may have (a) slowed her down, (b) influenced the way she proceeded, and (c) influenced the way Helen felt during composing.

After the second session Helen indicated that she felt she had been slowed down. She stated, "There's the two things: this is something I'm trying to do [as opposed to a piece of writing she felt compelled to do] and the other thing is that I'm conscious of having to talk about it. And that really takes me longer" (R2, p. 6). The following comments, made during the same interview, showed that her method of working may have been affected as well. She remarked:

I might, even though I know it doesn't matter to you, I might be trying to fix it up a little bit more just because I know someone's here. . . .it's hard not to, it's a little bit like being in school. . . .You want the teacher to think you're doing the best you can. (R2, pp. 8-9)

After the third session Helen mentioned the anxiety she feels when she is trying to start an assigned piece of writing. "I just keep thinking I'm not going to get started, I don't know what I'm going to say" (D, p. 9). She does not experience the same feelings in trying to start a self-

initiated piece. The composing sessions reported here resembled the former situation in that Helen may have felt a sense of obligation to the researcher in addition to the sense of being on view. This could account for her feeling of being in school and also may account for the global planning Helen did before the research sessions which enabled her to go immediately to producing text in the first composing session. As Helen stated later, "the beginning is always hard" (D, p. 18). Helen's choice of topic, which has been discussed earlier, came about as part of this prior planning and reflected her perception of what would be appropriate in the research context.

In addition to generating global plans and specific ideas related to her topic before the first session, Helen generated ideas in the form of notes between sessions. This paralleled her normal procedure which is indicated in this remark from the beginning of the second composing session. Helen laughed, then said: "Now I didn't touch anything but I did take notes. I don't know if that's allowed. I had to write things down, you know, because that's the way I write" (2, p. 2). The composing sessions had been scheduled to conform to the writer's commitments, but the schedule was not likely as flexible as her normal working conditions. This may have caused more of a separation than was normal between planning and generating ideas on the one hand, and translating these plans and ideas into text on the other. After the second session Helen asked:

You don't want me to do anything on it do you [between sessions]? I've got loads of other things to do but now the last time when I got some of those ideas I could have done them in the piece instead of just writing them down in notes the way I did. (R2, p. 26)

In spite of the intrusions that have been mentioned, Helen did not seem to feel that the research situation changed the essence of the way she writes. Several times she pointed to similarities between the development of "Cats" and the development of her writing outside the research context. In fact the writing environment was much closer to normal than any laboratory setting would be. There were no time limits nor assigned topics and the writer set the pace. As a person who is accustomed to working in the midst of a myriad of influences and demands on her time, Helen accepted the research context and worked within it.

The discussion turns now to a brief consideration of text-based analysis of Helen's revising process. Like the background report, this analysis is intended to broaden the picture of Helen Porter as a writer by going beyond the observations of her composing in a research setting.

### Revision Analysis

This section analyses the revisions made in one article in terms of (a) the purposes the writer had in making them and (b) their effect on the meaning of the text. The article

was an assignment from Books in Canada in which three works of fiction were to be reviewed. The assignment carried with it a time deadline and a "stringent" word limit. It was written in three sections of approximately 250 words each. One section was devoted to the book of each author. There were two typed drafts, composed over a period of two days. The revisions were identified and analyzed in terms of the taxonomy developed by Faigley and Witte (1981). Selected revisions were then investigated through the discourse-based interview.

In all, there were four stages of revisions to be analyzed. Stage one consisted of the changes made in the first draft in type. Based upon the observations of Helen's composing and her comments in the interviews, these were identified as changes made as she was in the process of composing the first draft. Stage two revisions were those made in ink on the first draft. These were identified as changes made some time after Helen had completed the first draft but before she attempted a complete second draft. Stage three consisted of changes made between the revised first draft and the second. Finally, stage four revisions were those changes made in type on the second draft.

All of the choices investigated through the discourse-based interview (as they were explained in Chapter III) were found to be based on rhetorical concerns. That is, they reflected the author's goals, strategies and plans for her topic, audience and her own projected role as well as her



responses to the constraints (such as word limits) associated with the task. The following examples illustrate the type of choice that was investigated. In the final draft Helen at times utilized personal pronouns to insert herself into the review. This was illustrated in statements such as "I felt that a sixteen-page introduction was too long for a work of this length." At other times she, in effect, withdrew from the review by choosing a less personal presentation as illustrated in this statement: "At times the reader's credibility is stretched too far, even for a work of this type." While these examples remained unchanged throughout the four stages of revision, others did not. For example, Helen changed "one that I liked particularly, perhaps because it varies unexpectedly from the female as temptress theme" to "one that varies unexpectedly from the female as temptress theme." In addition she made the following revision: "just as I was satisfied that I had a person or situation figured out" was changed to "just as the reader feels on top of the situation."

When the reasons for these revisions were probed through the discourse-based interview, some of the factors behind the changes were revealed and as well some of the reasoning that went into the choices that went unchanged was illuminated. In effect, all of these choices, whether they stayed constant or underwent revision, were found to be based on considerations of style that were deliberate yet almost

unconsciously applied to composing.

The discussion now turns to the analysis based on the taxonomy devised by Faigley and Witte. In the discourse-based interview, Helen stated that she had written the article just before her deadline, had known "pretty much" what she wanted to say before writing and had not changed her goals during writing. This was confirmed through the analysis in that there were no macrostructure changes made at any stage. This meant that the gist of the text after four stages of revision was the same as it was at the beginning. Over the whole article, 27 percent of the revisions were formal, 38 percent were meaning-preserving and 35 percent were microstructure changes. Table 1 shows the frequencies and percentages of revisions by stage and type of change.

Table 1

Frequencies and Percentages of Revisions by Stage and Type

-----							
Type							
-----							
Stage	Formal		Meaning- Preserving		Micro- structure		Total
-----							
1	(13)	30.23	(21)	48.84	(9)	20.93	(43)
	34.21		38.18		18.00		
2	(9)	17.65	(15)	29.41	(27)	52.94	(51)
	23.68		27.27		54.00		
3	(11)	26.83	(17)	41.46	(13)	31.71	(41)
	28.95		30.91		26.00		
4	(5)	62.50	(2)	25.00	(1)	12.50	(8)
	13.16		3.64		2.00		
Total	(38)		(55)		(50)		[143]

Note. (frequency) % stage/type

% type/stage

This table illustrates that meaning-preserving and microstructure changes together predominated in stages one through three, while formal changes predominated in stage four. It also shows that over one-half of the changes at stage two involved slight changes in meaning. This type of

change was much less predominant in all other stages.

Revisions were not equally divided among the stages. Of the total revisions, 30.07 percent were made in stage one, 35.66 percent in stage two, 28.67 percent in stage three, and 5.59 percent in stage four. More than one-half of all the revisions that involved changes in meaning were made in stage two. This result, along with the finding that almost 53 percent of the changes made in stage two involved changes in meaning, showed the second stage to have been the most important decision point as far as "fine-tuning" the meaning of the text. This table also indicates that stage four was relatively unimportant in terms of revising. It contained low percentages of all types of changes, even the copy-editing changes which dominated it.

The results from this analysis lend support to what was learned about Helen's composing from her protocols and interviews. Here, as in the observed composing, she made a number of different types of revisions in her first draft, but the bulk of her effort at shaping meaning was left until after the first draft was complete. One could surmise that Helen's first-draft strategy operated when she wrote these reviews just as it did when she was observed writing "Cats". This was true in both situations even though she was certain beforehand of her goals and specifics of what she wanted to say in the reviews but much less certain of these in "Cats".

Helen noted that the book reviewed in section one of the article had presented more difficulties than either of the

other two. She attributed this to the fact that she knew the author of the first book which made her, at times, uncomfortable and perhaps more cautious about what she wrote. Another possible reason for greater difficulty in this section could be related to its position at the beginning of the article. In talking about her strategies and work procedures, Helen said, "when I sit down to do a review, each time I think 'I can't do another one'... The beginning is always hard."

The revision analysis reflected the difficulties Helen expressed. In all, there were 143 changes made over the four stages. Table 2 shows how these revisions were divided among the three sections of the article.

Table 2

Percentage Revisions per Section of the Article by Stage

Stage of Revision	Section of the article		
	1	2	3
1	39.53	41.86	18.60
2	49.02	27.45	23.53
3	53.66	34.15	12.20
4	75.00	12.50	12.50
Total	48.95	32.87	18.18

Each section of the article contained approximately 250 words and so the sections could be compared on a revision per word basis. From Table 2 it can be seen that all stages of revising section one occupied proportionately more of Helen's attention, while section three occupied proportionately less. Table 3 shows that this was true in terms of all types of revisions.

Table 3

Percentage Revisions per Section of the Article by Type

Type	Section of the article		
	1	2	3
Formal	57.89	28.95	13.16
Meaning-Preserving	40.00	38.18	21.82
Microstructure	52.00	30.00	18.00

This analysis confirmed Helen's comments and perceptions about her revising process and provided precise information about the nature and the distribution of revision changes and their effect on the meaning of the text.

The scope of the system devised by Faigley and Witte extends to the operations involved in performing each type of revision change. A number of Helen's meaning-preserving and microstructure changes, for example, involved deletions from the text. While it was beyond the purpose of this study to investigate the operations of revising in detail, several of Helen's comments in the discourse-based interview illustrated the reasons behind them. In terms of the deletions, the word limit under which Helen operated forced choices upon her, some of which were easier to make than others. In another interview, Helen had remarked on the beneficial effects of word limits on her writing in that they forced her to pare her work down to essentials. In this article some choices to delete were made easily - "I could do without it" (D, p. 89) - while others were made more grudgingly - "Books in Canada are really particular about space; they don't want a word over. I would like to have left that in actually, but it was space" (D, pp. 80-81). There appears to be considerable potential in the converging evidence that can be derived from the revision taxonomy and the discourse-based interview to provide insight into writers' revising processes. This evidence could illuminate the goals and plans which direct revising, the operations involved in it, the distribution of revisions within a text, and the effect on the meaning in the text.

This concludes the short treatment of revision analysis

in this study which was carried out to broaden the picture of the writer's composing beyond the observed research sessions. The discussion in the next section will sum up and integrate the findings about Helen's composing and set them within the framework of the existing literature.

### Summation and Comparison to the Literature

This section will draw together findings from each of the three preceding sections to create an integrated description of Helen Porter's composing. In this way, the investigator will fulfill the second purpose of this inquiry which was to extend the current framework for composing by studying the composing processes of an active adult writer.

Writing has been an integral part of Helen's life since she was a student and for over twenty years she has been selling her work for broadcast and publication. Helen's interviews over the course of the research offered a chance to focus on some of her feelings about writing as well as to appreciate the range of her writing experience and glimpse her accumulated knowledge about composing. After speaking to Helen it became obvious to the researcher that she had acquired an expertise in writing which included many writing strategies and a range of evaluative criteria for her work.

Researchers such as Stallard (1974), Perl (1979), Planko (1979) and Flower and Hayes (1980a, 1981b) have suggested that differences exist between the composing processes of skilled writers and those of unskilled writers. It would be



expected that Helen's ~~composing~~ would correspond to the findings about skilled writers. As this discussion proceeds some specific similarities and/or differences to the findings from the earlier research will be noted.

It was apparent that Helen drew on her skills and expertise in the three observed composing sessions. The result was that there were many aspects of composing that she was able to handle with little apparent effort which could tax a novice writer. These aspects might range from overt factors such as typing skills to covert but important factors such as knowing how much leeway existed in the publisher's requirements for the assignment.

Helen thought aloud as she composed the first draft of an article she called "Cats" in the three research sessions. Based on her protocols and working from the frame of reference of the cognitive-process model of writing, the researcher made inferences about Helen's composing processes. The point to be highlighted in this summation is the dynamic nature of her composing, both in terms of the relationships among the writing processes themselves and in terms of the interrelationships of the writer's goals, strategies and plans with the writing processes and with the contextual factors. Figures 3, 4 and 5 (pp. 88, 91 and 94 respectively) represented the relationships among the writing processes within the context of the individual writing sessions. These writing processes are in reality the thinking processes -

planning, translating, reviewing and their sub-processes - that are believed by the authors of the cognitive-process model to be involved in composing.

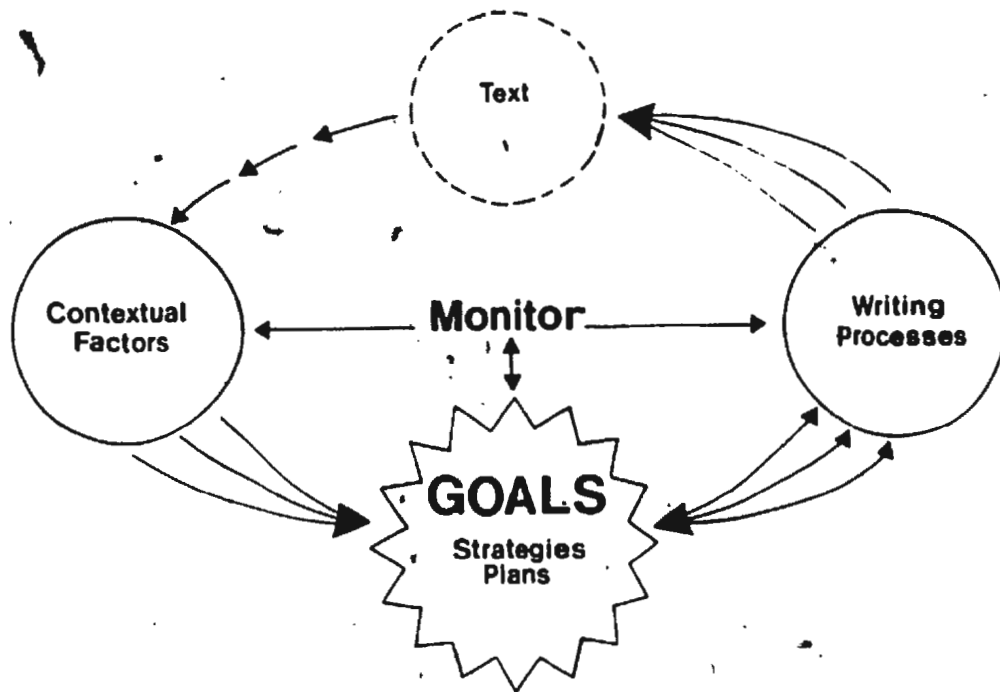
The hierarchial and embedded arrangements of processes set out in the cognitive-process model closely paralleled what was found in Helen's composing. This researcher is aware that when one works within the framework of a model, one tends to see what the model indicates should be there. Nevertheless, it does seem that the structure of the cognitive-process model allowed a more detailed and penetrating portrayal of the processes in Helen's writing than would otherwise have been possible. One can look back at some of the research cited in this study to verify this judgement.

Emig (1971) noted the "recursive as well as anticipatory" nature of composing while Perl (1979) remarked on the "retrospective structuring" within it. Stallard (1974) and Planko (1979) noted recursive elements in composing as well but they observed greater recursion in the processes of those writers they classified as skilled. All these researchers pointed to the times when their subjects paused to reread and reflect on what they had already written, as exemplifying the ailinear, cyclical nature of the writing process.

The descriptions of composing presented by these researchers could, in large part, be applied to the writing in this study as well. But the cognitive-process model

allowed much detail in describing the writing processes and also distinguished more clearly the role of contextual factors and goals in composing. This should permit more discriminating comparisons of different writers and different writing tasks in future research.

The relationships within composing will now be discussed in broader terms. These terms include the relationships of the writer's goals, strategies and plans with (a) her writing processes and (b) contextual factors. Figure 6 represents the dynamic relationships within Helen's composing as a whole. The arrows indicate the main interactions that were observed among the elements of composing. They indicate the nature and the direction of influence of one element of composing upon another. For example, the broken one-way arrows between text and contextual factors indicate that the text gradually becomes part of the context in which the writer composes, while the two-way arrows between goals and writing processes indicate their reciprocal influence. The unbroken arrows indicate a more direct, immediate influence. The broken lines around text indicate that it can always be subject to review depending on the writer's goals, strategies and plans. The jagged circle around goals, strategies and plans indicates that they undergo development within the composing process.



**Figure 6.** Schematic representation of the relationships of contextual factors; goals, strategies and plans; the writing processes; the text produced and the monitor within the writer's composing.

This researcher finds it useful to think of Helen's composing process as circular in shape. The elements of her composing such as (a) the contextual factors, which include her long-term memory, the work environment, the rhetorical problem and the text already produced, (b) her goals, strategies and plans, (c) her writing processes and (d) the text currently being translated are spread out along the

circumference of this circle. The monitor, as writing strategist, is at the centre, determining what she should do and when. Within this structure, one can look at the relationships within Helen's composing in more detail, beginning with the relationships of her goals, strategies and plans to her writing processes.

Goals, strategies and plans played a very important role in Helen's composing. Some of them, such as her first-draft strategy, were drawn from long-term memory. Others arose through integration of the writing processes, particularly planning and evaluating, with the writer's definition of the rhetorical problem. These goals and plans were formed within the writing processes and then directed the writing processes in the further production of the text. For example, Helen's broad goal of producing an article to compare commonplace negative comments made about cats and about women evolved as she wrote the first section of "Cats" and took on an important role in determining the ideas she chose to develop in later sections of the article. The two-way arrows in the figure indicate the feedback that existed between Helen's writing processes on the one hand and her goals and plans on the other. The influences of Helen's top-level goal and strategies on her composing were noted in detail in an earlier discussion. Also noted were the abundance and variety of planning statements that guided the moment to moment production of text. Over the course of the

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three composing sessions the existence of feedback was inferred from Helen's evaluative comments. From these she appeared to be monitoring her writing in terms of her goal and to be gradually redefining her goal in view of what she learned through generating new information and translating it into text.

As an earlier discussion indicated, contextual factors also had an important influence on composing in relation to the writer's goals. Two factors should be noted. First, Helen's goal was formed in the light of her perceptions of the context in which composing was to take place and, second, throughout composing the influence of contextual factors was filtered through her goal, with the effect that some elements of the context had more influence than others.

With regard to the first point, Flower and Hayes (1980a, 1981a) noted that writers define their own rhetorical problems and set up goals to fulfill them. They set up goals to handle only those elements of the rhetorical problem and their own past experience that they consider. If they impose a goal upon their composing that ignores many elements of the problem, then they will not solve it, although they may solve another. The research of Stallard (1974), Shaughnessy (1977), Planko (1979), Perl (1979) and Flower and Hayes (1980a, 1981b) has pointed to differences in planning and goal-setting between skilled and unskilled writers. Flower and Hayes have identified both the writers' ability to set goals that take into account all pertinent factors in the

writing context and their ability to develop and monitor their goals throughout composing as factors which distinguish competent writers. In particular, they have called attention to the "quality and quantity" of middle range plans which "lie between intention and actual prose. . .[which] give substance and direction to more abstract goals. . .and give breadth and coherence to local decisions about what to say next" (1981a, p. 379).

Helen's goal-setting behavior in this study showed the characteristics of the competent writer. None of the details which have been presented in an earlier discussion will be reiterated but the influence of the text produced in relation to the writer's goal and current plans bears some elaboration at this time. Once a text is composed it is an artifact for the writer to refer to (Smith, 1982) and, in effect, it becomes part of the context in which composing takes place. For most of the time that Helen composed in the research sessions, she worked under a first draft strategy. Because of this strategy, the developed text was not an overriding influence. Certainly Helen referred to it on a word and sentence level in translating to ensure that her ideas were presented in a comprehensible manner. But over the course of the three sessions she allowed her ideas to flow beyond her original intentions. Thus, her draft took on a feminist perspective which she had not envisaged at the start of writing "Cats".

It was apparent that a somewhat different situation existed in the periods of review within the composing sessions. In those situations, Helen's purposes were to evaluate and, to some degree, revise what was already there and so the developed text took on greater importance. Even then, consideration of the text was filtered through the first-draft strategy so that many final decisions were postponed.

In the situation which existed when Helen evaluated and revised the article considered in the revision analysis, the text probably took on an imposing role within the writing context. This analysis was undertaken to broaden the picture of Helen's composing that was available through the research sessions. Since Helen's remarks indicated her procedures in revising the book review were the "usual", it is likely that she will proceed in much the same way at some future date with "Cats", the article composed in first draft in the research sessions. In this latter article, however, some macrostructure changes can be expected over successive drafts as Helen finalizes her decisions about her purpose for the article. The three instances which have been pointed out - (a) translating under the direction of the first-draft strategy, (b) reviewing within the first draft and (c) revising over successive drafts - show how the same contextual factor can have a variable influence depending upon the writers goals, strategies and plans.

Stress has been placed upon the dynamics of composing in



this summation. The emphasis is properly placed if, as Flower and Hayes (1981a) have remarked, writing is a set of optional actions and if the writing processes may, indeed, be viewed as a tool kit from which the writer must choose and then orchestrate the processes chosen. Conclusions and recommendations arising from the emphasis upon dynamics will be pursued in Chapter V.

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

Composing is a valued and necessary activity in our society. It is a powerful way for people to organize and extend their thoughts as well as a means by which they inject themselves into the world. Composing, therefore, can be important in the development of individuals and of society as a whole. Increasingly over the last fifteen years, composing has become a focus of research. With this view of composing as background, the remaining discussion will present a brief review of this study and a formulation of the conclusions and recommendations that follow from it.

#### The Study in Review

The purposes of this study were to establish a theoretical and research framework for composing from a review of the literature and to extend this framework by studying the composing processes of an established adult writer.

It was found that a gradual transition occurred over the last fifteen years in the theoretical structure that was adopted for composing research. Before 1970 a stage model was the prevalent paradigm for the composing process. Since that time researchers have moved toward acceptance of a cognitive-process model for composing. The cognitive-process model provided the theoretical framework for this research.

A case study approach was utilized in investigating the composing of Helen Porter, an established writer living in St. John's, Newfoundland. Over the course of three sessions in her home, Helen composed the first draft of "Cats", an article she planned to submit for publication in a national periodical. The researcher observed Helen as she wrote and collected a variety of verbal reports from her to use in the analysis of her composing. In addition, the writer provided drafts of book reviews that had been published in Books in Canada. The researcher utilized a revision taxonomy to analyze Helen's revising over four stages in the reviews.

#### Conclusions and Recommendations

Conclusions were drawn with regard to (a) the nature of the composing studied, (b) the theoretical framework utilized and (c) the research methodology employed. Recommendations follow from some of these.

Composing was seen to be a dynamic process characterized by a complex array of interactions. Relationships of the thinking process within composing were varied and were at various times linear, ailinear, hierarchial and embedded. The deployment of the processes was directed and purposeful, involving the writer in making choices. One of the possible implications arising from such a view is that the process of planning - setting top-level goals, calling on strategies developed through past experience and forming a network of

plans to guide composing moment to moment - is a key element in composing. This is a view held by the authors of the cognitive-process theory and has been one focus of research. Helen's composing, like that of writers in other studies that have been cited, indicated the extensive influence of planning throughout the writing process. Further studies should be carried out to investigate the manner in which other writers form goals and to see the effects of different methods of planning upon composing.

Another implication of the view of composing accepted in this study is that the dynamic relationships within composing, as much as any tangible skill or knowledge, distinguish one writer from another and contribute to making one writer skilled while another is unskilled. In terms of distinguishing between writers, a key to understanding composing styles, for example, probably lies in the manner in which writers deploy the writing processes. In Helen's composing it could be seen that her strategies led her to seek breadth of idea development before depth. Therefore, she put emphasis on generating ideas and translating them into a text with the intention that some ideas would be selected to be further developed and refined later. Future research should investigate whether writers have characteristic ways of orchestrating the writing processes that transcend different writing tasks. Research should also ask whether there are critical differences in the ways that

writers approach composing. Since books were first printed, critics have judged writers' skill in terms of their products. Perhaps future studies could account for writers' skill in terms of how they go about composing their products.

This study was not directed toward finding or testing teaching methods for composing, so it is not surprising that there are no direct pedagogical recommendations arising from the findings about composing. Perhaps this description of the composing of one writer may be of value to teachers if it motivates them to reflect on their own composing and that of their students in a more structured, precise manner than was possible before. In addition, the accent on dynamics may cause them to consider the importance of experiencing the process of composing as a way of learning to write and this too would be thought a useful outcome. Teachers must investigate the types of experiences that may help their students develop their composing. Emig (1971) found that teachers did not write themselves and so tended to "underconceptualize," "oversimplify" and "truncate" the composing process (p. 98). Additional studies to investigate composing in depth could broaden teachers' perspectives on composing by showing what a number of established writers do.

The theoretical framework adopted in this study allowed the researcher to examine composing in a more detailed and penetrating way than would otherwise have been possible. Its authors, Flower and Hayes, have pointed out that it is the model of a competent writer and as such it was well suited to

the study of the ~~research~~ subject. It also seemed likely that it could serve to study the composing of less competent writers. In fact the differences or missing elements in the composing of unskilled writers would make enlightening contrasts that would add to existing knowledge about composing.

Nevertheless, there are elements of the cognitive-process model of writing that require further specification. This study has suggested the beginnings of a differentiation among goals, strategies and plans that might be elaborated and tested in future research. Furthermore, the consideration of reformulation in the process of translating has also been suggested and it is thought it may be worthwhile to investigate this further in terms of writers' composing styles. Within the theoretical framework of the cognitive-process theory it is recommended that more case studies be carried out on writers who have different characteristics and work in different genres and settings. In this way parts of the theory may be further specified and eventually tested. The cognitive-process model was designed as a "tool for researchers to think with" (Flower and Hayes, 1981a, p. 375). At present it is a good tool, and it has the potential to improve with future research.

The case study approach utilized in this inquiry is considered to have been appropriate and fruitful, yielding considerable basic knowledge about the composing processes of

an active adult writer. The principal research methods were a variety of verbal reports. The utilization of multiple research methods was valuable in that they served as "multiple indicators" (Afflerbach and Johnston, 1984, p. 319) and offered complementary evidence. Afflerbach and Johnston stated that verbal reports offer a "unique, if sometimes less than transparent, window for viewing cognitive processes" (p. 320). Because the insight offered through these reports is less than transparent and depends upon the researcher making inferences, the utilization of converging lines of evidence is especially important.

In this investigation the two most fruitful methods were considered to be the thinking-aloud protocols and the retrospective interviews. These two complemented each other in a most valuable way. What appeared to be very specific in the protocols was expanded upon in the retrospective interviews while elements that appeared to be excluded from the protocols were explored for the first time in the interviews. One concrete example arose from the first protocol in which there was no evidence of any global planning. The retrospective interview, however, made it clear that planning had been done, indicated when it had taken place and the reasons why it occurred as it did. In future studies it is anticipated that discourse-based interviews and thinking-aloud protocols could afford valuable complementary evidence about composing and it is recommended that these be utilized along with retrospective interviews.

In conclusion, it is considered that the study undertaken was successful in that a theoretical and research framework for composing has been established. Within that framework, the methodology employed to study composing has indeed extended the current framework for writing research.



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