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Aesthetic Understanding as Informed Experience:
Ten Informant-Made Videographic Accounts About the
Process of Aesthetic Learning

Richard Lachapelle

A Thesis
in
The Department
of
Art Education

Presented in Partial Fulfilment of the Requirements
for the Degree of Doctor of Philosophy at
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ABSTRACT

Aesthetic Understanding as Informed Experience:
Ten Informant-Made Videographic Accounts About the
Process of Aesthetic Learning

Richard Lachapelle, Ph.D.
Concordia University, 1994

The first objective of this dissertation was to explore the feasibility of using informant-made video recordings as data for research into the process of aesthetic understanding. The second was to gain insight into informants' attempts at understanding artworks by comparing the learning processes used by five expert and five non-expert volunteers.

The research protocol yielded a data set for each informant comprising an audiotape recording of a baseline response to two artworks, an informant-made video about two additional works, a transcript of a follow-up interview, and the informant's biography.

Analyses of this data revealed that the process of responding was the same for both expert and non-expert informants in one major respect: the use of psychological operations to create meaning about the artworks was similar regardless of subset membership. However, noticeable differences were found in the content of those operations. Non-experts relied on their experience as the major source of content to fuel their encounters, whereas experts derived content mostly from disciplinary types of art-related knowledge. Furthermore, evidence was found to support the notion that aesthetic understanding, in its
Ideal form, is the product of a process involving two types of learning: object-centered and information-based learning.

Based on these observations, a model is presented in which aesthetic understanding is conceptualized as a two-phased type of informed experience. In the first phase (experiential learning), the viewer encounters the work of art using mediating knowledge (a personalized body of knowledge based on life experience). The interaction of this knowledge with that contained in the work of art (objectified knowledge) results in the creation of meaning. This new understanding of the artwork, called constructed knowledge, is used by the viewer during the second phase of learning (theoretical learning) to confront an external body of related theoretical knowledge. This process of theoretical learning results in a reconstruction of knowledge about the art object. Reconstructed knowledge not only expands the viewer's understanding of the work of art, it changes the very structure of the original body of mediating knowledge in such a way as to favor aesthetic growth and development.
FOR MY PARENTS
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Many other colleagues and friends have also assisted me in the course of conducting this research. I wish to thank Dr. Colette Dufresne-Tassé for permission to use the analytical instrument developed by her research team for the study of museum visitors' psychological behavior and for her advice on its application. For his counsel, consideration and for his help in conducting the pilot projects and the analyses of the raw data, I wish to thank Malcolm MacPhail. Also for their assistance during the pilot projects, I wish to thank Lynda Fish and Jean-Yves Paquet. For his meticulous and helpful review of the findings of the study, I wish to express my appreciation to David Colsh. Thank you also to Janice Seline for her assistance in locating documentation on some of the works of art.

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CHAPTER I

Introduction

For to perceive, a beholder must create his own experience. And his creation must include relations comparable to those which the original producer underwent. They are not the same in any literal sense. But with the perceiver, as with the artist, there must be an ordering of the elements of the whole that is in form, although not in details, the same as the process of organization the creator of the work consciously experienced. Without an act of recreation the object is not perceived as a work of art. The artist selected, simplified, clarified, abridged and condensed according to his interest. The beholder must go through these operations according to his point of view and interest. In both, an act of abstraction, that is of extraction of what is significant, takes place. In both, there is comprehension in its literal signification -- that is, a gathering together of details and particulars physically scattered into an experienced whole. There is work done on the part of the percipient as there is on the part of the artist1.

--John Dewey

Purpose of the Study

This dissertation project seeks to gain insight into art viewers' attempts at understanding works of art by comparing the various learning processes used by expert viewers with those of non-experts. The information thus acquired will be useful in designing educational programs by which to effectively teach better art viewing strategies to learners with little or only intermediary viewing experience.

Furthermore, this dissertation explores the feasibility of using informant-made video recordings as a source of raw data for research into the process of aesthetic understanding. Portable video cameras.

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1John Dewey, 1958, p. 54.
more commonly known as "camcorders", were used by informants in this study in order to produce videos about their art viewing experiences. In order to validate the use of these video recordings as a source of research data for the purposes intended here, the effectiveness of this approach was compared with that of the traditional and more commonly used verbal interview.

This study addressed the following research questions: First, what insight into the process underlying adults' aesthetic understanding would the study provide? More precisely, what new understanding of that process would a video-based research procedure yield? Furthermore, were volunteer study participants able to use a camcorder to effectively record and communicate, from their own particular point of view, their understanding of specific works of art? Finally, how did informant-made video recordings prove useful as a means for studying adult subjects' aesthetic understanding?

Each of the above four research questions addresses the study problem from a different and particular perspective. The first and second questions seek to address the project's potential contribution to a theoretical body of knowledge: aesthetic response theory. The third question is intended to address the problem from the point of view of the individual study participant, and it has been formulated in such a way as to be consistent with a phenomenological theoretical framework. Such an approach attempts to describe social action from the point of view of its agents. Finally, the fourth research question addresses the study problem from the vantage of scientific methodology.
Early Development of the Research Idea

The idea that portable video cameras can be used as a data collecting tool for research into gallery visitors' aesthetic understanding process came to me in 1990 as a result of viewing a photographic installation by Canadian artist Michael Snow. In his installation, *Plus Tard* (1977), Snow recreates an art viewing experience by presenting, in sequence, 25 colour photographic prints which document the trajectory of a walk-about through the Group of Seven galleries at the National Gallery of Canada. The trajectory of the artist's viewing experience is captured in the various viewpoints from which each photograph is taken and in the sequence of the works of art selected and viewed by the artist through the intermediary of his camera lens. The specific qualities of the resulting photographs successfully symbolize the extent of the artist's involvement with each work encountered. A painting that captures and holds Snow's attention for a longer period of time results in a photograph that has clarity and focus because the artist pauses in front of it to view and document it. Similarly, a work of art that is deemed only interesting enough to sustain a cursory glance yields a blurred and out of focus image as the artist chooses not to stop in front of it. Instead, he snaps a photograph in passing.

Snow's *Plus Tard* conveys a surprising amount of visual information about one viewing event using an economy of means. It is this particular aspect of Snow's work, coupled with a desire to understand the art viewing experience from the point of view of the viewer, that brought me to ask whether a similar approach could be
developed for use in researching museum visitors' viewing experiences.

In order to advance the present state of research methodology used in studying informants' aesthetic experiences, this new approach would have to combine visual information with the kind of verbal information that is now routinely collected during audio-taped interviews with informants. It is obvious that still photography by itself is not appropriate for such research. In the installation described earlier, Snow's photographic images do convey a general idea of the artist's attitude vis-à-vis specific works of art. However, photographs are unable to disclose the full range and subtlety of thought and emotion that viewers readily communicate using language. A combination of still photography and audio-taped interviews, although theoretically feasible, would be too cumbersome to be practical, especially when other options are considered. While film allows for the recording of sound and image, it requires separate equipment for each of those functions and, therefore, brings with it a whole new set of problems consistent with a complex technical process: the development of film, editing, and the synchronization of sound and image. On the other hand, recent developments in video technology eliminate all of these problems yet, at the same time, guarantee a consistency in the quality of both image and sound that is quite sufficient for the purposes of research. In the electronics industry, the recent trend toward the miniaturization of video cameras intended for the consumer market has made a number of lightweight and user-friendly cameras readily available. These very versatile
camcorders make it quite easy for study informants to produce videotapes about their own art viewing experiences.

Feasibility of the Project

Two pilot projects were conducted for the purpose of verifying the feasibility of the research project.

The first pilot project was undertaken in the fall of 1990 (Lachapelle, 1990a). Two adult volunteers were briefed about the operation of a camcorder and then asked to produce a video of their exploration of a number of galleries within the Canadian permanent collection at the National Gallery of Canada.

This very useful exercise pointed out some of the weaknesses of the proposed protocol that needed to be addressed in order to ensure the success of further research using the new video methodology. Among the problems revealed by this undertaking was the fact that study participants had to "attend to two, sometimes conflicting, tasks. In his or her role as informant, the participant is asked to concentrate on the art viewing requirements of the procedure. Yet, in addition, in his or her role as camera operator, the participant must be attentive to the ongoing video taping, which requires, in addition to a minimal amount of skill, a continuous monitoring of the recording process" (Lachapelle, 1990a, p. 15). The new training procedures which are part of the research protocol used in this thesis project were designed to alleviate this problem by ensuring that participants master, ahead of time, the video taping skills required for the study. The training program does render the video-taping tasks more automatic, thus allowing the participant to attend principally to the task of responding
to the works of art. Furthermore, the revised protocol used in this dissertation project separates these two tasks into individual activities. Informants were encouraged to attend first to the contemplation of the works of art, then to the production of their video essays.

A second problem encountered during the first pilot project was of a more technical nature. Camcorders provide a full-colour rendition of whatever is recorded when it is played back on a colour monitor. However during actual taping, the image that is seen by the camera operator via the camera's viewfinder is a black and white one. The state of video technology, at the time that this research was being conducted, makes informant-made video research methods unsuited to the study of works of art where colour is a major concern. This problem was successfully addressed by informing study volunteers about this constraint, and by selecting, as the locus for the study, a series of galleries where a wide range of works of art are presented in which colour is not the primary vehicle for aesthetic expression. The galleries chosen for the study also included, by choice, a number of free-standing sculptures and installations. The findings of the first pilot were reported in a paper entitled Ethnographic Video as a Research Tool into Art Viewing Behavior: a Pilot Project (Lachapelle, 1990a).

A second pilot project was undertaken in the spring of 1992 with the purpose of testing the revised protocol intended for use in the present dissertation research. One volunteer informant\(^2\) produced a video-taped account of an art viewing experience by following each

\(^2\)The informant was a graduate of a B.F.A. program in photography and had previous VHS video experience.
and every step in the revised research protocol. Results of this study were extremely encouraging. The subject had no difficulty in conveying a useful and interesting account of his art viewing experiences during the production of two video tapes: a practice tape and a second "data" tape. Both videos were made in the galleries at the National Gallery of Canada during regular opening hours on 1 May 1992. During a follow-up interview, conducted on 2 May 1992, the final video tape was viewed by both the informant and the researcher together. A review procedure was adopted by which either the informant or the researcher could interrupt the viewing of the video tape in order to comment, to clarify or to pose questions about what was being seen or heard on the video screen. This review procedure worked extremely well as it gave both participants a sense of involvement and a sense of shared control over the proceedings of the interview. Due in large part to the fruitfulness of this follow-up interview, it was adopted as the final component of the research protocol for this dissertation research.

The Need for Research into Aesthetic Understanding

The results of the pilot projects confirmed that a research protocol based on informant-made videos had tremendous potential as a new approach for studying adults' responses to art within the context of the museum. There is a great need for additional research in this area, as we still know very little about the process by which adults actually understand works of art. Furthermore, there exist few research instruments to assist in this objective. In fact, the necessity for such research has been repeatedly stated and underscored by
major reports focusing on the educational role of museums. The Commission on Museums for a New Century was among the first to address this concern in its 1984 report.

Both theoretically and empirically, the development of research tools for investigating museum learning is in its infancy.... In order to answer basic questions, serious, systematic investigation of the process of learning in museums must be carried out. This requires that consistent units of measurement and instruments of data collection be developed. Research tools and methods must reflect the differences between the museum and other, more formal learning environments. They must yield valid and reliable measures of learning that can serve as the basis for informed decisions (Commission on Museums for a New Century, 1984, pp. 65-66).

Eight years later, research into the nature of learning in the museum is still being singled out by the American Association of Museums as a major concern that has not been fully addressed.

Although progress has been made toward developing a fuller understanding of the nature of learning in museums, further study is needed and is a key recommendation of this report. We must understand the relationship between the visitor and the setting in which the encounter with object or idea takes place. Research, experimentation, collaboration between curatorial and program staff, consultation with experts on learning theory, and collaboration with educators from other settings can expand our comprehension of the learning that occurs in the museum environment (American Association of Museums, Excellence and Equity: Education and the Public Dimension of Museums, 1992, p. 17).

Whereas, in many public art galleries, educational programming for children at the primary and secondary school levels has a long-standing tradition and is grounded in educational theory, adult education in the museum is still in the early stages of development.
This is due in part to a disproportionate representation of children among organized groups of museum visitors.

Programs for schoolchildren are the most frequent educational offering of museums. Informal surveys indicate that twice as many visits to museums are made by schoolchildren as by other members of the public. Guided tours, in-school presentations by museum staff or volunteers and school loan services are available in more than half of the nation's museums. Most people first visit a museum as youngsters with a school group, and those experiences have a profound effect on their attitude toward museums (Commission on Museums for a New Century, 1984, p. 66).

Indeed, in comparison to the vast number of school groups that visit museums and art galleries each year, the volume of both group and individual adult gallery visits has often been quite low. This factor, in addition to the extra energy involved in recruiting enough individual adult participants to justify the cost of an educational activity or program, has resulted (more often than not) in a discrepancy in the allocation of educational resources to the detriment of adult audiences (American Association of Museums, 1992, p.11).

For the most part, adult education in the public art gallery has been and remains a matter of providing visitors with guided tours of permanent collections and temporary exhibitions. As such, these educational interventions focus on providing the adult visitor with either factual or anecdotal information on such topics as: the works of art, the artist's intent, and the life of the artist. The aim of such educational programming is necessarily to be informative; it is not intended to provide the visitor with a formative experience on ways to understand art. The shortcomings of such an approach to adult education in the museum are obvious. First, this approach promotes a
dependency, on the part of gallery visitors, for the services provided to them by museum education departments. Second, novice and experienced viewers alike are left to their own devices when it comes to developing or furthering the viewing skills and strategies that are necessary for independent and satisfying aesthetic experiences.

To further complicate matters, most of the audience research undertaken in public art galleries is descriptive in nature. In the past, such research has provided a profile of the "average" visitor, including such information as visitors' income levels, educational achievement, and occupations. However, we know next to nothing about how adult visitors actually come to understand works of art.

Visitors to museums have been the subject of occasional study since the late 1920s, with most research focusing on demographic profiles, the effects of visitor orientation, seasonal visiting patterns and time-motion studies of visitor behavior.... There has been little research on object-centered learning or the nature of the museum experience (Commission on Museums for a New Century, 1984, p. 64).

The majority of previous museum studies have not studied the art viewing/understanding process, nor have they suggested ways for promoting and nurturing this process.

The research findings that I have reported in my Master's thesis, *Aesthetic Response and Post-Viewing Experience: A Process Study* (1990b), illustrate the complexity and the gradually unfolding character of the aesthetic understanding process. For the subjects who participated in that study, the procedure used for responding to various works of art was a lengthy and elaborate one. It involved various operations which took place during both the actual art viewing and during a two-week post-viewing period. Relevant post-viewing
activities varied with each participant, but included discussions, contemplation, visual recall, associations and inquiry. The extent and varied nature of these activities led to the observation that, for the study participants at least, aesthetic understanding is a process which extends well beyond the initial art-viewing period into a second post-viewing phase of aesthetic cognition. In addition, memory was identified as a significant feature of many of the post-viewing activities observed. Finally, my previous research raised as many questions about the aesthetic understanding process as it answered and, in doing so, emphasized the need for continuing research.

Definitions of Aesthetic Understanding and Related Terms

Before embarking on a review of the literature of key areas of research related to this dissertation, I wish to clarify some of the terminology that I will use.

Debate continues among researchers and theoreticians about definitions of aesthetic experience. This is, indeed, a difficult term to circumscribe. Current definitions have emerged from two different streams of thought. The first approach attempts to define aesthetic experience in terms of the quality of a response to an object or an event. From this point of view, it is the response, not necessarily the object or the event to which it refers, that is deemed to be aesthetic. This type of definition is exemplified by the work of John Dewey (1958).

Hence an experience of thinking has its own esthetic quality. It differs from those experiences that are acknowledged to be esthetic, but only in its materials (p. 46).
More recently, using the quality of experience as the basis for comparison, Csikszentmihalyi and Robinson (1990) have equated aesthetic experience to the "heightened state of consciousness" that is called "flow experience".

Philosophers describing the aesthetic experience and psychologists describing flow are talking about essentially the same state of mind.... When this heightened state of consciousness occurs in response to music, painting and so on, we call it an aesthetic experience. In other contexts, such as sports, hobbies, challenging work, and social interactions, the heightened state of consciousness is called a flow experience (pp. 8-9).

The second approach to defining aesthetic experience has emerged mainly from a need to provide a practical definition of the term for use in empirical studies of aesthetic response and aesthetic development. This point of view defines this experience simply as a response to an aesthetic object. Inherent in this second approach is the belief that definitions (such as those presented in the previous paragraphs) based on the quality of the experience describe only the ideal form of the aesthetic encounter. Csikszentmihalyi and Robinson acknowledge that this premise is inherent in their research. "The point of the study was not to understand the average viewer's response to art but to construct a model of the ideal experience based on the highest forms in which it can be expressed" (1990, p. xv). Researchers studying and comparing the aesthetic experiences or aesthetic development of various populations, such as novices and experts, or children, adolescents and adults, require definitions that account for the entire range of all possible responses to aesthetic objects. For this reason, definitions used by researchers such as Abigail House (1983) and Michael Parsons (1987) focus not on the
quality of aesthetic experience, but mainly on the fact that these experiences occur in response to art objects.

I have chosen to take this second approach in my attempt to delineate aesthetic experience, and I have opted for a simple, straightforward, operational definition. Therefore, for the purposes of this study, the use of the term *aesthetic experience* will be used to refer to viewers' encounters with works of art. I acknowledge, however, that other kinds\(^3\) of aesthetic experiences are possible, but these are not the province of this research project. I agree with Abigail Housen (1983, p. 34) that an aesthetic experience consists of both an analytical and an affective response to a work of art and that these two facets of the experience cannot be easily separated without distorting the very nature of that experience. This point of view is shared by many researchers including Barbara Kaplan (1982), Csikszentmihalyi and Robinson (1990), and others.

Even though "aesthetic understanding" is the term Housen uses most often when referring to encounters of an aesthetic nature, she makes no distinction between the terms "aesthetic experience" and "aesthetic understanding". However, for the purposes of this dissertation, I wish to differentiate between these two related terms. An *aesthetic experience* is an unique experience which begins as soon as the viewer comes into contact with a work of art and continues as long as that viewer attends to that work of art, whether or not he or she remains within its physical presence. *Aesthetic understanding*, on the other hand, is the comprehension of the work of art, and of the

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\(^3\)Examples of other realms of aesthetic experience include such encounters with nature, music, poetry, or theatre.
psychological processes used to discover it, that the viewer is able or willing to communicate to the researcher. Aesthetic understanding is therefore only one part of a greater all-encompassing aesthetic experience. Aesthetic experience, unlike aesthetic understanding, also includes that which the viewer is unable or hesitant to communicate such as experience of a private nature, psychic experience of a pre-conscious or unconscious nature, thoughts and feelings rejected by the viewer as not pertinent to the experience at hand, or thoughts and feelings too premature or vague to be clearly articulated. Finally, aesthetic understanding changes and evolves as the aesthetic experience itself continues to unfold. The aesthetic understanding that is communicated by the viewer to the researcher at a specific moment in time is like a snap-shot of that event frozen in time: it is true at the moment that it is communicated, but continues to evolve even after it is communicated to the researcher. With the passage of time, the actual content of the understanding may change only a little or a lot depending on the specific characteristics of a particular aesthetic experience.

In this dissertation, whenever I refer to the sum total of an informant's life-long involvement in viewing and appreciating art, I will use the expression "previous art-viewing experience".

Finally, in Chapter VI, I introduce the concept of the "determinability" in order to explain the process whereby previous art-viewing experiences provide the museum visitor with a starting point from which to begin to understand newly-encountered works of art. This notion is borrowed from the work of Csikszentmihalyi and Robinson. They define determinability as "the perceived opportunity
to find, on a fairly direct level, some point of entry into the object....we might best think of it as the relative balance of challenges and skills at the levels of meaning, intention and interpretation (1990, p. 147).

**Summary**

This dissertation project was developed and undertaken in order to realize two major objectives. First, I wanted to explore the feasibility of using informant-made video recordings as a source of raw data for research into the process of aesthetic understanding. Second, by comparing the various learning processes used by expert and non-expert viewers, I hoped to gain insight into these art viewers' attempts at understanding works of art.

There is a great need for study into adults' spontaneous learning as it occurs within the context of the fine art museum. Furthermore, we still know very little about the process by which adults actually understand works of art. During the last decade, the necessity for such research, and for the development of appropriate investigative tools, has been repeatedly stated and underscored by major reports focusing on the educational role of museums. This dissertation addresses some of these concerns.
CHAPTER II

Literature Review

Behavior and appropriate situational contexts are interconnected in a friendly manner. Behavior constructs and maintains the appropriate situational context, and the appropriate situational context exerts a kind of pull for the emergence of the right behavior. That is, behavior which enables heightened depth and breadth of experiencing constructs conditions which in turn pull for the emergence of new behavior⁴.

--Alvin R. Mahrer

Introduction

Chapter II is devoted to a review of the literature from the four different areas of scholarly research that have informed the undertaking of the dissertation project. First, I present a review of previous attempts to use informant-made films or videos as a source of research data and, then, I critique the strengths and weaknesses of a research methodology based on such an approach. Second, I review recent theories that relate to aesthetic development in adults. Third, I discuss selected theories that attempt to explain the process by which adults respond to and understand aesthetic objects or events. Finally, I address the problem of adult learning, as it occurs in the museum, by reviewing some of the theoretical models of adult learning and by comparing and relating these to Csikszentmihalyi and Robinson’s theory of aesthetic response.

Informant-Made Films and Videos as Research Data

Efforts to conduct empirical research into the process of aesthetic understanding have multiplied considerably during the last two decades. Early attempts to study the phenomenon addressed important epistemological problems relating to the nature of aesthetic experience and to the methodologies suitable for its study. In an examination of the past and future of research into aesthetic education, Wilson (1974) skillfully circumscribes these two issues.

The major methodological problem to be overcome ... is how to assess aesthetic experiences. Perceptions, feelings, and appreciations are internal states, not behaviors, and thus are not directly observable. What may be observed are behaviors assumed to be closely related to and reflective of internal stages and from which inferences may be made about those internal states (Wilson, 1974, p. 60).

Wilson criticizes methods associated with quantitative research such as studies of aesthetic preference, studies of eye movement, semantic differential techniques and others as inadequate for the study of aesthetic experience because "each obscures more of the aesthetic experience than it reveals" (p.60). Wilson privileges language as the most appropriate modality from which the nature of aesthetic experience can be inferred.

What is needed is a behavior which is essentially isomorphic to each of the multiple facets of an unfolding aesthetic experience. Language -- verbal descriptions -- is the behavior which seems to approximate most closely the aesthetic experience (p. 60).

Language has become widely accepted as the best source of data for the study of aesthetic experience and is now used by most researchers interested in museum research (Housen, 1983; Parsons,
1987; Horner, 1988, Csíkszentmihalyi & Robinson, 1990; Weltzl-Fairchild, 1992; Dufresne-Tassé & Lefebvre, 1993; and others). Data collection by audio-taped interviews has become the standard procedure for this kind of research. However, each researcher has developed unique protocols for that purpose which take into account their prior assumptions about the nature of aesthetic experience and the particular needs of their research. Housen uses tape-recorded "stream-of consciousness" interviews about art reproductions. Her method is not an interview in the true sense: subjects are asked to speak freely while looking at a reproduction. The "interviewer does not interfere with, or direct, the subject's remarks, except by nods of affirmation or facilitating comments" (1983, pp. 50-51). Parsons uses audio taped "semistructured" interviews in which pre-determined questions are used to guide the discussion about selected colour reproductions, thus ensuring that certain topics are covered during the interviews. In addition, whenever necessary, Parson's interviewers use probing question in order to seek clarification of informants' statements (1987, p.19). Csíkszentmihalyi & Robinson also use tape-recorded "semistructured" interviews designed to investigate informants' anecdotal recall of previous art-viewing experiences (1990, pp. 21-22).

Since videotape recordings also provide documentation of informants' verbal statements about their aesthetic experiences, informant-made videos continue the tradition of using language as a primary source of data for the study of aesthetic experience. Of course, video also produces a visual record of the subject's aesthetic experiences from their own point of view; thus, informant-made
videos provide additional sources of information not available to the researcher using audio-recording technology. Furthermore, this research procedure differs from previous research methodology in two very significant ways. First, informant-made video research is conducted in the natural setting (the public art gallery), and not in a research laboratory as is the case for most of the research in this field. Second, data collection is undertaken using the actual works of art as research materials instead of reproductions.

As a research tool, informant-made film or video is rooted in the practice of ethnographic filmmaking. Anthropologists and ethnographers have used filmmaking in the course of their study of tribal societies and ethnic groups since the late 19th century5 (Brigard, 1979). Ethnographic films have been defined as a combination of "...two ways of seeing and understanding, two strategies for bringing order to (or imposing order on) experience: the scientific and the aesthetic". The ideal ethnographic film will "unite the art and skills of the filmmaker with the trained intellect and insights of the ethnographer" (Heider, 1976, p. ix).

Up until recently, most efforts in ethnographic filmmaking have involved the production of documentaries controlled and directed by the researcher. In such cases, the camera operator is the researcher herself or a research assistant working under the direction of the researcher. Information collected using this technique provides a record of the event strictly from the point of view of the researcher. Early examples of this kind of ethnographic filmmaking include

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5In 1895, Félix-Louis Regnault (assisted by Charles Comte) filmed the pottery fabrication process used by a West-African woman.
Baldwin Spencer's studies of Australian aborigines (1901), Robert Flaherty's film Nanook of the North (1922), Gregory Bateson and Magaret Mead's six ethnographic films about the Balinese released in 1950. A more recent application of this approach is Jean Rouch's and Edgar Morin's Chronicle of Summer (1961) which explored Parisians' attitudes in regards to the Algerian War (Heider, 1976, p. 16 - 42).

More recently, some ethnographers have attempted to capture on film the particular point of view of their subjects by asking them to film themselves. The best known example of this work is Sol Worth and John Adair's (1972) pioneering exploration of the potential of informant-made ethnographic films. In the early 1970's, Worth and Adair began studying Navajo Indians by asking them to make films about their own culture. Building on the work of these two anthropologists, Bellman and Jules-Rosette (1977) have also used informant-made films and videos during the course of their respective studies of the ritual and secular interactions within two separate African communities: the Bapostolo and the Kpelle. These early examples of the use of informant-made films raised important questions about the very nature of ethnography and the value of ethnographic filmmaking as a research tool.

Ethnography has traditionally involved translation, explanation, and analysis of one culture into the idiom of another. If Worth and Adair are right, then Navajo films would be somehow "in Navajo" and would therefore be the raw material for ethnography, not ethnography itself. The most valuable aspect of the project was to raise the question of the culturally specific nature of films. The implications of this are of great importance to ethnographic films. There is a great need for more research in this direction (Heider, p. 43).
In a well constructed critique of ethnographic filmmaking, anthropologist Bernard-Richard Emond (1978) reviews its strengths and weaknesses. First, he warns us not to assume that the camera and the human eye are equivalent. The eye sees with a focal length similar to that of normal camera lens (25 mm for 16 mm film and 50 mm for 35 mm film). However, most film and video cameras are equipped with zoom lenses that distort distances and flatten the picture plane. The human eye adapts easily and quickly to changes in intensity of light, whereas in film (or video) these situations lead to exposure problems that result in a loss of information. The eye has a greater resolution than a camera equipped with a normal lens, and its focus is based on a single point in space. In turn, the camera focuses on an entire picture plane giving equal weight to all objects located at that same distance from the camera lens. Human peripheral vision extends beyond 180 degrees, while the picture plane becomes unacceptably distorted when the field of vision of a camera lens extends beyond 120 degrees. The restricted field of vision of the camera operator does not allow him or her to direct his or her attention as quickly from one point to another, as is possible with the naked eye (Emond, 1978, pp. 26-27).

However, similar qualitative and quantitative differences can be established between the human ear and the microphone. Microphones are far less flexible, more limited and less selective than the human ear (Emond, 1978, p.27). Therefore, even researchers using audio-taped interviews must contend with similar limitations imposed by the use of microphones and tape recorders.
Second, Emond cautions about the false impression of reality that films can convey. Filmed (or video-taped) images are constructed during the filmmaking process; they are not objective recordings. Camera operators construct a new reality by the way they select, frame, and focus on specific objects or events. Editing also distorts events and the passage of time presented in a film rarely corresponds to real time. Furthermore, the presence of cameras and the activities of camera operators can have a disruptive effect on subjects. However, these effects tend to diminish as subjects become used to the presence of cameras and their operators (Emond, 1978, pp. 29-31).

Emond believes that these difficulties can be overcome. If researchers are aware of the limitations of ethnographic filmmaking, then they can use it, instead, in ways that take advantage of its strengths. Ethnographic films allow researchers to review events as often as is necessary to fully understand them. The audio-visual documentation of language-related behaviors (using film or video) permits an in-depth analysis of the relationship between the verbal and non-verbal components of these events. Emond feels that film or video are particularly well suited to the study of proxemics (personal and cultural use of space) and body language. Ethnographic filmmaking also allows researchers to show film footage to their informants in order to obtain additional information about the events they have filmed (Emond, 1978, pp. 43-49).

Is the use of ethnographic filmmaking appropriate for the study of aesthetic experience? The use of any technical instrument brings with it a whole new set of problems that, hopefully, can be overcome and, then, offset by the advantages of the new technology. We have
seen above that even the use of audio-tape for recording interviews results in a distortion and a loss of information. Yet, researchers now routinely use tape-recorders, because the advantages they provide far out-weight any inconvenience. Many of the technical problems associated with film cameras have been eliminated or at least minimized with the advent of lightweight camcorders (palmcorders). Anyone can learn to use these in a very effective manner in less than one hour. Furthermore, most people have no trouble adapting to the technical limitations of camcorders such as, for example, reduced peripheral vision. Many of the criticisms that Emond makes about the distorted reality conveyed by films can also be made about informants' verbal comments. Informants' statements are also constructions that involve the selection, the framing, and the focusing of all kinds of information, in order to transpose it into a narrative that attempts to convey the informant's subjective interpretation of his or her experience. Just as the subjects of a documentary film eventually become used to the presence of cameras, informants who produce videos eventually become used to the operation of the palmcorder and, therefore, its disruptive effects are greatly diminished over time. Finally, we should not forget that the form of aesthetic experience, as it relates to visual art, is not simply linguistic. Visual perception and kinesthetic experience are also major components of the experience for which informant-made videos, unlike audio-tape recording, can provide some form of record. As suggested by Emond, capturing these components on video will permit an in-depth study of the relationship between the verbal and non-verbal constituents of aesthetic experience.
The art viewing experience is a complex one that defies simple description. An aesthetic response tends to unfold quickly and, as it proceeds, it tends to take on ever shifting forms. At times it may be an emotional response, at other times, an intellectual or a sensate response. Like the anthropologist, the researcher studying aesthetic experiences must often work in an extremely uncontrolled and ever-changing environment. Under such conditions, most researchers’ observation skills are taxed to the limit. Informant-made videos have the potential to lessen that strain. As in ethnographic film, the use of video can provide "a means of mastering the culturally spontaneous observation by shifting the clinical analysis [from the field] to the research laboratory where it can be studied at leisure and by any number of specialists" (Collier, p. 123). And, only video or film "...can record the realism of time and motion" (Collier, p. 129) as well as simultaneously making both a visual and audible record of an event.

Another strength of this approach for aesthetic research is its potential for sustaining and extending participants' aesthetic involvement with the works of art explored during the recordings. This is possible because participants can view and discuss their tapes with the researcher after their completion. When this follow-up activity takes place some time after the initial production of the tape, it allows both the informants and the researcher the distancing necessary to transcend the immediacy of the experience in order to carry it forth to another level of understanding.

However, it is important to acknowledge the fact that participant-produced video tapes provide mediated access to subjects' aesthetic understanding. The camera is not meant as a substitute for
the human eye, but rather as a tool by which subjects will communicate, to the best of their abilities, their understanding of specific works of art. The extent of informants' skills in using the palmcorder has an impact on the tapes they will produce. Furthermore, verbal interviews with informants are also dependent on the subject's skills in communicating his or her experience and, lest we forget, informants' verbal accounts can provide only mediated access to informants' internal experiences. In the case of verbal interviewing, it is the technology of language itself, vocabulary and syntax, that interposes itself between the informant's experience and his or her ability to formulate an account of it. Unfortunately, there is no such thing as direct, non-mediated, access to the realm of individuals' subjective experiences, no matter whether these experiences are aesthetic or not in nature.

Review of Aesthetic Development Theory

Research into the psychological development of aesthetic understanding has demonstrated that this ability develops as a function of art viewing experience (Coffey, 1968; Gardner & Gardner, 1970, 1973; Clayton, 1974; Brunner, 1975; Gardner, Winner & Kirchner, 1975; Gardner & Winner, 1976; Parsons, Johnston & Durham, 1978, Housen, 1983; Parsons, 1987; Dewell, 1986; Weltzel-Fairchild, 1991, 1992). Aesthetic development theories, such as those proposed by Abigail Housen and Michael J. Parsons, are theoretical formulations that describe the sequence of stages of cognitive development that each of us must "grow" through in order to respond aesthetically to works of art. Although the rate of progression
through the various stages of learning identified by each researcher may vary considerably from person to person, the sequential order of aesthetic stages is said to be the same for all individuals.

Abigail Housen (1983) proposes a model of aesthetic development which considers both the affective and cognitive dimensions of aesthetic experience. Her model is comprised of five stages of aesthetic understanding. In the first stage, the Accountive Stage, aesthetic response consists mostly of relating the work of art to one's own subjective past experience. Housen says of this initial stage that "preferences, beliefs, past history are not distinguished from judgments, but form the basis for making judgments" (p. 7). In stage 2, the Constructive Stage, a work of art is assessed according to its perceived function or utility, which can range "from the very moral and didactic to the very mundane and worldly. A painting may reflect the good and joyous life or it may be worth a huge amount of money" (p. 8). During the third stage known as the Classifying Stage, the perceiver sets aside his or her own subjective impressions and instead attempts to appreciate art objects by objectively classifying the work in question according to an historical period, an artistic movement, or a particular style (p. 9). In the Interpretive Stage (Stage 4), the viewer begins to respond to the work in a new and very individualized fashion. He or she, for the first time, exploits feelings and intuition, as well as other information, in formulating a symbolic interpretation of the art work (p.9). Finally, in the last stage called the Creative Reconstructive Stage, the work "is looked at in many different ways, from many different perspectives, with each new encounter colored by past insights. In relating the painting in such [a] way, the viewer
acknowledges that both he and the art work bring to the encounter particular histories and properties" (p. 10). All information is now considered relevant, no matter whether its source is within the onlooker's own subjective experience or within the art work's factual existence.

Parsons' (1987) model of aesthetic development also is comprised of five stages. Unlike Housen's model however, which presents the aesthetic development of adolescents and adults, Parsons' theoretical representation of development covers the entire range of aesthetic understanding beginning with early childhood and continuing from there to all stages of adolescence and adulthood. Stage One in this second model is called Favoritism and it identifies the responses of children up to about the grade of kindergarten. The response here is best described as "an intuitive delight in most paintings, a strong attraction to color and a freewheeling associative response to subject matter" (p. 22). Beauty und Realism is the title given by Parsons to stage two. At this level of development, the subject of a painting is all important and the stage itself is structured around the notion of the painting as a skilled, realistic representation of a necessarily attractive subject. The main focus of the third stage is the expressive quality of a painting, and appropriately, the stage has been named Expressiveness. Realistic representation is no longer seen as the purpose of a painting. Rather, paintings serve the purpose of expressing someone's experience. The viewer now looks for and judges a painting in accordance with the painting's interest and intensity of expression. In stage four, named Style and Form, the viewer now understands that a painting gains its true significance and
communicative potential, not on the basis of personal opinion, but as a result of social consensus. The meaning of the work of art is constituted within a social framework which includes ideas of tradition, style and history (p.24). Finally, stage five is characterized by Autonomy. It is now understood that, in the end, the responsibility for evaluating the worth of a work of art rests with the individual. Yet, "Individuals must judge the concepts and values with which the tradition constructs the meanings of works of art. These values change with history and must be continually readjusted to fit contemporary circumstances" (p.25).

Both Parsons and Housen agree that the stages described in their respective models of aesthetic development are not closely correlated with age. Both researchers have identified art viewing experience as the most important factor in determining individual levels of aesthetic development. Nonetheless, Parsons relates that only "in a most general way...does stage follow age, and only at the younger ages. In practice, virtually all pre-school children use [Parsons'] stage one ideas. Most elementary school children use [Parsons'] stage two ideas. Many, but fewer, adolescents use (at times) ideas from [Parsons'] stage three. After that, circumstances become more important than age" (Parsons, 1987, p. 12).

Housen, on the other hand, reports that adolescents of about 16 years of age demonstrate an average level of aesthetic development "of about stage I/II", which is in fact a transitional stage in Housen's model between stages one and two. At about age 20, "mean aesthetic [Housen's] Stage III is attained only in the college group when aesthetic exposure is high" (Housen, 1983, p. 187). She further
reports that progression from the Constructive Stage (Stage II) to the Classifying Stage (Stage III) requires the attainment "of a simple framework which ... [the viewer] uses to classify aspects of the art object. This framework can grow out of a variety of possible distinctions, some historical, and some pertaining to the so-called formal properties of the work". She goes on to explain that these frameworks are not the same for all viewers, but share a common characteristic in providing the viewer with "a basis for decoding the structure of patterns within the work" (1983, p. 185).

Although the acquisition of a single framework for the classification of works of art may be sufficient to explain the progression from Stage II to Stage III in Housen's model, it is questionable whether such a theoretical construct could account for the full extent of aesthetic development. In the case of encounters with works of contemporary art, it is especially doubtful whether any single framework could provide the breadth and flexibility required for successful and meaningful aesthetic experiences. In all likelihood, aesthetic appreciation involves more than mere classification of works of art using only externally acquired "frameworks". It is much more likely that aesthetic encounters depend on complex psychological processes that, in turn, are associated with emotion, perception, communication, cognition and imagination. Furthermore, it is almost certain that the process of aesthetic understanding is fueled, in tandem, by both external and internal sources of experience and information.

Aesthetic response theory seeks, therefore, to identify the process contained within aesthetic experiences. To that end, many
researchers have proposed descriptive theoretical models that attempt to explain the complexity and the diversity of individual responses to aesthetic objects or events.

**Review of Aesthetic Response Theory**

Some of the earliest, as well as some of the more recent research undertaken on aesthetic response, has focused on the cognitive aspects of the art viewer's response. One of these theories seems to provide additional support for the role assigned to the notion of frameworks within Housen's theory of aesthetic development. Leonard Zusne (1986) proposes a descriptive model of aesthetic response based on a revised formulation of Festinger's (1957) Theory of Cognitive Dissonance. However, instead of Festinger's concept of "dissonance" as the motivating factor in seeking renewed homeostasis once a conflict has taken place, Zusne proposes that a state of "cognitive consonance" - a form of pleasant, intrinsic motivation that "is sought for its own sake" - is the main factor inciting and rewarding aesthetic behavior (p. 531). He further proposes that "fittingness" is the mechanism via which aesthetic judgments are made. "The core of the aesthetic experience is the experience of some degree of fit between the specimen (the aesthetic object or event) and the corresponding standard. The degree of fit determines the intensity of the experience" (p. 531). Zusne also proposes a mechanism through which aesthetic development may occur. "The fact that the ideal standard is held only for the time being and that it is held by a given individual suggests the acquired nature of the standard and of the
variations within an individual over time and among individuals" (p. 537).

A second paradigm, also essentially cognitive in scope, is proposed by John A. Codd (1982) to explain how aesthetic judgments are made. Codd argues that art appreciation is essentially a cognitive activity which involves interpretation of the aesthetic object or event using criteria that "are embedded in a normative language system and bounded by a logical structure" (p.15). "Interpretive cognition", as Codd calls it, has three distinctive features. The first feature, "interpretive indeterminancy", relates to the fact that the aesthetic object itself can support a number of different interpretations. "Intentionality" is the second feature, and it pertains to the fact that aesthetic cognition is an activity that is engaged in at will; it is not an automatic response. It is, according to Codd, something that we can do, if we want to. Finally, the third and last feature of interpretive cognition is "imagination". The feature of imagination requires that we go beyond what is immediately apparent in the work of art. "Because works of art are complex symbolic objects, considerable understanding may be required to grasp their meaning.... It is important to recognize that imagination is required not only to create but also to interpret a work of art" (p. 23).

The role attributed to imagination stands out as a key construct in many theories of aesthetic response. The viewer's use of imagination is also implied in the definitions that Housen provides for two of the later stages of her theory of aesthetic development: the Interpretive Stage and the Creative Reconstruction Stage. Imagination is an important notion in many conceptualizations of aesthetic
experience because it confers on the viewer an active role in the construction of his or her own understanding of the work of art. The viewer is not seen as a passive recipient of some message transmitted by the work of art; rather, he or she is understood as actively involved in a creative act that brings together perception, intellect, and emotion. Indeed, there has been considerable criticism of theories that attempt to portray aesthetic response solely as a cognitive process. In a review of early attempts to create a theory of aesthetic development, Barbara J. Kaplan (1982) emphasizes that a plausible theory will have to include both the cognitive and affective components of aesthetic experiencing. "Part of the aesthetic and creative experience seems to involve suspension of the distinctions and differentiations we have learned and to experience thinking with feeling" (p. 95).

More recently, Csikszentmihalyi and Robinson (1990) have formulated an explanation of the aesthetic experience that addresses many of these concerns. By using anecdotal evidence obtained from a group of fifty-two museum professionals as the empirical basis for their study, Csikszentmihalyi and Robinson hoped to examine the aesthetic encounter in its purest and optimal form. From this data, they were able to identify the four major dimensions of aesthetic experience: intellect, communication, perception and emotion. Each one of these dimensions constitutes, to some extent, a challenge that the work of art addresses to the viewer. She or he, in turn, will need to continuously perfect her or his skills within each of these four domains in order to continue to perform adequately in the task of aesthetic appreciation. According to Csikszentmihalyi and Robinson,
the intellectual dimension of aesthetic experience consists of all aspects of the viewer's attempts to use knowledge in order to find meaning in the work of art. The communicative dimension of the aesthetic experience is characterized by the two modes by which an exchange is established via the work of art: the communication across different time periods and cultures, and the communication between individuals (the artist and the viewer). Perception is the third dimension of the aesthetic experience. It relates to the physical and formal qualities of a work of art and to the role that our senses play in defining it. Finally, the emotional dimension of aesthetic experience consists not only of the positive emotions engendered by the work of art, such as joy and inspiration, but also the negative ones, such as fear and frustration. For many of the informants in this study, the initial emotional response to a work of art is the triggering factor that actually incites the viewer to engage in the process of discovery that leads to the aesthetic appreciation of the art object (Csikszentmihalyi and Robinson, 1990, pp. 27-71).

Having identified the four dimensions of aesthetic experience, Csikszentmihalyi and Robinson then propose a model that describes the aesthetic encounter in terms of an interaction between the viewer, the work of art, and the artist. To this encounter, the viewer brings his skills in aesthetic appreciation; these may be more or less developed according to the viewer's training and previous viewing experience. The work of art also plays a role in the encounter as each work of art, with its specific characteristics, challenges anew the viewer's know-how according to the four dimensions identified above. In this model, the work of art is said to incorporate all its possible
meanings including those "that transcend, in one way or another, the artist's intentions and the limitation and convention of his or her historical period that yet are open to interpretation and understanding by the beholder" (Csikszentmihalyi and Robinson, 1990, p.135). The last component in this triad consists of all the cognitive, communicative, perceptual and emotional content imbued, directly or indirectly, consciously or unconsciously, by the artist into the work of art at the moment of its creation.

In this model, the quality of the aesthetic experience is said to relate directly to the viewer's ability to engage in a meaningful dialogue with the work of art according to the above four dimensions, and to the extent that the viewer's understanding concurs with the meaning vested in the work by the artist and, indirectly, by the other sociocultural factors that also come into play in the construction of the meaning of a work of art. The degree of overlap between the viewer's skills, the art work's specificities, and the artist's intentions determines the extent and nature of the aesthetic experience (Csikszentmihalyi and Robinson, 1990, pp. 133-137).

In addition to the three models reviewed here, prescriptive or descriptive theories of the aesthetic experience have also been proposed by Annis (1980), Feldman (1987), Horner (1988) as well as others.

**The Museum as a Site of Learning**

In a recent article, I compare two theoretical models -- one describing the nature of aesthetic experience (Csikszentmihalyi & Robinson, 1990) (presented above) and, the other, the process of
learning in adults (Artaud, 1989) -- in order to demonstrate that an aesthetic experience is also a learning experience (Lachapelle, 1992). What follows is a recapitulation of key points originally presented in that paper.

According to the psychologist Gérard Artaud, in situations of learning, adults must face and resolve the dilemma that arises from the confrontation between "a body of knowledge coming from an external source and the questions and intuitions that surface from within". More specifically, "the problem relates to the student's appropriation of knowledge" (Artaud, 1989, p. 115) (original translation). Furthermore, the adult learner is never totally unknowledgeable about a subject. It is clear that the "knowledge to be transmitted is not the only one to be taken into account; it interacts in permanence with this other knowledge that the student has constructed from his or her previous experience" (p. 121, original translation). Artaud identifies, therefore, two types of knowledge, "experiential knowledge" and "theoretical knowledge" as the raw materials of adult learning.

Experiential knowledge "carries with it a whole series of representations that are developed internally starting from...[the learner's] interaction with reality and the prevalent cultural models that have informed his or her way of seeing and understanding" (p. 122, original translation). This knowledge is fragmentary and remains unorganized. It is precisely because of the limitations of experiential knowledge, that learning can never limit itself to a simple exploration of the learner's experiential knowledge on any given subject. Such a quest is not sufficient in itself to promote changes in
the learner's cognitive schemes. Instead, the learner's attempts to inventory his or her experiential knowledge on any given subject usually raises numerous questions that, given the limitations of personal knowledge, remain unanswered. Thus, the learner usually turns to an external, more perfected, body of knowledge in order to explore the problem from a different perspective.

It is through confronting his or her experience-based knowledge with an appropriate theoretical knowledge that the learner can take stock of his or her own experience. He or she can identify the weaknesses of personal knowledge, organize it and, finally, understand it much better. However, in contrast to experiential knowledge, theoretical knowledge is a body of knowledge that "has been developed by someone else" and originates from outside the learner. It is logical, coherent, well articulated and its structure is scientific in character. "It helps the learner to distance himself or herself from his or her own experience by proposing a panoramic view of reality" (p. 128, original translation).

In the methodology proposed by Artaud, the confrontation of experiential knowledge (inventoried during the first phase of the learning process) with theoretical knowledge is not an end in itself, but rather a second phase of learning. As the comparison between these two bodies of knowledge takes place, the learner's experiential knowledge remains as a "permanent reference", but it also begins to change as it comes into contact with scientific knowledge. Yet, it maintains the authenticity conferred to it by the attestation of the learner's life experience. A third phase, "integration", aims to promote the emergence and the acknowledgment of new knowledge
through the process of the "recreation of knowledge". This process represents "a passage from an initial symbolization to a more elaborate symbolization [through] the clarification of the content of the initial intuitions, a revised formulation of questions from a different point of view, the disclosure of the implications of this new knowledge in life and in action" (p. 141, original translation).

To make the point that the process of aesthetic understanding is in fact a learning process, I will compare Artaud's model with that of Csikszentmihalyi and Robinson, and I will point out the similarities between the two models. First, Artaud's notion of experiential knowledge can be used to describe the viewer (and the skills that he or she brings to the aesthetic encounter) in Csikszentmihalyi & Robinson's model. Second, the artist in the aesthetic experience model (and the meaning he or she invests into the work of art) serves the same function as the notion of theoretical knowledge in Artaud's model. Both are sources of information that are external to the viewer or the learner. The work of art, of course, is the target of the viewer's efforts to create meaning within the context of an aesthetic experience. It is the equivalent of the greater body of knowledge that is the object of the learner's efforts in Artaud's theory. Finally, a parallel can be drawn between Csikszentmihalyi and Robinson's definition of aesthetic experience -- the area of overlap among the three components of the model: the viewer, the artist, and the work of art -- and the concept of integrated knowledge in Artaud's model. Artaud defines integrated knowledge as the result of the interaction of theoretical and experiential knowledge (Lachapelle, 1992, pp. 123-124).
However, in order to make the point that aesthetic experience is a learning experience (as I have in the previous paragraph), it is necessary to adapt Artaud's theory by adding a fourth element not originally present in the model: the body of knowledge that is the object of the learner's efforts. Without this addition, there is no component in Artaud's model that can be compared to the role of the work of art in Csikszentmihalyi and Robinson's model. This is so because Artaud's model is intended to describe adult learning within a traditional academic setting, where leaning is, more often than not, a matter of the transmission of a body of knowledge from teacher to student. Yet, for the purposes for which it was originally intended, Artaud's model is convincing, and its internal and external validities are well founded.

Learning in the museum, however, is not a simple question of the transmission of knowledge from an authority to a learner, either through books or other means. It is a self-guided, active learning experience in which the learner constructs new knowledge based on an encounter with an object and other related sources of information. It is a form of experiential learning in the truest sense. Experiential learning is understood to be "learning in which the learner is directly in touch with the realities being studied. Experiential learning typically involves not merely observing the phenomenon being studied but also doing something with it, such as testing the dynamics of the reality to learn more about it, or applying the theory learned to deliver some desired result" (Keeton & Tate, 1987). Kolb's (1975, 1984) experiential learning model provides an explanation of the process by which this kind of learning occurs.
Kolb's model] depicts learning as a four-stage cycle with each stage requiring different abilities and skills on the part of the learner....[The first stage consists of] concrete personal experience which is followed by observation and reflection of that experience [the second stage]. These reflections are connected to and reworked into abstract concepts and generalizations [the third stage] which are then tested in new situations [the fourth stage]. In turn these lead to new experiences for a repetition of the cycle. In order for learning or change to take place, the four stages of the cycle must be integrated; for example, an experience which is not reflected upon or is not tested in actual practice, is lost as potential learning (Melamed, 1985, p. 1798).

Learning as it occurs in the museum setting has a number of other characteristics that distinguish it from learning in a purely academic setting. First, "as places of informal, self-directed learning, museums stimulate visitors to create their own encounters with objects and ideas.... Unlike schools, museum visits have no prerequisites and no sequential curriculum. Often the learning experience is a moment of reflection or a chance discovery that moves the visitor in a lasting way" (American Association of Museums, 1992, p. 16). Second, museum learning is object-centered, that is to say that learning in this setting is almost always focused on the investigation of a specific object or display. "Museum exhibits are object-based, visual and spatial. They engender a kind of learning very different from that prompted by the printed page or formal lecture" (Commission on Museums for a New Century, 1984, p. 64). Third, even when visitors do participate in structured educational activities offered by the museum, these activities differ substantially from courses offered in academic settings. This is so because such activities must take into account the specific characteristics and
requirements of heterogeneous museum populations. In the museum, educational programming tends to include a broad range of services such as lectures, gallery talks by curators and educators, publications, docent tours, extended labels, and various interactive devices such as didactic displays or CD-ROM data bases accessible by computer (American Association of Museums, 1992, p. 17; Commissions on Museums for a New Century, 1984, p. 65).

To "learn" in a museum means to develop the ability to synthesize ideas and form opinions, shape an esthetic and cultural sensibility. These intellectual qualities result from all kinds of learning, but they are the special province of museums, where objects and ideas are interwoven in an open process of communication that blends study and exploration, seeing and thinking and, in many instances, touching (Commissions on Museums for a New Century, 1984, pp. 58-59).

Any model that attempts to explain the process of learning in the museum will need to take into account the specificities of the museum as a learning environment: the heterogeneity of visitor populations, the informal nature of learning in that setting, and the object-centered structure of the learning process.

Summary

As a source of research data, informant-made videos have the advantage (over audio-taped interviews) of providing, in addition to an audible record of informants' statements, information about the perceptual and kinesthetic aspects of aesthetic experiences with works of art.

Research into the psychological development of aesthetic understanding has demonstrated that this ability develops in
sequential stages in accordance with the extent of art viewing experience. Furthermore, aesthetic response has been shown to have four major psychological dimensions: intellect, communication, perception and emotion. In its purest and optimal form, aesthetic response can be described as an interaction between the skills of the viewer, the content imbued into the work of art by the artist, and the broader social meaning embodied by the work of art itself.

There are many characteristics that distinguish learning in the museum from learning as it occurs in more conventional academic settings. Museum learning is object-centered. It is, in most cases, self-directed learning and, consequently, it is a form of experiential learning in its truest sense. Therefore, in addition to cognitive sources of information, museum learning depends also, to a large extent, upon the learner's emotional, perceptual and kinesthetic experience.

The adult visitor faces a dilemma every time he or she encounters a work of art. As a learner, he or she must reconcile the knowledge acquired through past experience with the two other kinds of knowledge encountered during an aesthetic experience. The first of these is the knowledge that results from the experiential learning, described above, that occurs immediately and spontaneously during the aesthetic encounter. The second is a more formal, theoretical body of knowledge accessed by the learner through the various sources of cognitive types of information, which are usually provided by the museum through wall text, extended labels, paddle boards, exhibition catalogues and other means.
Aesthetic understanding is the result of a learning process that arises from the viewer's encounter with an art object. It is a complex process that unfolds gradually both during and after the viewer's actual encounter with the work of art. Previous research efforts have not provided adequate explanations of the learning processes involved in adults' encounters with works of art. This study, whose protocol is described in detail in the next chapter, provides a more adequate explanation.
CHAPTER III

Methodology

Psychologists once used the term "apperception" to denote a process in which the organizing of sense data in relation to previous experience is especially extensive and systematic. This term is still useful in describing responses to art....All perception contains some amount of this, but in describing aesthetic experience it is especially important to notice the extent and order with which inner forms are built up more or less in compliance with the cues suggested by the outer form, the seen or heard work of art....The apperception of art often involves some inference and reasoning, as in reading a detective story. In some types of art, such as religious symbolism, apperception involves understanding abstract ideas and theoretical relations⁶.

--Thomas Munro

Overview

The design of the methodology for this study is based on an ethnographic and qualitative investigative approach.

Ethnographies are analytic descriptions or reconstructions of intact cultural scenes and groups....[They] recreate for the reader the shared beliefs, practices, artifacts, folk knowledge, and behaviors of some group of people. Consequently, the ethnographic researcher begins by examining even very commonplace groups or processes in a fresh and different way, as if they were exceptional and unique....this allows investigators to discern the detail and the generality that are necessary for credible description (Goetz and LeCompte, 1984, p. 2).

Data collecting techniques include both participant observation (Pohland, 1972) and non-participant observation, interviewing, audio and video recordings, and field notes.

⁶T. Munro, 1956, p. 120.
The procedure for collecting the data required for this study was the same for each informant. It involved four main components: 1) an audio-taped interview with the informant documenting her or his verbal responses to specific works of art; 2) individual training for the informant on the use of the video equipment; 3) production by the informant of a video about two art-viewing experiences; and 4) a follow-up interview in which both the informant and the researcher watch and discuss that informant's video tape.

Research sites.

Each informant attended individual training, taping and interviewing sessions. These sessions took place on different days for each informant, at a time that was convenient for both the informant and the researcher. In some cases, the training sessions on the use of the video equipment were given at the informant's place of residence when this was more convenient for the informant. This was the case for Suzie, Roger and Rex. All other sessions (the first audio-taped response session, the subsequent practice and production sessions for the informant-made video tapes, and the follow-up interview) took place at the National Gallery of Canada in Ottawa, Ontario. The responding sessions, during which informants were asked to respond to actual works of art, took place in the galleries devoted to the permanent collection, while the follow-up interviews were conducted in an office in the Gallery's Education Division. Informants were free to select the galleries as well as the works of art to be used in their practice tapes. However, the same network of five interconnected galleries was suggested to each informant as an appropriate venue for
the production of their final video tapes. I chose this particular cluster of galleries (a gallery in the Canadian permanent collection showing works of art produced between 1940 and 1965 and four galleries devoted to contemporary Canadian art) for two reasons. First, I wanted the informants to avoid works of art dealing mainly with colour because the built-in viewfinder, which forms the eyepiece of the video camera, provides the operator with a black and white image of what she or he is taping. This is the case even though the video tape itself provides a colour image when played back on an external colour monitor. This technical limitation did not make the camcorder used in this study suitable for studying works of art where colour is the main aesthetic concern. Second, I proposed these specific spaces to the informants because I wanted to ensure that a wide variety of works of art was readily available from which they could select their own preferences. The galleries in question presented works of art that ranged from representational to abstract and from traditional (i.e. painting and sculpture) to contemporary media (i.e. installations). It is important to note that I did not impose the choice of these galleries on any of the informants. They were free to go elsewhere within the permanent collections if they were unable to find works of art that they liked within the proposed galleries. This was an important consideration because, during the course of my study, the exhibits in some of these galleries changed considerably. From the outset of the study, I knew that I would not be able to guarantee that the variety and the range of the works on display would remain the same for the entire duration of the field work.
**Time requirements.**

A total of about six hours was required in order for an informant to complete all of the exercises prescribed by the research protocol. Five informants completed the required tasks over two days during two separate three-hour sessions. The following informants -- Suzie, Roger, Julien, Mona and Albert -- opted for this scheduling format.

When this two-day schedule was chosen by an informant, we proceeded as follows. During the first session, I began by briefing the informant about his or her role in the study: I presented an overview of the various exercises in which she or he would participate; I explained that the objective of the field work was to obtain honest accounts of his or her aesthetic understanding of various works of art; I emphasized that no particular expertise was required in order to participate in the study and that I was truly interested in hearing personal and honest descriptions of her or his experiences with the works of art. Finally, the informant was asked to sign formal consent forms relating to his or her participation in the study (copies were given to the informant) and to complete a biographical questionnaire.

Once these preliminaries were dispensed with, we undertook the first exercise specified in the research protocol: the audio-taped verbal responses to two different works of art. Once this was done, the informant participated in a training session on the operation of the camcorder used in the study. As part of this initial training, the informant was asked to produce a short video in which she or he explored either her or his place of residence or the public spaces (excluding the galleries) at the National Gallery. The first phase
usually ended after we viewed the video and discussed any technical problems encountered during the filming exercise.

The second session was normally scheduled for a different day, but usually took place within a week of the first session. During the second session, the informant produced a practice video tape about one or two works of art in one of the galleries. Once completed, this tape was viewed in order to identify and correct any technical difficulties encountered by the informant in making the tape. The content of the practice tape was not discussed. The informant then produced a final video which was, in fact, the video that provided the data for the study. Two separate works of art were presented by the informant in this final data video. Finally, both the researcher and the informant viewed the final video together in a follow-up interview which took place immediately after the tape was completed by the informant. This follow-up interview signaled the end of the second phase and also the end of each informant's participation in the study.

Five informants elected to complete all of the requirements specified by the research protocol on the same day. In such cases, the first session, as described above, was completed in the morning and the second session was completed in the afternoon. The two phases of data collection were separated by a lunch break. The following informants chose this scheduling format: Nicole, Rex, Janet, Paul and Diane.

Selection of the works of art.

Throughout the course of this study, informants were free to choose for themselves the works of art that they would respond to in
their videos. In this research project, the selection of an art work by the informant is understood to be the very first step in the process of responding to a work of art. Various works of art appeal to different people for divers reasons. Why one person is drawn to a specific work of art, which may leave another absolutely indifferent, has much to do with the personality and preferences of that person. As I see it, in this process of initial attraction between the viewer and the object, the work of art is somehow the embodiment of the right combination of characteristics that excite a particular viewer. It is not possible, therefore, for anyone to recognize which works of art will be perceived as attractive by someone else. On many occasions, in this and in my previous research, I have witnessed informants spending long periods of time, walking through gallery after gallery, in search of that one work of art to which they wished to respond. Given the sheer power and mystery of this process of initial attraction, it seems unlikely that any researcher could assemble a selection of reproductions or works of art that could excite each informant equally. Therefore, it is appropriate, in situations of actual in-gallery field work, to let the informants make their own selections.

Two criteria were given as guidelines for choosing the works of art. First, informants were asked to select works which they did not know. Second, they were instructed to select works of art that appealed to them.
Languages Used in Data Collection.

This study was conducted in Canada's National Capital. The Capital Region is a amalgamation of eight municipalities located on both sides of the Ontario-Québec provincial boundary. The Region's total population is about 675,000, of which 51% claim English as their mother tongue, 34% French, and 15% some other language (The Canadian World Almanac and Book of Facts, 1989 pp. 77-82). The Region is, of course, the seat of the Federal Government and, therefore, bilingualism is a fact of life throughout the Capital.

Canada is currently attempting to achieve a truly bilingual national status, although the French and English cultures have remained distinct, existing side by side. In cities like Montreal and Ottawa, where the two languages co-exist, the result is a stable bilingualism somewhat similar to that found on the language frontiers of Switzerland (Williamson, Swingle and Sargent, 1982, p. 305).

In choosing to conduct this study at the National Gallery of Canada, I had to consider very carefully the issue of language. Since I am fluently bilingual, I would have erected an unnecessary and artificial barrier between myself as a researcher and numerous potential informants by selecting English over French, or French over English, as the language of the study. Of the candidates for participation in the study, few were equally comfortable in both languages. Furthermore, given the present political climate in Canada, citizens of the Capital Region expect, as a matter of principle, that they will be addressed in the language of their choice. Therefore, the only practical answer to this problem was to allow informants to use whatever language they preferred. This solution also presented the

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7 Aylmer, Hull and Gatineau are located in the province of Québec, while Ottawa, Nepean, Gloucester, Rockcliffe Park Village, and Vanier are situated in Ontario.
advantage of ensuring that informants would not be hampered by irrelevant problems of fluency in a language other than their mother tongue. In the end, this was also the only outcome that would satisfy all the needs and rights of potential informants while, at the same time, reflect and preserve the unique linguistic reality of the chosen field site.

The use of two languages in conducting the field work may bring readers to question whether the variances in results observed between the subsets of the study group will be simply a reflection of the linguistic differences between participants. I strongly believe that this is not the case. Contrary to what some may assume, language is not the only means by which we think and, therefore, by which we come to understand works of art.

It is Edward Sapir who proposed, in 1921, the theory that the patterns of our cultural behavior, as well as the structures of our thinking, are determined by the vocabulary and syntax of the language we speak. This influential point of view was further developed by Benjamin Whorf (1952, 1956), whose linguistic-relativity hypothesis maintains that language systems (grammar) actually limit the extent to which individuals are in contact with reality, because language is said to provide the very means by which we perceive reality (Williamson, Swingle and Sargent, 1982, pp. 310-311).

However, this extreme point of view has come under considerable scrutiny.

Our best psychological information indicates that thinking goes on in terms of some combination of words, concepts, images, gestures, and feeling -- but it does not necessarily depend on any of these. All of them -- whether basically verbal, visual or emotional -- have
arisen in a context of social communication (Williamson, Swingle and Sargent, 1982, p. 311).

Although Rudolf Arnheim (1969) concedes that language is useful in assisting thought, he makes the convincing argument that thinking can occur without resorting to the use of language. To support this position, he cites a number of clear examples of thinking in animals (pp. 228-229). Arnheim also points out that language has limitations: it is an incomplete system which depends on imagery from other media in order to actually give shape to thought (p. 240). He further argues that words do not have stable meanings and, that according to the individuals and the context in which they are used, words can even have simultaneous different meanings (p. 245). Finally, Arnheim criticizes linguistic determinism as a narrow and introverted explanation for the process of thinking.

Language interacts with the other perceptual media, which are the principal vehicles of thought....By sanctioning and preserving concepts formed in perceptual experience, language influences the organization of thought. Of this influence, the more radical formulations of linguistic determinism have given a crudely one-sided account. They maintain that the vocabulary and grammatical makeup of a language creates the world view of the people who use it....[This] doctrine seems to derive its impetus from an introverted need to view the human mind as the creator of the outer world. It could not otherwise ignore the obvious question of how a language came to develop a particular vocabulary and grammar in the first place; nor would it transfer characteristics of language so confidently to the mentality of the people who speak it, without a shred of independent evidence indicating that the nonlinguistic behavior of the population does in fact parallel the idiosyncrasies of their forms of speech (pp. 242-243).

Ethnography remains one of the few approaches to scientific inquiry that "admit the subjective perception and biases of both
participants and researcher into the research frame" (Goetz and LeCompte, 1984, p.95). In this epistemological context, the main concern relating to the use of language in ethnographic research is not the issue of linguistic determinism, but rather the question of the inquirer's fluency in the language(s) used in the study. Fluency is considered essential for a full and unfettered understanding of the subjects being investigated.

To achieve the degree of understanding required for unraveling the behavior and belief patterns under study, many trainers of fieldworkers insist that no researcher really can hope to study a people adequately through interpreters. [...] in-depth understanding of a culture requires near-native fluency in the language as well as extensive and intensive participant observation (p. 95).

Language fluency can even be a concern in studies where researcher and informants speak the same language and originate from the same culture. Goetz and LeCompte (1984, p. 96) cite the example of researchers studying teenagers: a good understanding of the slang and other expressions used by adolescents is essential, in such cases, if the researcher is to truly understand his or her informants.

I believe that I am well qualified to conduct research in both English and French. I have been speaking both these languages since early childhood, and I am fluent in both. During my career as a researcher, I have presented papers at various professional conferences in both English and French, and I have also published papers in juried journals in both these languages. My facility with both languages used in the study has ensured that the data collected from
all informants has not been misrepresented or misinterpreted due to a deficiency in language.

**Study Design and Procedures**

*Audio-taped verbal responses to works of art.*

The first component of the research protocol consisted in collecting informants' audio-taped verbal responses to works of art. This was intended to act as a control measure by providing a base-response against which the informant's video response could be compared. This comparison was made in order to establish the validity of data collection procedures using informant-made videos.

For each informant, the control procedure consisted in soliciting and documenting a verbal response to two different works of art chosen by the participant. This response was taped using an audiotape recorder. The exact details of this procedure are as follows.

In order to assist the informants in selecting the works of art, a floor plan of the National Gallery of Canada was presented to each participant as a means of familiarizing them with the full range of exhibits at their disposal. Informants were told that they could select works of art from any of the galleries within the permanent collections, with the exception of the five galleries set aside for the production of the final data video tapes.

Responding to each work of art began with an uninterrupted viewing period, of at least five minutes duration, during which the participant was asked to direct his or her attention to looking at the work of art. The minimum of five minutes allocated to this task served to impress upon the informant the importance of looking as
the first step in the response sequence. However, the exact duration of this initial viewing period, beyond the required minimum, was left to the discretion of the participant. In actual fact, none of the informants looked at their selected art work for more than the required five minutes. The exact duration of the initial viewing period was measured and controlled by the researcher using the timer on a wrist watch.

The next step in the audio-taped verbal responses consisted in eliciting from the participant an uninterrupted verbal account of his or her response to each art work immediately following the viewing period. Informants were asked to respond out loud as they tried to retrace the steps by which they became acquainted with the work of art during the initial five minutes of viewing. Participants were asked to speak for about five minutes, but they were allowed to continue beyond this time limit if they felt the need. In cases where the informants had difficulty in verbalizing their understanding, I facilitated their responses by posing open-ended and non-leading questions such as “Are there any comments you want to make about the fabrication of the piece?” or “What advice would you give to the artist about her work?” or “What do you think the artist is trying to say in this painting?” and so on.

Once the informant had completed the sequence described above, the entire process was repeated with the same informant, in response to a different work of art. In all, each informant looked at, and commented on two artworks in the audio-taped phase of the research.
Camcorder training session.

After completion of the audio-taped verbal responses described above, each informant participated in a video training session in which he or she became acquainted with the video equipment to be used in the study. The training session was conducted by the inquirer and consisted of an explanation and a demonstration regarding all aspects of the operation of the camcorder. The content of the training session included the following skills: installing the camera’s battery pack, inserting and ejecting a cassette, adjusting the viewfinder and the viewfinder focus, understanding the difference between the camera’s two modes of operation: “camera” and “VTR”, turning on the power, using standby mode, removing the lens cover, holding the camera, recording, using auto-focus, using the zoom lens, using the macro feature for extreme close-ups, basic in-camera editing, and finally, understanding the features of the built-in tape counter. The informants practiced each camera skill as I explained it to them. Throughout the training session, informants were encouraged to comment and pose questions and, when necessary, to seek clarification regarding the operation of the camera and regarding the tasks he or she was being asked to take part in.

Training video.

After becoming familiar with the operation of the camcorder, the informant was asked to produce a short training video consisting of a visual exploration of the public spaces at the National Gallery or of his or her own place of residence. The objectives of this exercise were to reinforce, through practice, the informant’s new filmmaking
skills. In this exercise, the study participant was asked to explore different ways in which the video image and the video soundtrack could be used together to effectively convey to an imaginary audience information about the spaces in question. Once the practice video was completed, I met with the informant to view and discuss the tape. This follow-up session focused on practical concerns, such as the problems encountered in operating the camera and what filmmaking techniques might be used or perfected in order to better convey the informant's ideas.

**In-gallery practice videos.**

The production of additional practice videos was intended to permit the informant to become familiar with using the camcorder as a tool for conveying her or his thoughts about specific works of art. Therefore, each informant produced, while on location in the galleries, one or more additional practice tapes about specific works of art. It should be noted that participants were asked to avoid using the network of galleries set aside as the proposed venue for the production of the final data videos. In producing these practice tapes, informants were asked to follow the same directives as those for the production of the final data videos. Participants were free to make as many practice tapes as required in order to become familiar with the use of the camcorder. Most informants produced only one practice video. Two informants, Suzie and Roger, produced two, even though one would have been sufficient. Suzie and Roger were the first two informants that I worked with. It is through their experiences in
producing these practice tapes that I realized that one practice video would be sufficient for the other study participants.

As the researcher, I attended the production of all the informants' practice videos. However, I limited my role to that of an observer, unless an informant specifically requested my assistance or decided to involve me as a participant in the videos in the role of an interlocutor. Once again, both the informant and I viewed the practice videos together. For the participant, this was an opportunity to verify whether or not the information in the video was being communicated as he or she intended. For the researcher, viewing the practice videos was a means of assessing whether or not the informant had developed sufficient facility in using the video technology in order to move on to the production of the final data video.

**Taping of the final data video.**

The primary objective for the final video tape was to produce a video which documented the informant's impressions of selected works of art.

At this point in the research protocol, each informant was quite familiar with the procedures to follow for the production of the data tape. However, I reminded each informant that he or she should select works of art that appealed to him or her, and that these artworks should be unfamiliar. In order to acquaint the participants with the full range of works of art they could choose from, I walked them through the five galleries which had been set aside for use in this exercise. I reminded informants that they were free to select
works of art from other galleries, especially if they were unable to find something appealing within these spaces. Since the final data tape was to consist of video-taped responses to two different works of art, I also explained that the informant should probably select the first work and respond to it by producing a video about it first, before selecting the second work and responding to it in turn. The informants were also given another option: they could select two works of art and produce only one video tape comparing and contrasting the two works. I provided this choice, because it seemed plausible that some participants might normally proceed in this manner when viewing works or art. Only one informant, Albert, chose this option. All other nine informants treated each work of art separately in two distinct videos.

As for the previous exercises, namely the audio-taped verbal response and the in-gallery practice video tape, I instructed the informant to take five minutes to view the work of art selected before beginning the production of the data tape. Furthermore, I explained that the nature of the task at hand was to try to communicate, through the production of a video, his or her understanding of the work of art as well as the various ideas, steps, intuitions, insights and feelings that led to this understanding. Once more, I timed the duration of the initial viewing period using the timer on my wrist watch, and I indicated to the informant that he or she could proceed with the taping only once this five-minute period was over.

The informant was asked to produce a short video essay of approximately 5 minutes in duration for each work of art. I encouraged the informant to produce a video about the work of art
that retraced chronologically the steps by which he or she became acquainted with it, thus recreating the informant's viewing and contemplative process for that particular work of art. I posed four questions for the informant to consider in producing their videos. These were: "Where did you begin [in your process of trying to understand the work of art]?", "What was your first reaction?", "What did you think about?" and "How did your impressions change?" I also gave the same few pointers to each informant. I asked him or her to consider how the use of images and the use of commentary in the video might help an imaginary audience to better understand the informant's viewing experience. I told the participant that he or she could make a plan of the content of the videos beforehand and take notes if necessary. Also, I reminded the informant that the video would be in colour even though the camera's viewfinder provides only a black and white image of what he or she would be taping.

During the actual taping session, I tried to limit my role to that of an observer but, at the request of some informants, I acted either as a technical assistant or as an interlocutor and provided whatever help was requested. As a participant observer, I was able to become familiar with the circumstances surrounding the production of the informants' videos, and any useful information in that respect was duly recorded in my field notes.

Follow-up interviews.

A follow-up to the production of the final data tape took place on the same day that the informants produced their tapes. This follow-up consisted of a video screening and an interview. The
objective of this exercise was to seek further insight into the affective and cognitive processes that guided the selection, viewing and understanding of the works of art presented in the informant’s video. The participant was asked, therefore, to view and to discuss with the researcher the videotape he or she had just produced.

The procedure adopted for all of the follow-up interviews was the same. It was understood by both the informant and myself that the playback and the viewing of the video tape could be interrupted at any time by either party in order to comment on or to seek clarification about what was being seen or heard on the tape. The playback of the videotape was temporarily suspended for the duration of all episodes of dialogue between the participant and the researcher. Once the issues brought forth by either party were resolved, viewing of the data tape resumed. Upon viewing the entire segment of videotape about the first work of art, the inquirer posed whatever questions were deemed appropriate from among those on a list prepared as an outline for the interview. The researcher’s questions focused on issues that had not been addressed in the video or on concerns that deserved further exploration given the nature of the work of art in question or the nature of the informant’s aesthetic experience. The structure of these follow-up interviews was necessarily open-ended. The focus of the exchange between informant and researcher was shaped by the actual content of the informant’s videos.

The follow-up interviews continued until the entire video tape had been viewed and commented. These interviews were recorded on audiotape in order to supplement the field notes taken by the researcher during the course of the interviews.
Equipment

All audio-taped sessions and interviews were recorded using the battery-powered Sony WM-D3 stereo cassette recorder along with a Sony PC-62 electret condenser stereo microphone.

All informants used the same camcorder unit for the production of all of their videotapes. These videotapes were made using the 8 mm Sony CCD-TR51 video camera recorder. This lightweight "camcorder" weights 590 grams. It is equipped with a F 1.8 video lens, which features a combined 6 x power zoom with a focal length ranging from 5.8 mm to 35 mm. The camera also features a TTL autofocus system, an automatic white balancing system, a monochrome electronic viewfinder and an incorporated omni-directional stereo microphone. For the purposes of this study, the camera was powered using NP-55 lithium battery packs (6.0 V) which provide 55 minutes of operating time.

The selection of a video camera for use in this study was undertaken with great care. The Sony CCD-TR51 video camera was chosen because it provided solutions to some of the problems encountered during the pilot projects undertaken in 1990 and 1992. The main advantages of this camera were its weight, its automatic white balancing system and its autofocus system. The CCD-TR51 is a very lightweight camera, and its selection totally eliminated the problem of fatigue that was reported by informants who took part in the pilot projects using a heavier camera. The automatic white balancing system in the CCD-TR51 ensures good colour and a good quality of image when the tapes are played back on a quality video
monitor. The white balance is achieved simply by pointing the camera lens towards a white surface, such as a gallery wall, while the camera is on standby mode. This is a much simpler operation than the white balancing procedures used in previous generations of camcorders. The CCD-TR51's autofocus system makes filmmaking an extremely easy process. This camera's autofocus system is a great advance over previous generations of video cameras because it virtually eliminates any drift (a temporary loss of focus) during the automatic focusing of the lens. As a result, the quality of the images is consistently good; the images are easily "read" and understood by whomever views the videotape. In the course of this study, informants produced well over 45 different video segments. Out of this total, focusing was a problem in only one of the segments, where the camera's automatic focusing system had trouble distinguishing between the white of the gallery walls and the large almost-white surfaces of one particular abstract painting.

**Selection of Informants**

Ten adult informants participated in the study. The selection of informants was guided by one criteria only: whether or not informants could be classified as either visual arts experts or non-experts. Experts were defined as those informants who had professional university training in the visual arts and/or were involved in careers where such training (or a recognized equivalent) was an entry-level requirement. In turn, non-experts were defined as informants with university training in any discipline except the fine arts. The selection of informants for the study was limited to
candidates with a university education\(^8\) in order to ensure that informants in both groups had somewhat equivalent levels of education. From the beginning of the selection process, I set out to recruit an equal number (five) of expert and non-expert informants. Informants were selected without specific regard for their age, gender, socioeconomic, or cultural backgrounds, as variety in the informants' personal profiles was considered highly desirable. By working with informants from a wide range of backgrounds, I hoped to observe and report on the widest possible range of art viewing behaviors.

Because participation in this study required a serious commitment in time and involvement on the part of each informant, it was not feasible to recruit participants at random from among visitors to the National Gallery of Canada. Therefore, informants were selected using two different sources. Initially, I approached friends and acquaintances, who met the basic selection criteria for the study, and asked them if they would agree to volunteer for participation in the study. In turn, these friends recommended some of their own friends and colleagues as potential informants. In many instances, my friends acted as intermediaries between their friends and me, and in this regard, they provided invaluable assistance in extending the sphere of the search for potential informants. In the end, once the recruiting was finished, an equal number of men and women and an

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\(^8\)Of the ten informants participating in the study, nine had completed at least an undergraduate degree, while one was in the process of completing the final year of her undergraduate studies. All informants had undertaken their programs of studies at well-established and recognized universities.
equal number of francophones and anglophones had agreed to participate in the study.

Before getting involved in actual interviews and taping sessions, each informant completed in writing a short biographical history using a standardized questionnaire provided by the researcher (Appendix 6). This questionnaire included, among others, items requesting information on the informant's previous museum attendance, previous art and art history training, as well as video making experience and skills. In addition, all informants were briefed in advance about the objectives of the study, as there was no justifiable reason or advantage in keeping this information from them. Each informant was told about the nature and the requirements (in terms of time, commitment, number of tasks, and so on) called for by the project and, also, that they had the right to terminate their participation in the study, at any time. Finally, written consent was obtained from each informant.

In the next section, I present individually each one of the ten persons, who agreed to act as an informant in this study. I also provide additional information about informants' backgrounds and about their involvement in the research project.

*The order of informants' participation in the study was as follows: (1) Suzie, (2) Roger, (3) Nicole, (4) Julien, (5) Rex, (6) Mona, (7) Janet, (8) Paul, (9) Albert, (10) Diane.*

It is important to note that, in some of the tables, informants are referred to by number according to order of participation, because a shortage of space within the tables did not permit the use of their names.
# TABLE 1
**OVERVIEW OF NON-EXPERT INFORMANTS AND RELATED DATA SOURCES**

<table>
<thead>
<tr>
<th>INFORMANTS</th>
<th>DATA SOURCES</th>
<th>FOCUS OF FOLLOW-UP INTERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AUDIO SESSION</strong></td>
<td><strong>INFORMANT-MADE VIDEO</strong></td>
<td></td>
</tr>
<tr>
<td>I.D.</td>
<td>AGE</td>
<td>Schooling</td>
</tr>
<tr>
<td>Suzie</td>
<td>31</td>
<td>B.A. Pol. Sc.</td>
</tr>
<tr>
<td>Roger</td>
<td>38</td>
<td>M.A. Sociology</td>
</tr>
<tr>
<td>Nicole</td>
<td>35</td>
<td>B.A. Admin. (Final Year)</td>
</tr>
<tr>
<td>Rex</td>
<td>25</td>
<td>M.A. English</td>
</tr>
<tr>
<td>Janet</td>
<td>30</td>
<td>B.A. Pol. Sc.</td>
</tr>
</tbody>
</table>

**Legend:**
- Fig. = figurative
- Abs. = abstract
- Ins. = Installation
- C. = Contemporary (after 1960)
- H. = Historical (before 1960)
Non-Expert Informants

Of the five non-expert informants, three were women and two were men. Two of the five held undergraduate degrees, two had earned graduate degrees, and one was enrolled in the final year of her undergraduate program. Table 1 presents an overview of the group of non-expert informants by providing background information about each informant, as well as basic information about the three different research activities that each non-expert participated in.

Suzie.

At the time of her involvement in the study (December 1992), Suzie\(^9\) was 31 years old. Suzie completed her university studies in 1980 and holds a BA degree in political science. She is presently employed as a business representative and office manager for a union local. In her capacity as business representative, she represents union members in the adjudication of grievances, participates in the negotiation of collective agreements and represents members in their general labour relations with their employers. She has held this position for the last six years.

Before participating in this study, Suzie visited art museums about once or twice a year. Her last visit to a public art gallery was in April 1992, or eight months before her participation in the study. During some of the visits to these museums, she participated in guided tours and workshops, and she attended the screenings of films as well. During her secondary education, Suzie had art as a subject in

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\(^9\) In order to protect the informants' identities, each was assigned a pseudonym. In some cases, informants chose their own pseudonyms.
grades 9, 10 and 11. Between 1985 and 1991, she took four or five non-credit night courses in art at a local high school and at a community art school. Prior to her participation in this study, she had no previous experience in operating a video camera and in filmmaking.

Suzie elected to complete all the components of the research protocol in two separate sessions which took place on the 19th and 20th of December 1992. She conducted her interviews and exercises in English.

Roger.

Roger was 38 years old when he became involved in this project. He holds a baccalaureate degree (1979), with a major in sociology and a minor in French literature, and a master's degree in sociology (1982). During the last six years, in his capacity as a program officer, Roger has been administering various grant programs for a federal agency that funds research in the humanities and the social sciences.

Roger visits public art galleries about once a year. The last time he visited one was in the spring of 1992, which is approximately 10 months before his participation in the study. During these visits, he will sometimes "listen in" if he encounters a tour group in the galleries. Otherwise, he never takes part in any of the educational activities that are offered in public art galleries. Roger did not take art as a subject in high school and has never taken art courses anywhere. He reported that he had no previous experience in using a video camera or in filmmaking.
Roger chose to complete the various exercises required for the study in two separate sessions which took place on the 7th and the 9th of January 1993. He undertook all of the interviews and taping exercises in French.

Nicole.

Nicole was 35 years old when she participated in this study. For the last ten years, she has worked as an administrator in a public art gallery, where her responsibilities include the coordination of group tours and the administration of budgets for her department. In addition to working full time, she is a part-time student enrolled in the final year of her baccalaureate of commerce degree.

Because of her work, Nicole visits public art galleries a number of times each year. She reported that her last visit took place in November of 1993, about two months before her participation in the research project. During such visits, she will sometimes attend guided tours or conferences. Nicole reported that she took art in high school during grades 9 and 10, but that she has not taken an art course since. She also reported that she had some previous experience in using a VHS video camera, but she described this experience as “limited” since it relates mostly to the filming of one specific family gathering.

Nicole completed the requirements of her role as informant for the research project in one single day-long session which took place on the 16th of January 1993. Her interviews and exercises were conducted mainly in English. On occasion, she used French, but only briefly.
Rex.

At the time of his participation in the study, Rex was 25 years old. Rex has earned three university degrees: a baccalaureate in journalism (1988), a baccalaureate in English (1989) and a master's degree, also in English, completed in 1992. He has worked as a self-employed writer for the last three years.

Rex visited public art galleries six times during the previous year and twice each year for the two years before that. His last visit prior to his participation in the study took place four months earlier. During these visits, he has sometimes attended lectures and films presented in conjunction with the various exhibitions that he visited. Rex did not take art in high school. However, he did take one university level credit course on the history of 20th Century art. During his journalism training, he was trained in the use of Beta video cameras, and he reported that he felt comfortable using such equipment.

Rex elected to complete the requirements of the research protocol in one single day-long session. This session took place on the 25th of January 1993. All activities were conducted in English.

Janet.

The last non-expert informant to take part in the study was Janet, who was 30 years old at that time. Janet completed her university studies in 1983 and holds a baccalaureate in political science. For the past four years, she has been self-employed. In her capacity as a home daycare provider, she provides care to children varying in age from 1 to 6 years.
Janet attends public art galleries four or five times a year. The last time she visited an art museum was the week before she participated in the study. During her gallery visits, she has also attended lectures and workshops, and she has also used audio guides. Janet took art in high school in grades 9 to 11. She has also taken a number of non-credit art courses at two different community art centers. She reported that she had no prior experience in using a video camera or in filmmaking.

Janet completed all of the requirements of the study protocol in one single day-long session. The session took place on the 20th of February 1993 and was conducted entirely in English.

**Expert Informants**

Of the five expert informants, two were women and three were men. All had completed at least a baccalaureate degree. One informant had completed a master's degree, while a second was in the process of obtaining hers. Table 2 presents an overview of the group of expert informants by providing background information about each participant, as well as basic information about the three different research activities that each expert participated in.

**Julien.**

Julien was 30 years old when he participated in this study. Julien holds two baccalaureates, one in psychology and the other in sociology. He also has a master of arts degree in sociology. He is presently employed as an art gallery educator and, in that capacity, he plans and executes educational programming for temporary exhibitions and
### Table 2
**Overview of Expert Informants and Related Data Sources**

<table>
<thead>
<tr>
<th>INFORMANTS</th>
<th>AUDIO SESSION</th>
<th>DATA SOURCES</th>
<th>FOCUS OF FOLLOW-UP INTERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.D.</td>
<td>AGE</td>
<td>Schooling</td>
<td>Profession</td>
</tr>
<tr>
<td>Julien (4)</td>
<td>30</td>
<td>M.A. Socio.</td>
<td>Museum educator</td>
</tr>
<tr>
<td>Mona (6)</td>
<td>43</td>
<td>B.F.A. M.A. (in progress)</td>
<td>Museum educator</td>
</tr>
<tr>
<td>Paul (8)</td>
<td>24</td>
<td>B.F.A. B.A. (Art history &amp; theory)</td>
<td>Artist &amp; educator</td>
</tr>
<tr>
<td>Albert (9)</td>
<td>34</td>
<td>B.A. (Classical Studies &amp; Aesthetics)</td>
<td>Museum Educator</td>
</tr>
<tr>
<td>Diane (10)</td>
<td>31</td>
<td>B.F.A.</td>
<td>Artistic Director of an alternative gallery</td>
</tr>
</tbody>
</table>

**Legend:**
- Fig. = figurative
- Abs. = abstract
- Ins. = Installation
- C. = Contemporary (after 1960)
- H. = Historical (before 1960)
acts as his museum's liaison with primary and secondary schools, as well as with colleges and universities. He has been working as a museum educator for the last five years. Because of his work, he attends numerous exhibitions each year, in his own gallery as well as in others.

Julien took art classes in high school during three consecutive years. During his undergraduate studies in university, he took four art history courses. His graduate courses and thesis research focused on a study of the sociology of art. Julien had no previous video or filmmaking experience when he agreed to participate in this research project. Julien completed all of the requirements of the research protocol in two separate sessions on the 23rd and 31st of January 1993. His interviews and exercises were conducted in French.

Mona.

At the time of her participation in the study, Mona was 43 years old. She holds a baccalaureate in fine arts (1983) and was in the process of obtaining her master's degree in art education. Mona has been employed as an art educator in a public art gallery for the last nine years. For the last two of those years, she has been responsible for managing all of the ongoing educational programming in her museum's education department. Her work requires that she attend, on a regular basis, many exhibitions in her own institution as well as in others.

In high school, Mona took art only in grade 11. She cites the paucity of art courses in her high school as the reason why she took such courses only once. She took a non-credit drawing course in
college in 1973 and also a non-credit watercolour course in a community art school in 1977. Of course, she completed numerous credit courses in both art history and studio when she did her undergraduate studies a few years later. Finally, Mona reported that she has no previous video or filmmaking experience.

Mona completed the requirements of the study in two separate sessions. The first took place on the 4th of February 1993 and the second took place on the 5th of February 1993. Her interviews and exercises were conducted in French.

**Paul.**

Paul was 24 years old at the time of his involvement with the project. Paul has completed two undergraduate degrees: a BFA in studio art and a BA in art history and theory. He is a practicing artist, but also works as a contractual educator at a public art gallery. His work-related duties include conducting guided tours, workshops, and giving talks in conjunction with various temporary exhibitions. His work requires that he attend, on a regular basis, various exhibitions both in his own institution as well as in others.

Paul did not take art classes in high school. However, in completing his two undergraduate degrees, he has taken numerous art studio, art history and art theory courses. It is in the context of some of these studio courses that he has acquired both training and experience in video production, using VHS equipment, and in filmmaking using 16 mm equipment. Paul describes his film and video experience as "extensive"; he has training and experience in both the operation of the camera and in the editing of film and video.
Paul completed all of the requirements of the study in one day-long session, which took place on the 15th of February 1993. His interviews and exercises were conducted in French.

Albert.

Albert was 34 years old at the time of the study. He holds two undergraduate degrees: the first, in classical studies (1982) and the second in philosophy of art (1985). He is employed as a museum educator in an anthropological museum; this is a position he had held for a year and a half at the time of the study. Before that, he worked as a museum educator in a public art gallery for four years. In his present capacity as a museum educator, he researches, designs and develops educational programming for both the permanent collection and temporary exhibitions. As with most of the other expert informants, the nature of Albert's work requires that he attend, on a regular basis, numerous exhibitions in his own institution as well as in others.

Albert took secondary school art courses during his last two years in high school. During the course of his university studies, he took three different 6 credit courses in art history and art theory, and one 6 credit studio course. Prior to his participation in this study, Albert did not have any experience in video or filmmaking.

Albert chose to complete the various activities set out in the study's protocol in two separate sessions. The first session was held on the 25th of February and the second on the 28th of February 1993. All interviews and exercises were conducted in French.
Diane was the last informant to take part in the study. Diane completed her baccalaureate in fine arts in 1987. At the time of the study, she was 31, and had been employed for a year and a half as the artistic director of an alternative gallery. She described her main duties there as the promotion of artists who work in “contemporary, alternative formats" mainly by presenting their work to the public in exhibitions and other artistic events. The nature of her work required that she attend numerous exhibitions almost on a daily basis.

Diane took art courses in every grade in high school except for grade 10. During her final year in high school (grade 13), she enrolled in a different school so that she could take in a greater number of art courses. In that year, 6 of her 8 courses were in fact art courses. Of course, in addition to these courses, she took a large number of studio, art history and theory courses as part of her undergraduate studies in visual art. Again, while in university, she was trained in video production and acquired video experience by working on her own productions as well as on other students’ productions. In addition to her university work, she became involved in television by working on some of the productions of a small community cable station. These various experiences permitted her to become familiar with the use of Beta, VHS and television studio cameras. In spite of these experiences, she describes the extent of her video experience as somewhere in between “just a little experience” and “enough experience to feel comfortable”.

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10Cited from the informant’s biographical history which was completed on March 12, 1993, as part of the preliminary information collected at the beginning of the study.
Diane chose to complete all of the requirements of the study in one day-long session which took place on the 12th of March 1993. Her interviews and exercises were conducted in English.

**Summary**

The selection of ten adult informants for participation in this study was guided by one criteria only: whether or not participants could be classified as either visual arts experts or non-experts. Experts were defined as those informants who had professional university training in the visual arts and/or were involved in careers where such training (or a recognized equivalent) was an entry-level requirement. In turn, non-experts were defined as participants with university training in any discipline except the fine arts. Altogether, five expert and five non-expert informants were recruited for participation in the study. The overall make-up of the group also consisted of equal numbers of men and women, as well as equal numbers of francophones and anglophones.

The procedure for collecting the data required for this study was the same for each and every participant. It involved four main components: 1) an audio-taped interview with each informant documenting their verbal responses to specific works of art; 2) individual training for each participant on the use of the video equipment; 3) production by the informant of a video about two art-viewing experiences; and 4) a follow-up interview in which both the informant and the researcher viewed and discussed the informant's own video tape.
The research protocol yielded a data set for each informant which comprised an audio-taped recording of a baseline response to two works of art, an informant-made video recording about two additional works of art, a transcript of a follow-up interview and, finally, the informant's biographical profile. Analysis of these sources of data constitutes the empirical basis for a discussion of differences in the process of aesthetic understanding between the expert and non-expert informants. Furthermore, the comparison of the informants' verbal and video responses to the works of art provides the means by which to validate information-made videos as an alternative approach for collecting research data about volunteers' aesthetic experiences. These analyses are presented in the next chapter.
CHAPTER IV

Results

Seeing is not an activity divorced from the rest of consciousness; any account of visual art which is adequate to the fact of our actual experience must allow for the imbrication of the visual with other aspects of thought\textsuperscript{11}.

---Victor Burgin

Introduction

In this chapter, I will present the results of the study undertaken using the protocol outlined in Chapter III. The qualitative analysis of the data generated by the field work has permitted a number of interesting observations about the aesthetic understanding process of the study participants and about the use of informant-made videos for the purposes of research into aesthetic understanding. The presentation of the study results begins first with a brief overview of the findings. Then, the evidence to support each of these findings is presented in detail in subsequent sections of the chapter. Finally, the significance of the findings will be discussed at length in Chapter V.

Overview of Findings

First, a typological analysis of the cinematographic orientation of the videos was conducted in order to determine the nature of the intellectual stance taken by the informants in the production of their video tapes about the works of art.\textit{This analysis revealed that the approach taken by all ten informants was essentially the same: each informant produced videos that were classifiable as interpretations}

\textsuperscript{11}V. Burgin, 1986, p.53.
according to Barrett's (1986) Typology for the Interpretation of Photographs.

Second, examination of the informants' use of filming techniques revealed that the non-expert participants, as a group, used more filming operations than the experts. Non-experts used more zoom-ins, more zoom-outs, more pans and more travels per minute than the expert informants. It is only in the use of edits that the experts exceed the non-experts by using about two-thirds more edits per minute.

Third, an in-depth study of the non-narrated segments in each informant's video tapes was undertaken in order to determine the prevalence of this filmmaking technique in the informant-made videos, and to assess whether expert informants used the technique to a greater extent than the non-experts. In most cases, use of non-narrated segments was found to be low. However, in comparison to all other informants, one expert (Diane) and one non-expert informant (Rex) used a noticeably higher amount of non-narrated segments in their video tapes.

Fourth, discourse analysis was used for a detailed examination of the verbal transcripts of the soundtracks of selected informant-made videos. No noticeable differences were found in the expert and non-expert informants' use of psychological operations (thought processes) during the process of aesthetic understanding. However, discourse analysis did reveal that non-experts favored the use of a cognitive approach during their attempts at aesthetic understanding, whereas experts tended to use both cognition and imagination almost equally. Furthermore, expert informants formulated a greater number of hypotheses about the meaning of the works of art.
Fifth, when the functions of the psychological operations used in the process of aesthetic understanding were examined, both subsets of the study groups came out about equal. A third of the operations used by the informants was for the purpose of perceiving and becoming acquainted with the works of art. However, the greatest proportion of the operations was used in order to construct meaning about the works of art. Finally, only small proportions of operations were used by both the expert and non-expert informants with the intention of controlling the accuracy of their perceptions, or for the purposes of perfecting the meaning constructed about the works of art.

Sixth, when the sequence of the functions of the operations for subjects in both groups was examined, no noticeable differences were found that could be attributed to group characteristics. However, differences in the sequence of the functions did reflect differences in the specificity of individual works of art. In other words, informants adapted their use of operations according to the challenges presented to them by different works of art.

Finally, results of the discourse analysis were also used to compare the two data collection methods used in the study: the audio-taped interviews and the informant-made videos. Differences between the two sets of data were found, but most of these differences are attributable to the fact that the analysis consisted in a comparison of the same informant’s responses to two different works of art. However, for three of the four informants (whose tapes were selected for this analysis) a noticeable reduction in the use of the operation To State was observed in the video-taped accounts. With this one exception,
the verbal data collected using informant-made videos compared quite favorably to the verbal data collected using audiotape recordings.

Complete details of each finding introduced in this overview are presented in corresponding sections of this chapter. Before considering these, however, additional information about the treatment of data and the methods of analysis will be helpful by providing a context for the presentation of the detailed analyses.

**Treatment of Data and Methods of Analysis**

Prior to the actual analysis of the data, the following data soundtracks were transcribed by the researcher for each informant participating in the study: 1) the audio-taped verbal responses to two works of art, 2) the final data video about two other works of art, and 3) the audio-taped follow-up interviews. In addition to the transcription of the video soundtracks, a sequential description of the filmmaking techniques used to produce the data videos was also made. Table 3 presents the works of art selected by each informant for their audio and video responding sessions.

On average, the transcript for each informant consists of about 30 pages of single-spaced text, while the total length of all transcripts together is 337 pages. The transcripts provided the basis for word counts, discourse analysis, and an analysis of filmmaking techniques. Other types of analyses were conducted by viewing and scoring the actual videos. These included the analysis of non-narrated segments
<table>
<thead>
<tr>
<th>INFORMANT</th>
<th>Works of Art</th>
<th>Category</th>
<th>Works of Art</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Suzie</strong></td>
<td><strong>Lawren Harris</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Kenneth Lochhead</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td>(non-expert group)</td>
<td><strong>North Shore, Lake Superior 1926</strong></td>
<td>Painting</td>
<td><strong>Minotaur 1960</strong></td>
<td>Painting</td>
</tr>
<tr>
<td></td>
<td><strong>Lawren Harris</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Walter Murch</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Abstraction 1939</strong></td>
<td>Painting</td>
<td><strong>Enlarged Doll 1965</strong></td>
<td>Painting</td>
</tr>
<tr>
<td><strong>2. Roger</strong></td>
<td><strong>Cornelius Kreighoff</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>William Kurelek</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td>(non-expert group)</td>
<td><strong>White Horse Inn by Moonlight 1851</strong></td>
<td>Painting</td>
<td><strong>The Ukrainiant Pioneer 1971</strong></td>
<td>Painting</td>
</tr>
<tr>
<td></td>
<td><strong>Jeff Wall</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Greg Curnoe</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td></td>
<td><strong>The Vampire’s Picnic 1991</strong></td>
<td>Photography</td>
<td><strong>Corner 1975-1976</strong></td>
<td>Painting</td>
</tr>
<tr>
<td><strong>3. Nicole</strong></td>
<td><strong>Bertram Brooker</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Christine Pflug</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td>(non-expert group)</td>
<td><strong>Alleluia c. 1929</strong></td>
<td>Painting</td>
<td><strong>Kitchen Door with Esther 1965</strong></td>
<td>Painting</td>
</tr>
<tr>
<td></td>
<td><strong>Otto Greiner</strong></td>
<td><strong>European</strong></td>
<td><strong>Ron Martin</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Prometheus 1909</strong></td>
<td>Painting</td>
<td><strong>Untitled no. 39, January 1 to January 3 1981</strong></td>
<td>Painting</td>
</tr>
<tr>
<td><strong>4. Julien</strong></td>
<td><strong>Robert Fones</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Lawren P. Harris</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td>(expert group)</td>
<td><strong>Butter Models 1979</strong></td>
<td>Installation</td>
<td><strong>Derailment 1962</strong></td>
<td>Painting</td>
</tr>
<tr>
<td></td>
<td><strong>Claude Monet</strong></td>
<td><strong>European</strong></td>
<td><strong>Charles Gagnon</strong></td>
<td><strong>Canadian</strong></td>
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<tr>
<td></td>
<td><strong>A Stormy Sea c. 1884</strong></td>
<td>Painting</td>
<td><strong>November Steps 1967-1968</strong></td>
<td>Painting</td>
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<tr>
<td><strong>5. Rex</strong></td>
<td><strong>Cornelius Kreighoff</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>René Derouin</strong></td>
<td><strong>Canadian</strong></td>
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<tr>
<td>(non-expert group)</td>
<td><strong>White Horse Inn by Moonlight 1851</strong></td>
<td>Painting</td>
<td><strong>Equinox Series: Homage to the People of Mexico City 1990</strong></td>
<td>Installation</td>
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<tr>
<td></td>
<td><strong>David B. Milne</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Bill Woodrow</strong></td>
<td><strong>European</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Sparkle of Glass c. 1927</strong></td>
<td>Painting</td>
<td><strong>Life on Earth 1984</strong></td>
<td>Installation</td>
</tr>
<tr>
<td><strong>6. Mona</strong></td>
<td><strong>James W. Morrice</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Harold Town</strong></td>
<td><strong>Canadian</strong></td>
</tr>
<tr>
<td>(expert group)</td>
<td><strong>Venetian Girl c. 1902</strong></td>
<td>Painting</td>
<td><strong>Untitled 1959-1961</strong></td>
<td>Installation</td>
</tr>
<tr>
<td></td>
<td><strong>Arthur Lismer</strong></td>
<td><strong>Canadian</strong></td>
<td><strong>Carl Beam</strong></td>
<td><strong>Canadian</strong></td>
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<td></td>
<td><strong>Winter Landscape 1918</strong></td>
<td>Painting</td>
<td><strong>The Problematical Theoretical 1991</strong></td>
<td>Mixed Media</td>
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### TABLE 3 (Continued)

<table>
<thead>
<tr>
<th>Audio Session</th>
<th>Video Session</th>
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<tbody>
<tr>
<td><strong>7. Janet</strong> (non-expert group)</td>
<td><strong>8. Paul</strong> (expert group)</td>
</tr>
<tr>
<td>J.E.H. MacDonald</td>
<td>Paul Rand</td>
</tr>
<tr>
<td>The Tangled Garden</td>
<td>Coal Diggers 1935</td>
</tr>
<tr>
<td>1916</td>
<td></td>
</tr>
<tr>
<td>Paul Kane</td>
<td>Lucius O'Brien</td>
</tr>
<tr>
<td>Scalp Dance <em>w</em> the</td>
<td>Kakabeka Fall,</td>
</tr>
<tr>
<td>Chulahps Indians</td>
<td>Kamantiskula River 1882</td>
</tr>
<tr>
<td>c. 1851-1856</td>
<td></td>
</tr>
<tr>
<td>Canadian Painting</td>
<td>Canadian Painting</td>
</tr>
<tr>
<td>Walter Murch **</td>
<td>Harold Town</td>
</tr>
<tr>
<td>Enlarged Doll 1965</td>
<td>Untitled 1959-1961</td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>9. Albert</strong> (expert group)</td>
<td></td>
</tr>
<tr>
<td>Lucius O'Brien</td>
<td>Ron Martin **</td>
</tr>
<tr>
<td>Sunrise on the</td>
<td>Untitled no. 39,</td>
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<tr>
<td>Saguenay 1880</td>
<td>January 1 to January 3 1981</td>
</tr>
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<td></td>
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<tr>
<td>Alfred Laliberté</td>
<td>Ron Martin **</td>
</tr>
<tr>
<td>Young Indians Hunting</td>
<td>Bright Red No. 8 1972</td>
</tr>
<tr>
<td>c. 1905 ??</td>
<td></td>
</tr>
<tr>
<td>Canadian Painting</td>
<td>Canadian Painting</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>10. Diane</strong> (expert group)</td>
<td></td>
</tr>
<tr>
<td>Jenny Holzer</td>
<td>Walter Murch **</td>
</tr>
<tr>
<td>Inflammatory Essay</td>
<td>Enlarged Doll 1965</td>
</tr>
<tr>
<td>1978-1983</td>
<td></td>
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<tr>
<td>Nancy Spero</td>
<td>Greg Snider</td>
</tr>
<tr>
<td>The First Language 1981</td>
<td>A Representation of the Great Lakes in Inch and a Half Galvanized Steel Arranged in a Space Like this 1983</td>
</tr>
<tr>
<td>American Installation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Work of art selected for the analysis of cinematographic orientation using Barrett’s (1986) typology.**
in each informant's video and the analysis of the cinematographic orientation of each informant's video.

Three different analytic approaches were used in treating the data. Typological analysis was used to examine the overall cinematographic orientations of the informant-made videos. Using this type of analysis, the researcher identified the characteristics in each video that provided evidence of the point of view adopted by each informant for the production of his or her video. Then, using this information, each video was assigned to the specific category, within a larger theoretical framework, which best described the informant's intellectual approach in producing that video.

Enumerative\(^2\) systems of analysis, consisting of various types of frequency counts, were used to produce an overall picture of the results for all informants. Enumeration was conducted using categories that emerged from the data during the course of analysis or by using analytic instruments developed by other researchers. The enumerative treatment of data allowed for the effective comparison of results for the subsets of the study group: the expert and the non-expert informants.

In addition to and in conjunction with enumerative and typological techniques, analytic induction was used to examine the data in order to generate and refine hypotheses about the similarities and differences in the process of aesthetic understanding used by the expert and non-expert informants. As the study progressed, this

\(^2\) Goetz and LeCompte (1984) propose the term enumerative analysis as an appellation for quantitative analysis techniques when these are used in qualitative research. They define enumeration as "data analysis strategies that use frequency counts" ... [They] "require a precise identification of phenomena or categories of phenomena and a consistency in data collection techniques" (pp. 184-185).
approach consisted mainly in identifying the appropriate descriptive evidence that would support various formulations of working hypotheses (Goetz and LeCompte, 1984, pp. 179-190).

The various analyses conducted on the ten informants' videotaped accounts of their aesthetic understanding can be grouped into four broad categories according to their focus: 1) the tapes were analyzed for cinematographic orientation; 2) the informants' use of filmmaking techniques was investigated; 3) non-narrated segments were analyzed for the informant's intent; 4) discourse analysis of the informants' comments about the works of art was conducted using the verbal transcripts of the tapes. In all cases, analysis was undertaken in such a way as to allow for a comparison of results between the five expert and the five non-expert informants. Comparisons were also made between data obtained by analyzing the informant-made video tapes with data obtained using the audio-tape recording.

During the production of their final data video, each informant produced two video segments. Each one of these segments was about a different work of art. For the purposes of data analysis, when simple analytic procedures were being employed, both of the informants' video segments were used. This was the case for the review of the non-narrated portions of the videos. However, given the exceedingly large volume of data available, analyses were conducted on selected video segments in those cases where complex and time consuming analytic procedures were being utilized. This was the case for the analyses of the cinematographic orientation of the informant-made videos, for the discourse analysis of the verbal transcripts of the videos, and for the comparison of the discourse analysis results of the
audio-taped and video-taped sessions. In these instances, I selected each informant's best video. The best video was deemed to be the one in which the participant devoted the greatest amount of time to the formulation of meaning about the work of art as opposed to, for example, simply describing it. For the majority of informants, the best video turned out to be their second segment because, as we all know, practice usually has a positive, cumulative effect on the results of a repeated task. However, the first video segment of two informants, Nicole and Janet, was noticeably superior in quality to their second one\textsuperscript{13}. For the production of their second video unit, both of these participants experienced great difficulty in locating a work of art for which they felt some affinity. Out of a necessity to complete their videomaking task, both eventually settled on a "compromise" as the subject of their second video: a work of art to which they could respond, even though they felt no strong attraction to it. In both these cases, the end result was a reflection of their ambivalence about the chosen work of art: their second videotape was noticeably inferior in quality to their first one. Finally, one informant, Albert, did a comparison of two works of art by the same artist as the topic of his data video. The video simultaneously addresses both works of art from the beginning to the end of the video; it is impossible to separate

\textsuperscript{13}Since both Nicole and Janet completed all of the requirements of the research protocol in a single day-long session, fatigue could probably also account for this outcome. However, my field notes do not support this explanation. Furthermore, both Nicole and Janet confirmed, in separate follow-up discussions, that they weren't tired at the time they produced their second video tapes. Rather, both informant explained that they had simply run out of interesting works of art to talk about and, therefore, were not particularly excited by the work of art they selected for their final video tape. Finally, since the five informants, who elected to complete the requirements of the research protocol in a single day-long session, are almost equally distributed between both study groups (3 non-experts and 2 experts), fatigue is an unlikely explanation for any of the differences observed between the two groups.
comments about one work from comments about the other. Therefore, for this reason, Albert's entire video had to be used for all of the different procedures conducted during the analyses of the informant-made videos.

Predictions for Data Analyses

Five predictions were formulated in order to guide the analysis of the data generated by the study.

First prediction.

In regard to the cinematographic orientation of the informant-made videos, I expected the expert informants, because of their professional training in the fine arts, to produce videos with a more artistic and creative orientation. I expected the non-expert participants to do the opposite: that is to approach the videomaking task in a straightforward fashion, as if they were making a documentary film rather than a work of art.

Second prediction.

In regard to the use of filmmaking techniques and patterns, I expected the expert informants to explore at great length the technical possibilities of the camcorder. At the same time, I expected the non-expert informants to approach the technical possibilities of the medium in a more reserved fashion, thus limiting their selection of techniques to a few, essential ones.

Third prediction.

In regard to the inclusion of non-narrated segments within their informant-made videos, I expected expert informants to make considerable use of this filmmaking technique. Again, because of their
professional training in the arts, I predicted that expert participants would be more inclined to allow the video image to speak for itself and, thereby, would produce a greater number of silent segments in their videos. I expected that non-expert informants would not use this technique to any noticeable extent.

Fourth prediction.

In regard to the use of psychological operations during the process of aesthetic understanding, I expected expert informants to approach the process of responding to a work of art in a much more creative fashion. Creativity "includes two elements: novelty and appropriateness. In order to be considered creative, a product or response must be different from what has been done before. But the product or response cannot merely be different for the sake of difference; it must also be appropriate, correct, useful, valuable, or expressive of meaning" (Amabile & Tighe, 1993, p. 9). As evidence of creativity, I expected to witness a greater use of imagination in responding to the works of art and the generation of a greater number of hypotheses about its meaning. Furthermore, I expected expert participants to make greater use of disciplinary knowledge in their attempts to construct meaning about a work of art. I expected non-expert informants to take a much more literal approach to understanding the works of art. Evidence of this type of process would include a greater emphasis on the factual information present in the art object and fewer attempts to formulate hypotheses about the work of art's meaning. I also expected non-experts to depend, to a greater extent than the experts, on their personal experience as a source of knowledge to inform their understanding of the work of art.
Fifth prediction.

Finally, in regard to the comparative analysis of the verbal transcripts of the audiotapes with the verbal transcripts of the videotapes, I expected few differences to be found in the data that could be attributed to differences in the two data collection methods. Rather, I expected that any differences that might emerge would be a reflection of actual differences in the nature of the specific aesthetic experiences under examination.

Overview of the Verification of Predictions

The analysis of the study data resulted in the rejection of the first and second working predictions. No differences were found in the cinematographic orientation of expert and non-expert informants’ videos, as all were classified as "Interpretations" (first prediction). Only minor differences were found in experts’ and non-experts’ use of filmmaking techniques (second prediction). Non-experts used more zooms, pans and travels, whereas experts used more edits.

The third prediction was confirmed. Expert informants devoted more time in their videos to non-narrated segments than did the non-expert informants. However, the videos of just three informants -- one non-expert and two experts -- account for most of these differences.

The fourth prediction was confirmed in part. No noticeable differences were found between the two study groups in regard to the thought processes used by the informants in responding to the works of art. However, in their responses, experts differed from the non-experts in two ways: they made greater use of imagination and formulated more hypotheses about the meaning of the works of art.
Finally, the fifth prediction was also confirmed. Variations in the results obtained by comparing the audio-taped and the video-taped data were not related to differences in collection methods. Instead, it was found that these variances were due to noticeable differences in the types of artwork selected by each informant for use in conjunction with the two different data collection techniques.

In the sections that follow, I present, in detail, the evidence that led to the conclusions summarized in this overview of the outcome of the verification of predictions.

**Analysis of the Cinematographic Orientation of the Videos**

As mentioned earlier, the purpose in conducting a typological analysis of the selected informant-made videos was to identify the overall cinematographic orientation of the videos and to compare expert and non-expert videos for differences in orientation.

I had great difficulty in finding an existing instrument for use in this analysis. In fact, I was not able to locate in the literature one single typology that was intended specifically for this purpose. Instead, I had to consider using typologies that were created, not for the study of film or video, but for the study of photographs. Finally, I settled on using Terry Barrett's (1986) typology for the interpretation of photographs, because it could be used for classifying videos without any alterations. This possibility presented a great advantage: by respecting the integrity of the instrument, its internal validity would be maintained. However, in order to justify the use of Barrett’s construct for the study and classification of my informants’ videos, I needed to provide examples of videos or films that were the equivalent
of the examples of still photographs provided by Barrett in his definitions for each category in the typology. It was evident that, in order to apply Barrett's instrument to the study of videos, I had to take into account the specific audio-visual format of that product: I could not limit the analysis of the informant-made videos to a study of images only. By successfully providing convincing examples of videos for each category, I could then make the claim that Barrett's construct was an appropriate tool for the study and classification of videos. Therefore, video or film equivalents for the examples of still photographs provided by Barrett, in his definitions for the categories in the typology, are presented in Appendix 1.

Barrett's typology consists of six "discreet and conceptually distinct" categories. (Barrett, 1986, p. 55). Using this instrument, photographs can be classified into specific categories according to their salient features. The six categories are: 1) descriptions, 2) explanations, 3) interpretations, 4) ethical evaluations, 5) aesthetic evaluations, and 6) theoretical photographs (Barrett, 1986, pp. 55-59).

Before classifying the informant-made videos using these categories, it is necessary to be clear about exactly what is being studied and classified in this analysis. Because the informant-made videos are documents about the informants' aesthetic experiences with works of art, the content of those works of art must not be confused with the intellectual stance taken by the study participant in his or her video about it. In this exercise, it is the informant's product or, in other words, the video itself that is being classified, not the work of art selected as the topic of the video.
Given the above aim, it is also useful to define the rules for classification. Barrett, in paraphrasing Walton (1978), states that "Any photograph can profitably be seen as if it belonged in each of the six categories, but a 'right' category placement is where the photograph makes most sense, fits best, does its best job, or where it is seen to its best advantage" (p. 59).

Two judges participated in the exercise of assigning each informant-made video to one of the categories in Barrett's typology. The first judge was Malcolm MacPhail, an art educator and graphic artist, who had previous research experience. The second rater was the researcher himself. After becoming thoroughly acquainted with the criteria for each category in the typology, both judges rated the videos independently, but met later to compare results. The ratings of the two judges agreed in each and every case. These results are a testimonial to the quality of Barrett's typology: the definitions for each category are clearly defined and, therefore, easy to apply.

Overall, all of the ten videos\(^{14}\) analyzed met Barrett's criteria for classification as interpretations. Barrett defines interpretations as "nonfalsifiable explanations which are analogous to metaphysical claims in language in that their makers use them to make assertions about the world independently of empirically verifiable evidence.... Interpretive photographs depict an intentionally subjective understanding of phenomena and generally point up the world-views of the photographers who made them" (pp. 56-57). The following excerpts from the transcripts of some of the informant-made videos

\(^{14}\)For a list of the videos selected for this analysis, see Table 3, pp. 82-83.
are intended to illustrate some of the features of the videos that led to their classification as interpretations.

...it is like someone has taken out his anger, ripped the head off, ripped the arms out, like with something we do, or we've done as children, or you see children do with their toys. You know, they rip them apart, especially, when they're angry. Maybe the painter was angry with somebody when he painted it" (Lachapelle, 1993, p. 24).

Bon, bien, c'est vraiment pas une pièce d'une maison très ordonnée. C'est [la maison de] quelqu'un qui a l'air détendu, puis ... qui est relativement peu soucieux de tout mettre en ordre. [Quelqu'un] qui est différent de molt16 (p. 60).

Et puis, je remarque les lignes en mine de plomb. C'est, c'est assez amusant. C'est comme s'il s'était tracé des lignes droites avec une règle pour s'assurer qu'il écrit assez bien. Ça me rappelle, évidemment, la formation scolaire qu'on a tous, à peu près tous, reçu où il faut écrire droit sur les lignes. Tout ça, cet élément là, ça rejoint un peu cette notion de l'importance du mot, cette notion de l'importance de l'histoire écrite17 (p. 202).

There is something very haunting about the work. And that kind of appeals to me. That mystery appeals to me. [Pause] And, of course, there seems to be something very, kind of physically [or] sexually threatening in the way this doll is positioned. It seems very vulnerable18 (pp. 320-321).

Even though all of the videos were classified as interpretations, two of the experts' videos demonstrated, albeit in some sequences only, some of the features of other categories. The sequences were short and accounted for a very small percentage of the entire videos.

15Suzie, non-expert informant, in referring to Walter Murch's Enlarged Doll (1965).
16Roger, non-expert informant, in referring to Greg Curnoe's Corner (1975-1976).
18Diane, expert informant, in referring to Walter Murch's Enlarged Doll (1965).
In following Barrett's rule for classification, it was decided that their classification as interpretations should prevail. However, it did not seem appropriate to ignore this discordant information about the orientations of these two videos. Therefore, the two exceptions were classified as interpretations that demonstrated some sub-dominant features.

In providing an example, in Appendix 1 (see pp. 271-276), of a theoretical video during a discussion of Barrett's six categories, I explain why one particular section of Paul's video about Krzysztof Wodiczko's *Projections on Venice* (1986) could qualify as an example of theoretical criticism.

Parts of Julien's video about Charles Gagnon's *November Steps* (1967-1968) show some of the features of an ethical evaluation. *November Steps* is a large abstract painting in which a centered black rectangle "touches" only the bottom edge of the canvas; the background is almost white and forms a frame around the rectangle on the left, right, and top sides of the painting. In some sections of his video, Julien argues that others should look at this work of art and understand it in the same way as he does. He begins his video by stating that most people would probably see nothing in such a work, but that he has indeed seen many, many things.

Je pense que la réaction normale serait de dire: "Mon Dieu, il n'y a pas grand chose dans cette oeuvre". Moi, j'ai découvert beaucoup, beaucoup de choses (p.120).
Twice in the video, Julien switches from speaking in the first person singular, “Je”, to either the third person singular, “on”, or the first person plural, “nous”. These changes in pronouns give a prescriptive tone to his statements, as if he is suggesting that others should necessarily agree with his comments or proceed as he has when looking at this work of art.

Donc, du point de vue formel, c’est assez simple. On pourrait se demander si la partie blanche est [en] avant de la partie noire ou le contraire, que la partie noire soit en avant de la partie blanche... (p. 121).

...lorsqu’on parle d’œuvres abstraites comme celle-là, on parle beaucoup de notre manière de les percevoir. C’est très difficile de se détacher de [cela]. On a l’impression de parler de nous-même. C’est un peu le type d’oeuvre parfaite [sic] qui nous revient à nous-même (p. 124).

The sections in Julien’s video that have this prescriptive tone are indeed very short: 10 to 30 seconds each in duration. This tone is not maintained throughout the entire video, which lasts 6 minutes and 12 seconds. In fact, in the remainder of the video, Julien uses the first person singular in relating his experience with this work of art. The overall orientation of the video is decisively an interpretation and not an ethical evaluation.

**Analysis of Filmmaking Techniques**

An enumerative analysis of filmmaking techniques was conducted on the two data videos produced by each informant. This analysis was conducted, firstly, in order to examine informants’

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19 In French, this pronoun, although singular in grammatical construction, is in fact plural in meaning and is the equivalent in English, to the second person plural "you".
handling of the camcorder during the production of their videos and, secondly, in order to determine whether any noticeable differences in this regard would be found between the two subsets of the study group. The analysis consisted of a frequency count for the various types of filmmaking techniques used by each informant during the production of his or her videos.

Generative\textsuperscript{20} analysis of the informant-made videos revealed that the following filmmaking operations were used by some or all informants. Most informants took advantage of the camcorder's easy-to-operate zoom lens in order to produce two different kinds of zooms. In a "zoom-in", the zoom lens is used to bring the viewer closer to the subject of that particular segment of the video. In a "zoom-out", the zoom lens is used to move further away from the subject. In both cases, the camera operator remains stationary. In a "pan", the camera operator also remains in one location and, instead, rotates the camera, either horizontally or vertically, or sometimes in a circular or a random pattern, in order to produce a panoramic overview of the subject of the segment. In the case of a "travel", the camera does not usually rotate but, instead, moves in unison with the camera operator, as he or she walks from one location to another while filming. This results in a video segment that gives the viewer the impression that he or she is also moving from area to area. An "edit" occurs in a video when the filmmaker cuts from one segment to another without using a transition. In the context of this study, informants "edited" their videos "in-camera". That is, editing was

\textsuperscript{20}Generative analysis is the process used to construct categories for organizing and describing the research data (Goetz and LeCompte, 1984, pp. 179-181).
done quite simply by turning the camera off, effectively ending one segment and, then, turning the camera back on again in order to begin another segment, different from the first. Only one informant, Paul, used the camcorder's "fade" button in order to produce fade-ins or fade-outs in his videos\(^\text{21}\). During a fade-out, the video image and sound gradually disappear as the video screen goes to black. In a fade-in, the video image and sound gradually appear as the video screen goes from a uniform black to a full rendition of the image and sound being taped by the operator.

In addition to the various operations defined in the previous paragraph, informants also varied the range (the focal length) of their video images. Because of the great variety of works of art selected by the informants, focal lengths could not be assigned a fixed value (i.e. so many meters or centimeters in distance from the subject). Instead, definitions for the following terms had to be relative to the works of art selected by the informant, taking into account the size of the work. Therefore, "long shots" were defined as video images which were taken from enough distance from the subject in order that the entire work of art could be seen on the video screen. Therefore, a long-shot of a large sculptural installation would have to show the entire installation, just like the long-shot of a small painting would have to show the entire painting. "Intermediate range shots" were defined as video images where one-half of the work of art could be seen. In turn, "close-ups" consisted of images of parts of the work of art, showing less than half of the work and none of its edges. Finally, "extreme

\(^{\text{21}}\) Since these are technically edits, they were counted as such in the analysis.
### TABLE 4

**MOST PREVALENT FILMMAKING TECHNIQUES USED**

(INCIDENCE PER MINUTE OF VIDEO)

#### NON-EXPERT INFORMANTS

<table>
<thead>
<tr>
<th>Duration of Video</th>
<th>Filming Operations</th>
<th>Shot Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ZI</td>
<td>ZO</td>
</tr>
<tr>
<td>1. Suzie 17.45 m.</td>
<td>.74</td>
<td>.52</td>
</tr>
<tr>
<td>2. Roger 15.98 m.</td>
<td>2.25</td>
<td>1.75</td>
</tr>
<tr>
<td>3. Nicole 12.63 m.</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5. Rex 10.33 m.</td>
<td>1.26</td>
<td>.97</td>
</tr>
<tr>
<td>7. Janet 10.95 m.</td>
<td>1.64</td>
<td>1.46</td>
</tr>
<tr>
<td>Group Total 67.35 m.</td>
<td>5.89</td>
<td>4.70</td>
</tr>
<tr>
<td>AVERAGE 13.47 m.</td>
<td>1.18</td>
<td>.94</td>
</tr>
</tbody>
</table>

#### EXPERT INFORMANTS

<table>
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<th>Duration of Video</th>
<th>Filming Operations</th>
<th>Shot Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ZI</td>
<td>ZO</td>
</tr>
<tr>
<td>4. Julien 11.48 m.</td>
<td>1.05</td>
<td>.70</td>
</tr>
<tr>
<td>6. Mona 19.90 m.</td>
<td>.50</td>
<td>--</td>
</tr>
<tr>
<td>8. Paul 15.72 m.</td>
<td>.95</td>
<td>.89</td>
</tr>
<tr>
<td>9. Albert 7.12 m.</td>
<td>.84</td>
<td>.42</td>
</tr>
<tr>
<td>10. Diane 10.52 m.</td>
<td>.48</td>
<td>.86</td>
</tr>
<tr>
<td>Group Total 64.74 m.</td>
<td>3.82</td>
<td>2.87</td>
</tr>
<tr>
<td>AVERAGE 12.95 m.</td>
<td>.76</td>
<td>.57</td>
</tr>
</tbody>
</table>

**Legend**

**Operations:**
- ZI = zoom-in
- ZO = zoom-out
- P = camera pan
- T = traveling with the camera
- E = edit (in-camera)

**Shot Ranges:**
- EX = extreme close-up
- CU = close-up
- IR = intermediate range
- LS = long shot
close-ups" were defined as images which show extremely small details of the work, such as surface texture, and in which it is difficult to determine, from these extreme close-ups only, the relationship of the parts represented to the rest of the work. For example, from an extreme close-up of some lines in a drawing, it would not be possible to determine whether these lines form part of a leaf or part of face.

Table 4 presents the number of filming operations and the number of each type of shot range used by the informants for each minute of video tape produced. It was necessary to adjust the numerical results of the analysis (by dividing the total number of operations or shot ranges by the duration of each informant's videos) because the length of the informant-made videos varied considerably from participant to participant. Without adjusting these figures, the comparison of the results of the subsets of the study group would not be possible.

The information presented in the table reveals that all informants had a preference for using certain techniques over others during the production of their videos. It is difficult to conclude anything definite about the use of filmmaking techniques according to group membership, because the sample in this study is small. However, informants' preferences for certain techniques do not seem to be dictated by expert or non-expert status; rather, they seem related to personal preferences and to the nature of the works of art selected as topics for the videos.

For example, in addition to zooms, Rex used large numbers of pans (4.74/minute) and travels (2.03/minute) during the production of his videos, because this was the best or perhaps the only way to
present an overall view of the two sculptural installations presented in his videos. Both of these works of art consisted of numerous components spread out over a large area of floor space. Therefore, his technical approach was well suited to his subject matter. Rex's use of pans and travels gives the viewer of the video a real sense of how he moved among and along these various sculptural components. Zooms alone could not adequately convey this information. Details of the other individual informants' use of filmmaking techniques are presented in Appendix 2.

When the two groups of informants are compared, one major distinction becomes apparent. The non-expert informants, as a group, use far more filming operations than the experts. Non-experts used .42 more zoom-ins, .37 more zoom-outs, .49 more pans and .36 more travels per minute than the expert informants. It is only in the use of edits that the experts exceed the non-experts by using .63 more edits per minute. In fact, all members of the expert group used edits in the production of their videos, whereas only two of the non-experts did. In terms of the shot ranges used, the expert informants, on average, used all four shot ranges almost to the same extent; the difference in frequency of use for the lowest and the highest category of shot ranges by the experts is .22/minute. The non-experts, on the other hand, showed a preference for using intermediate-range and close-up shots, and the difference in frequency of use for lowest and highest category of shot ranges is far greater: .66/minute. This is three times the spread reported above for the expert informants.

Finally, by analyzing the sequential arrangement of filmmaking techniques used by the informants in producing their two data videos,
it is possible to identify, for each informant, a number of patterns in their use of filmmaking techniques. Although interesting from a theoretical and methodological point of view, this type of analysis did not prove extremely useful in providing additional information about variances in the experts' and non-experts' use of filmmaking techniques. Therefore, the communication of the results of this second analysis of filming techniques is relegated to an addendum, Appendix 2, and it is presented there as a matter of interest only.

**Analysis of Non-Narrated Video Segments**

Initially, word counts of the verbal transcripts of the audio-taped interviews and the informant-made videos were conducted in order to examine whether informants would speak less, or more, in their videotaped responses compared to their audio taped ones.

Because of their highly specialized fine arts training, focusing almost entirely on the communicative potential of visual imagery, I suspected that the expert informants would actually speak less during their informant-made videos; I thought that they would be inclined to allow the video image to speak for itself to a greater extent than the non-expert informants. Indeed, if it did exist, this difference would become especially apparent when the extent of discourse contained in each informant's videotapes was compared to the extent of discourse in their respective audio taped recordings.

The interpretation of the results of this analysis, presented in Appendix 3, proved to be very difficult. As expected, the expert informants did talk more during their audio-taped interviews and less during the production of their informant-made video tapes. However,
the reverse was true for the non-expert informants. They talked less than the expert informants during the audio-tape interview, but during the filming of their videos, they accelerated their rate of speech. As a result, the rate of speech for both subsets of the study group was the same in the videotaped responses. This unexpected and counter current movement makes the two groups appear much more similar in this regard. Therefore, a closer examination of this phenomenon was required before a more definitive answer would become apparent. In an attempt to resolve the enigma uncovered by the word counts, I decided to examine those segments of the informants' videos that were silent or, in other words, without any narration. A careful examination of these segments and the context in which they occur provides insight into the intent of the informant who produced them. For example, it is immediately apparent when the purpose of a non-narrated segment is to make a technical adjustment: we can see that, for example, the informant is adjusting the framing of the image or attempting to get a better focus. Likewise, when an informant pauses in mid-sentence or in the course of expressing a still incomplete idea, it is obvious that the informant is pausing to reflect upon what he or she is saying and that the non-narrated segment is only the unintentional product of this reflection. It is only in the case where the informant deliberately films a silent segment, either to show the work in whole or in part, or in order to contemplate the work of art, that we can conclude that the informant intends to let the work of art speak for itself. The deliberateness of the informant's actions in filming these latter segments becomes obvious when the segment is viewed in context with the other segments that precede and follow it.
<table>
<thead>
<tr>
<th>INFORMANTS</th>
<th>To show the work of art (seconds)</th>
<th>To reflect while commenting (seconds)</th>
<th>To adjust the camera or the image (seconds)</th>
<th>Total seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NON-EXPERT INFORMANTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suzie (1)</td>
<td>16</td>
<td>63</td>
<td>9</td>
<td>88</td>
</tr>
<tr>
<td>Roger (2)</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Nicole (3)</td>
<td>37</td>
<td>0</td>
<td>10</td>
<td>47</td>
</tr>
<tr>
<td>Rex (5)</td>
<td>94</td>
<td>0</td>
<td>17</td>
<td>111</td>
</tr>
<tr>
<td>Janet (7)</td>
<td>29</td>
<td>8</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>Group Averages</td>
<td>35.6</td>
<td>15</td>
<td>7.2</td>
<td>57.8</td>
</tr>
<tr>
<td><strong>EXPERT INFORMANTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Julien (4)</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Mona (6)</td>
<td>33</td>
<td>22</td>
<td>6</td>
<td>61</td>
</tr>
<tr>
<td>Paul (8)</td>
<td>48</td>
<td>6</td>
<td>8</td>
<td>62</td>
</tr>
<tr>
<td>Albert (9)</td>
<td>3</td>
<td>0</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>Diane (10)</td>
<td>188</td>
<td>2</td>
<td>17</td>
<td>207</td>
</tr>
<tr>
<td>Group Averages</td>
<td>55.2</td>
<td>7.4</td>
<td>11.4</td>
<td>74</td>
</tr>
<tr>
<td><strong>DIFFERENCES IN GROUP AVERAGES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference in Averages (N-E minus E)</td>
<td>-19.6</td>
<td>7.6</td>
<td>-4.2</td>
<td>-16.2</td>
</tr>
</tbody>
</table>

For the analysis of the non-narrated video segments, only those segments equal or greater to two seconds were retained for analysis. Segments of less than two seconds were too ambiguous to analyze, as many of these shorter segments were unintentional and simply the result of hesitation on the part of the informant. The duration of the silent segments were timed using the camcorder's built-in timer. For
each informant's videos, the non-narrated segments were compiled according to two dimensions: their duration and the informant's intent in producing them. The three examples provided in the preceding paragraph are descriptive of the categories used in order to classify the intent of each segment. These categories were: 1) To show or contemplate the work of art, either in whole or in part, thus allowing the work to "speak" for itself; 2) To reflect while in the process of commenting on the work of art; 3) To make a technical adjustment to the operation of the video camera or to adjust the framing or other aspects of the video image. Table 5 presents, for each informant, the total number of seconds of non-narrated segments that were classified within each category. This table also presents the averages for both groups of informants, as well as the differences in results between both.

The results presented in Table 5 provide us with the following information on the participants' use of non-narrated segments in the production of their video tapes. In order to reflect while commenting on the work of art, the non-experts used, on average, twice the number of seconds (15 seconds) of total non-narrated segments than did the experts. However, this figure is misleading, because closer examination of the individual results for this category reveals that the group average for non-experts is greatly inflated by the extent to which Suzie used such segments in her own videos: a total of 63 seconds. This figure is therefore not highly salient.

There is a slight difference between the average number of seconds of non-narrated video produced by the two groups of informants while making adjustments to the video camera. The
expert group devoted 4.2 more seconds on average to this task than did the non-experts.

A noticeable difference between the two groups is apparent in the extent to which the experts, in comparison with the non-experts, use non-narrated video segments with the intent of allowing the video image to speak for itself. The proportion of non-narrated segments within this category in relation to the total of all non-narrated segments is higher in the expert group than in the non-expert group. Experts devoted 74.5% of all non-narrated segments to the purpose of showing the work of art, while non-experts dedicated a somewhat smaller proportion (61.5%) of their total non-narrated segments to the same task. Furthermore, experts are devoting on average, as a percentage of non-expert total, 55% more seconds to this purpose than non-experts. The average for the expert group is 55.2 seconds compared to 35.6 seconds for the non-expert group.

In total, the non-experts produced slightly more video footage as a group (67.34 minutes) than the experts (64.74 minutes). The ratio (67.34 + 64.74) for the total duration of each group’s videos is 1.04 in favor of the non-experts. If we use this ratio to adjust the difference in performance between the two groups\(^{22}\), the gap between them widens, by just over six percentage points, to 61.3% more seconds of video, within this category, in favor of the expert informants. It seems therefore that, as a group, the experts are indeed using non-narrated segments in order to allow the video image to speak for itself to a greater extent than the non-experts.

\(^{22}\) The adjustment was calculated as follows: 55.2 (experts’ average) x 1.04 = 57.408 - 35.6 = 21.808, then 21.808 + 35.6 = 61.3%.
Nonetheless, the non-experts are also doing this to a considerable degree: 61% as often as the experts. However, most of this use of non-narrated segments, for the whole study group, is attributable to an outlier, Diane and, to a lesser extent, to two other informants: Rex, and Paul. The significance of this will be discussed in detail in the next chapter.

**Discourse Analysis**

**Procedures.**

A review of the informants' statements about the works of art was conducted using the transcripts of each informant's best\(^{23}\) videotape. Furthermore, for the purpose of comparison between the audio-taped sessions and the informant-made videos, analysis was also undertaken on the best selection from the transcripts of four of the informants' audio-taped sessions. Table 6 lists the works of art selected for this audit.

Discourse analysis was conducted using an instrument developed by Colette Dufresne-Tassé, Thérèse Lapointe, Carole Morelli and Estelle Chamberland (1991) for the purpose of studying the experiences of adult museum visitors. Through a thorough examination of museum visitors' verbalizations, the instrument is able to identify various aspects of their psychological experience.

The reliability of the instrument has been proven. Ratings by any one researcher have been shown to be consistent from text to text and inter-rater reliability is also very high. Indeed, the level of disagreement in both cases is less than 10%, and that is well within

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\(^{23}\) For an operational definition of this term, see page 86.
# TABLE 6
SELECTIONS USED FOR DISCOURSE ANALYSIS

<table>
<thead>
<tr>
<th>INFORMANT</th>
<th>Work of Art</th>
<th>Category</th>
<th>Work of Art</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Suzie</strong></td>
<td><em>Lawren Harris</em>&lt;br&gt;North Shore Lake Superior 1926</td>
<td>Canadian Painting</td>
<td><em>Walter Murch</em>&lt;br&gt;Enlarged Doll 1965</td>
<td>Canadian Painting</td>
</tr>
<tr>
<td>(non-expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Roger</strong></td>
<td></td>
<td></td>
<td><em>Greg Curnoe</em>&lt;br&gt;Corner 1975-1976</td>
<td>Canadian Painting</td>
</tr>
<tr>
<td>(non-expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Nicole</strong></td>
<td></td>
<td></td>
<td><em>Christine Pflug</em>&lt;br&gt;Kitchen Door with Esther 1965</td>
<td>Canadian Painting</td>
</tr>
<tr>
<td>(non-expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5. Rex</strong></td>
<td><em>Cornellus Kreighoff</em>&lt;br&gt;White Horse Inn by Moonlight 1851</td>
<td>Canadian Painting</td>
<td><em>Bill Woodrow</em>&lt;br&gt;Life on Earth 1984</td>
<td>European Installation</td>
</tr>
<tr>
<td>(non-expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>6. Mona</strong></td>
<td></td>
<td></td>
<td><em>Carl Beam</em>&lt;br&gt;The Problematical Theoretical 1991</td>
<td>Canadian Mixed Media</td>
</tr>
<tr>
<td>(expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>7. Janet</strong></td>
<td></td>
<td></td>
<td><em>Walter Murch</em>&lt;br&gt;Enlarged Doll 1965</td>
<td>Canadian Painting</td>
</tr>
<tr>
<td>(non-expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8. Paul</strong></td>
<td></td>
<td></td>
<td><em>Krzysztof Wodiczko</em>&lt;br&gt;Projections on Venice 1986</td>
<td>Canadian Photography</td>
</tr>
<tr>
<td>(expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9. Albert</strong></td>
<td></td>
<td></td>
<td><em>Ron Martin</em>&lt;br&gt;Untitled no. 39, January 1 to January 3 1981 and&lt;br&gt;Ron Martin&lt;br&gt;Bright Red No. 8 1972</td>
<td>Canadian Painting</td>
</tr>
<tr>
<td>(expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(expert group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
accepted standards for instruments used in discourse analysis (Dufresne-Tassé & Lefebvre, 1993, p. 38).

Use of the instrument consists of assigning identified units of speech, taken from the informant's statements about a specific object, to one of twelve independent and mutually exclusive categories. These categories represent the thought processes that visitors use while viewing the object. In this instrument, these thought processes are referred to as "operations". The definition of the term operation used by Dufresne-Tassé et al. (1991, p. 285, as quoted from Piéron, 1963) is taken from Piaget: an operation is deemed to be "a reversible internalized action that is coordinated with others according to an overall structure" [author's translation]. The twelve operations are: To Manifest, To Note or State, To Identify, To Recall, To Associate, To Compare, To Comprehend, To Justify or Explain, To Resolve, Modify or Suggest, To Situate Oneself, To Verify, and To Evaluate. Definitions and examples for each operation are presented in Appendix 4.

In addition to the coding of operations by category, another feature of the instrument permits the coding of each operation according to three different domains of experience: cognition, affect, or imagination. The operational definitions of the three domains were taken from the original French text (Dufresne-Tassé & Lefebvre, 1993, p. 34) and translated for use in this study by the author. They are as follows:

Affective domain. Experience has an affective structure when "the museum visitor is dealing with his [or her] internal states, his [or her] emotional reactions, when he [or she] attributes to something or
someone a qualifier that denotes attraction, pleasure, repulsion or displeasure" (1993, p. 34).

Cognitive domain. There is a cognitive structure to the visitor's experience when he or she "deals with an element as though it was a fact, a data, a rule or a principle" (1993, p. 34).

Imaginary Domain. There is an imaginary structure to the visitor's experience when he or she formulates "a personal construct resulting out of his [or her] immediate experience, or when he [or she] evokes, as Kearney (1988) described it, a past, present or future reality that is not present in the museum itself" (1993, p. 34).

A third feature of the instrument is that the units used for analysis are also tagged with the labels question, hypothesis or learning whenever evidence of these manifestations are found within the unit. Learning is said to be the product of an operation when the use of the operation leads to the acquisition of something new (knowledge, skills, etc.). In addition to the form of a statement, an operation may take the form of a question or an hypothesis. These two latter forms of the operations, as well as any evidence of learning, are considered especially important, because they are indications that the museum visitor is functioning at the level of an active agent instead of just being a passive recipient (Dufresne-Tassé & Lefebvre, 1993, p. 33).

The delineation of the units of informants' utterances for the purposes of analysis and coding is determined by the presence of an operation within each unit, regardless of its length. Units can, therefore, consist of a few words, a sentence, or even a paragraph.

For the analysis of the transcripts of the informant-made videos and the audio-taped interviews collected as data for this thesis, the
following procedures were adopted in addition to those presented in the preceding two paragraphs. Two raters participated in coding all of the transcripts used in the discourse analysis. Once again, the first rater was Malcolm MacPhail, who acted earlier in the study as a judge for the classification of the cinematographic orientations of the informant-made videos. The second rater was the researcher himself.

In preparation for the actual coding of the transcripts, both raters participated independently in a training exercise in which they practiced the procedures for coding the texts using surplus transcripts of sessions not retained for use in the study. Finally, when they were ready, each rater independently coded each unit in the transcripts designated for analysis. Later, the two raters met to review their ratings, and to discuss the codings for which there was no agreement. The extent of disagreement for any one transcript usually varied between 10 to 20% for the initial ratings. Discussion of the troublesome units was useful in revealing information that had been overlooked by either one or both of the raters. When the two raters agreed, corrections were made to the ratings. The raters were eventually able to agree on ratings for all of the utterances except for one: it was rejected by both raters because the content of that unit was too ambiguous to code.

The results of the discourse analysis are presented in Tables 7 and 8. These figures are adjusted findings which were calculated by dividing the total number of units within a category by the duration of each informant's video. These calculations provide, for each

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24 The raw data resulting from this analysis is presented in Appendix 4.
informant, the number of operations and formulations per minute of tape as well as the percentage of operations within each of the three different domains. Tables 7 and 8 also provide, for each group, the average number of each operation or formulation per minute of tape, as well as the average percentage of operations within each domain.

Table 7 provides adjusted figures for the non-expert informants. Part 1 of Table 7 presents the incidence of each operation and formulation; Part 2 provides the percentage of operations originating from within each of the three domains of experience. The number of operations per minute for the informants within this group ranges from a low of 3.76 (informant no. 1) to a high of 5.04 (informant no. 5). The average for the group is 4.37 operations per minute. When the group averages for each operation are considered, it becomes apparent that the following three operations were used most often: To State (0.93/minute), To Comprehend (0.75/minute), and To Explain (0.68/minute). The next two operations used most often were To Compare (0.43/minute) and To Identify (0.42/minute). Most other operations were used about once every four minutes, while To Resolve and To Recall were used the least (0.04 and 0.02 per minute respectively).

On average, the non-expert informants formulated a large number of hypotheses about the works of art they were viewing. In fact, they formulated far more hypotheses (0.74/minute) than questions (0.24/minute). Their comments showed evidence of learning at the average rate of 0.24 incidents per minute. As a group, the non-experts preferred to use cognition as a means of exploring and understanding the work of art almost as much as the other
TABLE 7
DISCOURSE ANALYSIS RESULTS: NON-EXPERT INFORMANTS

PART 1: OPERATIONS AND FORMULATIONS
(INCIDENCE PER MINUTE OF VIDEO TAPE)

<table>
<thead>
<tr>
<th>NON-EXPERT INFORMANTS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPERATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To Manifest</td>
<td>0.29</td>
<td>0.22</td>
<td>0.17</td>
<td>0.58</td>
<td>0</td>
<td>0.25</td>
</tr>
<tr>
<td>To State</td>
<td>0.14</td>
<td>0.78</td>
<td>1.73</td>
<td>0.78</td>
<td>1.21</td>
<td>0.93</td>
</tr>
<tr>
<td>To Identify</td>
<td>0.42</td>
<td>0.78</td>
<td>0.35</td>
<td>0.19</td>
<td>0.35</td>
<td>0.42</td>
</tr>
<tr>
<td>To Recall</td>
<td>0</td>
<td>0.11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.02</td>
</tr>
<tr>
<td>To Associate</td>
<td>0.14</td>
<td>0.11</td>
<td>0.35</td>
<td>0.39</td>
<td>0.17</td>
<td>0.23</td>
</tr>
<tr>
<td>To Compare</td>
<td>0.42</td>
<td>0.33</td>
<td>0.69</td>
<td>0.19</td>
<td>0.52</td>
<td>0.43</td>
</tr>
<tr>
<td>To Comprehend</td>
<td>0.56</td>
<td>0.44</td>
<td>0.17</td>
<td>1.55</td>
<td>1.04</td>
<td>0.75</td>
</tr>
<tr>
<td>To Explain</td>
<td>0.70</td>
<td>0.55</td>
<td>0.87</td>
<td>0.39</td>
<td>0.87</td>
<td>0.68</td>
</tr>
<tr>
<td>To Resolve</td>
<td>0</td>
<td>0.22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.04</td>
</tr>
<tr>
<td>To Situate</td>
<td>0</td>
<td>0.22</td>
<td>0.17</td>
<td>0.39</td>
<td>0.17</td>
<td>0.19</td>
</tr>
<tr>
<td>To Verify</td>
<td>0.84</td>
<td>0</td>
<td>0</td>
<td>0.19</td>
<td>0</td>
<td>0.21</td>
</tr>
<tr>
<td>To Evaluate</td>
<td>0.29</td>
<td>0.11</td>
<td>0.17</td>
<td>0.39</td>
<td>0.17</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>3.76</td>
<td>3.88</td>
<td>4.68</td>
<td>5.04</td>
<td>4.50</td>
<td>4.37</td>
</tr>
<tr>
<td><strong>FORMULATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questions</td>
<td>0.70</td>
<td>0</td>
<td>0.52</td>
<td>0</td>
<td>0</td>
<td>0.24</td>
</tr>
<tr>
<td>Learning</td>
<td>0.42</td>
<td>0</td>
<td>0</td>
<td>0.19</td>
<td>0</td>
<td>0.12</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>0.28</td>
<td>0.78</td>
<td>0.87</td>
<td>0.58</td>
<td>1.21</td>
<td>0.74</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Operations</td>
<td>27</td>
<td>35</td>
<td>27</td>
<td>26</td>
<td>26</td>
<td>28.2</td>
</tr>
<tr>
<td>Total Duration</td>
<td>7.18</td>
<td>9.02</td>
<td>5.77</td>
<td>5.16</td>
<td>5.78</td>
<td>6.58</td>
</tr>
</tbody>
</table>

PART 2: DOMAINS OF THE OPERATIONS
(PERCENTAGE OF TOTAL OPERATIONS\(^{25}\))

<table>
<thead>
<tr>
<th>DOMAINS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect</td>
<td>37.0</td>
<td>22.8</td>
<td>14.8</td>
<td>15.3</td>
<td>19.2</td>
<td>21.9</td>
</tr>
<tr>
<td>Cognition</td>
<td>44.4</td>
<td>42.8</td>
<td>44.4</td>
<td>57.6</td>
<td>57.6</td>
<td>48.9</td>
</tr>
<tr>
<td>Imagination</td>
<td>18.5</td>
<td>34.2</td>
<td>40.7</td>
<td>26.9</td>
<td>23.0</td>
<td>29.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>99.9</td>
<td>99.8</td>
<td>99.9</td>
<td>99.8</td>
<td>99.8</td>
<td>99.8</td>
</tr>
</tbody>
</table>

\(^{25}\)Percentages do not always add up to exactly 100 because of the rounding-off of the values.
TABLE 8
DISCOURSE ANALYSIS RESULTS: EXPERT INFORMANTS

PART 1: OPERATIONS AND FORMULATIONS
(INCIDENCE PER MINUTE OF VIDEO TAPE)

<table>
<thead>
<tr>
<th>EXPERT INFORMANTS</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Operations per Minute of Tape)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To Manifest</td>
<td>0.15</td>
<td>0.11</td>
<td>0.67</td>
<td>0</td>
<td>0.20</td>
<td>0.23</td>
</tr>
<tr>
<td>To State</td>
<td>0.59</td>
<td>1.09</td>
<td>0.44</td>
<td>1.12</td>
<td>0.79</td>
<td>0.80</td>
</tr>
<tr>
<td>To Identify</td>
<td>0</td>
<td>0.43</td>
<td>0.78</td>
<td>0.42</td>
<td>0.79</td>
<td>0.48</td>
</tr>
<tr>
<td>To Recall</td>
<td>0</td>
<td>0.11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.02</td>
</tr>
<tr>
<td>To Associate</td>
<td>0.30</td>
<td>0</td>
<td>0.22</td>
<td>0.84</td>
<td>0</td>
<td>0.27</td>
</tr>
<tr>
<td>To Compare</td>
<td>0.59</td>
<td>0.11</td>
<td>0.22</td>
<td>0.70</td>
<td>0</td>
<td>0.32</td>
</tr>
<tr>
<td>To Comprehend</td>
<td>2.22</td>
<td>1.09</td>
<td>0.67</td>
<td>0.56</td>
<td>0.40</td>
<td>0.99</td>
</tr>
<tr>
<td>To Explain</td>
<td>0.59</td>
<td>0.54</td>
<td>0.45</td>
<td>0.70</td>
<td>0.40</td>
<td>0.54</td>
</tr>
<tr>
<td>To Resolve</td>
<td>0</td>
<td>0.22</td>
<td>0.22</td>
<td>0</td>
<td>0</td>
<td>0.09</td>
</tr>
<tr>
<td>To Situate</td>
<td>0.59</td>
<td>0.33</td>
<td>0.67</td>
<td>0.42</td>
<td>0.59</td>
<td>0.52</td>
</tr>
<tr>
<td>To Verify</td>
<td>0</td>
<td>0.11</td>
<td>0.22</td>
<td>0</td>
<td>0</td>
<td>0.07</td>
</tr>
<tr>
<td>To Evaluate</td>
<td>0.15</td>
<td>0.33</td>
<td>0.34</td>
<td>0</td>
<td>0.40</td>
<td>0.24</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5.17</td>
<td>4.46</td>
<td>4.92</td>
<td>4.78</td>
<td>3.56</td>
<td>4.58</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FORMULATIONS</th>
<th>(Formulations per minute of tape)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions</td>
<td>0.30</td>
</tr>
<tr>
<td>Learning</td>
<td>0</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>2.51</td>
</tr>
</tbody>
</table>

TOTALS

<table>
<thead>
<tr>
<th></th>
<th>Total Operations</th>
<th>Total Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operations</td>
<td>35</td>
<td>41</td>
</tr>
<tr>
<td>Total Duration</td>
<td>6.77</td>
<td>9.20</td>
</tr>
</tbody>
</table>

PART 2: DOMAINS OF THE OPERATIONS
(PERCENTAGE OF TOTAL OPERATIONS26)

<table>
<thead>
<tr>
<th>INFORMANTS</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Percentage of Total Operations)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect</td>
<td>2.8</td>
<td>14.6</td>
<td>22.7</td>
<td>5.8</td>
<td>33.3</td>
<td>14.5</td>
</tr>
<tr>
<td>Cognition</td>
<td>42.8</td>
<td>46.3</td>
<td>36.3</td>
<td>41.1</td>
<td>44.4</td>
<td>41.8</td>
</tr>
<tr>
<td>Imagination</td>
<td>54.2</td>
<td>39.0</td>
<td>40.9</td>
<td>52.9</td>
<td>22.2</td>
<td>43.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>99.8</td>
<td>99.9</td>
<td>99.9</td>
<td>99.8</td>
<td>99.9</td>
<td>99.9</td>
</tr>
</tbody>
</table>

26 Percentages do not always add up to exactly 100 because of the rounding-off of the values.
two domains of experience combined. Forty-eight point nine percent (48.9%) of their operations were formulated with a cognitive orientation, whereas 29.0% and 21.9% were formulated respectively with an imaginative and an affective one.

Table 8 provides adjusted figures for the performance of the expert informants. Part 1 of Table 8 presents the incidence of each operation and formulation, whereas Part 2 provides the percentage of operations originating from within each of the three domains of experience. The number of operations per minute ranges from a low of 3.56 operations per minute (informant no. 10), to a high of 5.17 (informant no. 4). However, four of the five informants' results are in the high end of the range (4.46 to 5.17 operations/minute). The average for the group is 4.58 and this is only slightly more than the average for the non-expert informants (4.37). The difference between the two groups is 0.21 operations per minute.

As a group, the experts favored the use of two specific operations: To Comprehend (0.99/minute) and To State (0.80/minute). The next three most used operations are To Explain (0.54/minute), To Situate (0.52/minute), and To Identify (0.48/minute). Most other operations were used about half as often as these last three. Finally, three operations were used only occasionally; They were: To Recall (0.02/minute), To Verify (0.07/minute), and To Resolve (0.09/minute). The experts preferred to use imagination as their main approach to exploring and understanding the works of art. Forty-three point six percent (43.6%) of their operations had imaginative formulations, whereas operations with cognitive formulations followed close behind
and accounted for 41.8% of all operations. Only 14.5% of the group's operations were classified in the affective domain.

Finally, as a group, the experts formulated numerous hypotheses about the works of art they were viewing. Largely because of two members (informants four and six), the experts averaged 1.19 hypotheses per minute compared with .74 hypotheses per minute for the non-expert group. This is a difference of 0.45 hypotheses per minute between the two groups. Few operations were formulated as questions (0.14/minute), and fewer operations still were formulated in such a way as to be indicative of learning (0.03/minute). The non-experts, as a group, formulated 0.10 more questions per minute of video tapes and 0.09 more operations per minute showing evidence of learning.

By expressing the results of the discourse analysis in terms of percentages of total operations for each group, Table 9 facilitates a further comparison of the findings for the expert and non-expert groups of informants. Experts used the operation, To Situate, 6.8 percentage points more often and the operation, To Comprehend, 5.2 percentage points more often than the non-experts. The non-experts, in turn, made 4 percentage points more use of the operation To Explain and approximately 3 percentage points each more use of the operations To Verify, To Compare, and To State. It is difficult to assess the significance of these differences. However, in an attempt to put these differences in perspective, let us consider the fact that a 5 percent point difference represents, in fact, one operation out of twenty. A difference of this magnitude does not appear to be highly important, especially in consideration of the fact that most of the
### TABLE 9

**DISCOURSE ANALYSIS: A COMPARISON OF EXPERT AND NON-EXPERT VIDEOS**

(Percentage of total operations)

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>EXPERTS</th>
<th>NON-EXPERTS</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Manifest</td>
<td>5.2</td>
<td>5.6</td>
<td>-0.4</td>
</tr>
<tr>
<td>To State</td>
<td>17.4</td>
<td>20.5</td>
<td>-3.1</td>
</tr>
<tr>
<td>To Identify</td>
<td>10.4</td>
<td>10.6</td>
<td>-0.2</td>
</tr>
<tr>
<td>To Recall</td>
<td>0.5</td>
<td>0.7</td>
<td>-0.2</td>
</tr>
<tr>
<td>To Associate</td>
<td>5.8</td>
<td>5.6</td>
<td>+0.2</td>
</tr>
<tr>
<td>To Compare</td>
<td>6.9</td>
<td>9.9</td>
<td>-3.0</td>
</tr>
<tr>
<td>To Comprehend</td>
<td>21.5</td>
<td>16.3</td>
<td>+5.2</td>
</tr>
<tr>
<td>To Explain</td>
<td>11.6</td>
<td>15.6</td>
<td>-4.0</td>
</tr>
<tr>
<td>To Resolve</td>
<td>2.3</td>
<td>1.4</td>
<td>+0.9</td>
</tr>
<tr>
<td>To Situate</td>
<td>11.0</td>
<td>4.2</td>
<td>+6.8</td>
</tr>
<tr>
<td>To Verify</td>
<td>1.7</td>
<td>4.9</td>
<td>-3.2</td>
</tr>
<tr>
<td>To Evaluate</td>
<td>5.2</td>
<td>4.9</td>
<td>+0.3</td>
</tr>
<tr>
<td><strong>TOTAL(^{27})</strong></td>
<td>99.5</td>
<td>100.2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DOMAINS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect</td>
<td>14.5</td>
<td>21.9</td>
<td>-7.4</td>
</tr>
<tr>
<td>Cognition</td>
<td>41.8</td>
<td>48.9</td>
<td>-6.9</td>
</tr>
<tr>
<td>Imagination</td>
<td>43.6</td>
<td>29.0</td>
<td>+14.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>99.9</td>
<td>99.8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FORMULATIONS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>0.6</td>
<td>2.8</td>
<td>-2.2</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>26.1</td>
<td>17.0</td>
<td>+9.1</td>
</tr>
<tr>
<td>Questions</td>
<td>2.9</td>
<td>5.6</td>
<td>-2.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29.6</td>
<td>25.5</td>
<td></td>
</tr>
</tbody>
</table>

| Total Operations    | 172     | 141         | 31         |

\(^{27}\)Percentages do not always add up to exactly 100 because of the rounding-off of the values.
informants used a total of between 26 and 35 operations during their entire videotape.

**Domains of the operations.**

A more noticeable difference is revealed by a comparison of the percentage of total operations that fall within the different domains of experience. The group of expert informants used imagination (43.6%) and cognition (41.8%) almost equally during their exploration of the works of art. They also favored the use of these two domains by using them to a much larger extent (a total of 85.4% for the two) over the affective domain, which accounted for only 14.5% of total operations. The pattern of use of the three domains of experience is different in the non-expert group. Cognition was the preferred domain of the non-expert group; it made use of cognitively oriented operations almost half of the time (48.9%). Imagination, the next most used domain, accounted for 29% of total operations, while affect accounted for 21.9% of total operations.

The most important difference between the two groups is the extent to which experts made more use of imagination in order to structure their experience: a noticeable 14.6 percentage points. Other differences include the fact that non-experts used the affective domain 7.4 percentage points more often and that they also relied on cognition 6.9 percentage points more frequently than the experts in structuring their exploration and understanding of the works of arts.

**Formulation of hypotheses by the informants.**

Finally, another noticeable difference between the two groups relates to the number of hypotheses generated by the informants
during their investigation of the works of art. The expert informants formulated 9.1 percentage points more hypotheses about the meaning of the works of art than did the non-experts. However, this is not to say that the non-experts did not emit hypotheses about the works being viewed, because they did so to a noticeable extent as well. Seventeen percent of their total operations were formulated as hypotheses. Nonetheless, the experts surpassed them in this regard.

The functions of the operations.

Another feature of Dufresne-Tassé’s instrument is that the operations may be grouped according to one of four specific functions, since it has been demonstrated that the museum visitor tends to selectively use the various operations in keeping with the changing objectives of his or her investigation of a museum object. The four functions and their respective operations are: 1) To become acquainted with the object (by the use of the operations To Manifest, To State, and To Identify); 2) To construct meaning with what has been perceived (by the use of the operations To Recall, To Associate, To Compare, To Explain, and To Comprehend); 3) To control for accuracy (by the use of the operations To Verify, To Evaluate, and To Situate); and 4) To modify in order to perfect the meaning that has been constructed (by use of the operation To Resolve).

By grouping the results of the discourse analysis according to these four functions, we are able to continue the comparison of the
<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>EXPERTS</th>
<th>NON-EXPERTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>To perceive and become acquainted with the work of art</td>
<td>To Manifest 33</td>
<td>To State 37</td>
</tr>
<tr>
<td></td>
<td>To Identify</td>
<td></td>
</tr>
<tr>
<td>To construct meaning on what has been perceived</td>
<td>To Recall 47</td>
<td>To Associate 48</td>
</tr>
<tr>
<td></td>
<td>To Compare</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To Explain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To Comprehend</td>
<td></td>
</tr>
<tr>
<td>To control for accuracy</td>
<td>To Verify 18</td>
<td>To Evaluate 14</td>
</tr>
<tr>
<td></td>
<td>To Evaluate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To Situate</td>
<td></td>
</tr>
<tr>
<td>To perfect what has been constructed</td>
<td>To Resolve 2</td>
<td>To Situate 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
experts' and non-experts' use of operations in the production of their video tapes. Table 10 presents the results of the comparison.

The results of the grouping of operations is striking. It becomes obvious that the difference between the two groups, in terms of their use of operations according to function, is negligible. In regards to the first function, non-experts used only 4 percentage points more operations than the experts when initially becoming acquainted with the works of arts. When this difference is standardized by multiplying the average number of operations for the expert informants (34.4) by a factor of 1.04, this works out to about 1.4 additional operations for each non-expert informant. As pertains to the second function, both groups used almost the same percentage of operations in attempting to construct meaning on what they had perceived about the works of art: the difference here is only 1 percent point. For the third function, "to control for accuracy", informants in the expert group used 4 percentage points more operations. Again, this works out to an average of only 1.38 additional operations for the expert informants, when the average total of expert operations (34.4) is multiplied by .04. Finally, both groups used fourth function operations very sparingly, and the difference between the two group is only one percent point.

The pairing of each operation with a specific function also allows for the examination of the sequencing of operations according to their function. This possibility raises some interesting questions. Are there patterns in the way informants view and respond to the works of art? Do these patterns differ according to the level of expertise of the informants? In an attempt to provide answers to these questions, an
analysis was undertaken in which the sequence of operations identified in each informant's video was transposed according to the function associated with each operation. This new information was then translated into charts in the expectation that graphic representation of the sequencing of functions would bring to light any salient viewing and responding patterns present in the data. Appendix 5 presents, in the form of individual charts, the results of the first part of this analysis: the transposition of the sequence of operations into a sequence of functions for each participant.

The next section of the chapter presents the results of the second part of this analysis: the comparison of the sequence of functions used by each subset of the study group. To permit this analysis, the sequence of functions charts for individual informants were compared with the sequence of functions charts of the other informants in the same subset. In other words, the charts of individual non-expert informants were compared with the charts of the other non-expert informants, and the charts of expert informants were compared with each other. The technique used for the analysis consisted in comparing the corresponding sequential units in all of the sequence of functions charts within a specific subset of the study group.

To explain how this analysis was carried out, I will describe its use in examining the functions of the operations used by the non-expert informants. To begin, the functions of the first operation in the five individual non-expert charts were compared to see if they were identical. The same procedure was followed for the verification of all of the other operations, according to the order in which they
were used by the informants. When a majority (3/5 or more) of the functions of any set of corresponding sequential units -- for example, all non-experts operations number 17 in the individual charts -- were found to be the same, then the function of the majority of that set of units was transcribed to a chart. In this way, a new chart was created to represent a composite of the functions used by the majority of non-expert informants. It was hoped that this composite chart would reveal any patterns present in the functions of non-expert informants' psychological operations. However, sometimes, the comparison of a set of corresponding operations revealed that the functions differed from informant to informant to the extent that no one function was used, at that point in the sequence, by a majority of the non-expert group. In these cases, a number "0" was transcribed to the composite chart indicating that no correspondence was found among the five informants in the group. The result of this comparative analysis is the chart presented in the first-half of Table 11.

The procedure described in the preceding paragraph was also employed to produce a composite chart of the sequence of functions of the majority of expert informants. This chart is presented in the second-half of Table 11.

In each of the charts, the x-axis presents the sequence of operations used by the majority of each group of informants. Each operation is represented by a separate point on the chart. The y-axis presents the functions of each operation. The function To perceive and become acquainted with the work of art is represented by the numeral "1". The function To construct meaning on what has been perceived is represented by the numeral "2". The function To control
for accuracy is represented by the numeral "3". Finally, the function To perfect what has been constructed is represented by the numeral "4". The number "0", located on the y-axis at the intersection of the x-axis, does not represent a function. Instead, when a dot is located at that level, it indicates that none of the four functions was used by a clear majority of the members in the subset in question. It is essential to note that numerals 1 to 4 are used here only as symbols, within the charts, to replace the lengthy text labels given to each function. The numbers should not be construed as an indication that the functions are organized according to some kind of hierarchy with the number "1" function occupying the first and lowest rank and the number "4" function occupying the last and highest rank. The numbers are simply substitutes for the names of the functions. Although the functions do seem to occur within some kind of sequence within the process of aesthetic appreciation, there is no evidence at this time to support the notion that any of these functions are associated with higher orders of understanding in comparison with the other functions.

Do the composite charts reveal any differences in the process of aesthetic understanding of the two subsets of the study group: the experts and the non-experts? To answer this question, the morphology of two charts was compared for similarities and differences.

This comparison reveals that the composite diagrams for the expert group and the non-expert group are, in many ways, almost identical. Both diagrams indicate that functions one (To perceive the work of art) and two (To construct meaning) are the main purpose of
TABLE 11
SEQUENCE OF FUNCTIONS OF THE MAJORITY OF EACH SUBSET

Operations for Which the Functions are the Same for at Least 3/5 of the Non-Expert Informants

Legend:
Function 1: To perceive and become acquainted with the work of art.
Function 2: To construct meaning on what has been perceived.
Function 3: To control for accuracy.
Function 4: To perfect what has been constructed.
the use of operations by the majority of both expert and non-expert informants. For both subsets of the study group, these two functions are used at most points during the first three-quarters of the aesthetic encounter. In the non-expert group, a high percentage (17+26=65%) of the same functions are used by a majority of non-expert informants until operation number 26. However, after operation 26, no single function was used by the majority. In a similar fashion, a high percentage (23+36=64%) of the same functions were evident in the majority of the expert group's use of operations during the first 36 operations. Once more, after operation 36, no single function was used by a majority of expert informants. As mentioned above, the sequence traced by the diagrams of both study groups is alike in that majority use of functions one and two tends to occur approximately during the first 3/4 of the aesthetic encounter. During the last quarter of the aesthetic encounters, the functions of the operations in both groups become divergent and, therefore, no pattern in the selection of functions is apparent. Furthermore, although functions three (To control for accuracy) and four (To perfect) were used by most informants at some point in their encounters with the work of art, these two functions are noticeably absent from the composite charts. They do not appear on the charts, because they were never used at any one point by a majority of the informants in either subsets of the study group. Finally, if we compare the sections of both diagrams where they overlap according to the majority use of functions in each group (operations 1 to 26), we observe that the majority of both groups used 8 operations with function number one (To perceive) and 9 operations with function number two (To create meaning).
The diagrams in Table 11 also make apparent some differences in the functions used by the majorities of both study groups. The 8 function-one operations used by the majority of non-expert informants are spread out over the first 23 operations of the chart, whereas the 8 function-one operations on the experts' chart are clustered more closely together in the first 18 operations. This difference suggests that the majority of expert informants concentrated on perceiving the work of art during about the first third of the aesthetic experience, whereas the non-experts maintained their efforts in this regard over a longer period in the sequence of operations. Finally, the experts' composite chart has one salient feature that is absent from the non-experts' diagram. Operations number 31 to 35 represent a cluster of five function-two operations that occurs somewhat late in the sequence of the functions of the operations. This cluster suggests a major effort, by a majority of individual expert informants, to bring some kind of closure to the aesthetic experience by creating additional meaning about the work of art in question.

This completes the analysis of the functions of the operations used by each informant in responding to their respective works of art. In addition to the analyses presented in the previous section of the chapter, discourse analysis was also used to conduct one last examination of the results of the study.

**A Comparison of the Audio-Taped and Video-Taped Sessions**

In this final analysis, discourse analysts results of four informants' videotapes were compared to the discourse analysis results of one of their audio-taped sessions. The objective of this
undertaking was to determine the impact of the new research
protocol on the performance of the informants. Did the informants'
use of camcorders influence, in a noticeable way, the performances
which they recorded on videotape?

For this analysis, two non-expert informants (Suzie and Rex)
and two expert informants (Julien and Diane) were selected at
random. The best\(^{28}\) audio-taped interview and the best informant-
made video for each participant was selected for a comparison of the
discourse analysis results.

Before the examination of the results of these analyses can
begin, it is essential to first address two methodological problems
raised by the various levels of differences observed between the two
sets of data for each informant. What level of difference, between the
performances captured on audiotape and the performance captured on
videotape, is truly meaningful? And since we are comparing responses
to two different works of art, what are the effects of the informants'
choices of works of art on their performance? The first question is
much easier to address than the second. In regards to the first
question, we must keep in mind that, for a session lasting between
four and five minutes, one extra operation of a specific type can
influence the number of operations per minute of tape by 20 to 25 \%
The same is true for two operations of the same type over a duration of
of 9 to 10 minutes. It appears obvious that one extra operation of any
type over a five minute period is not a highly meaningful event, as it
could be easily attributed to any number of reasons besides the

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\(^{28}\) For the operational definition of this term, see page 86.
differences in the two research procedures. That is why, in considering the results of the comparisons presented in this part of the chapter, I have chosen a tolerance level of +/- 0.50 operations per minute to guide my interpretation of the findings.

In regards to the second question, since informants were instructed in both sessions to select works of art that, at first glance, attracted and interested them, the differences in performance attributable to difference in the works of art would be somewhat attenuated, to the extent that this is possible. I concede, however, that some portion of the differences in the informants' two performances are more than likely the results of differences in the challenge presented to the informant by each work of art. In fact, the more challenging the work of art, the more it is likely that the informants' performances were enhanced, as they assembled the best of their resources to meet the demands put on them by such a work of art. Nonetheless, it is impossible to estimate the extent of the influence of this factor on the results under consideration. I can only caution that the results must be considered in light of this possibility.

Let us now turn our attention to the findings of the analysis. Table 12 presents the results for the two non-expert informants selected: Suzie and Rex. Both informants used more operations per minute during their audio-taped sessions than during their respective informant-made videos. Suzie used 4.38 operations per minute during her audio-taped session compared to 3.76 operations per minute during her informant-made video; the difference is 0.62 operations per minute. Rex used 5.39 operations per minute during his audio-taped session compared to 5.04 operations per minute during his
### Table 12
A Comparison of the Audio-Taped and Video-Taped Sessions of Non-Expert Informants

(Incidence of Operations & Formulations Per Minute of Tape)

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>SUZIE</th>
<th>REX</th>
<th>OPERATIONS</th>
<th>SUZIE</th>
<th>REX</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Manifest</td>
<td>0</td>
<td>0.29</td>
<td>0</td>
<td>0.58</td>
<td>+0.58</td>
</tr>
<tr>
<td>To State</td>
<td>1.31</td>
<td>0.14</td>
<td>1.75</td>
<td>0.78</td>
<td>-0.97</td>
</tr>
<tr>
<td>To Identify</td>
<td>0.11</td>
<td>0.42</td>
<td>0.67</td>
<td>0.19</td>
<td>-0.48</td>
</tr>
<tr>
<td>To Recall</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>To Associate</td>
<td>0.22</td>
<td>0.14</td>
<td>0.40</td>
<td>0.39</td>
<td>-0.01</td>
</tr>
<tr>
<td>To Compare</td>
<td>0.22</td>
<td>0.42</td>
<td>0.54</td>
<td>0.19</td>
<td>-0.35</td>
</tr>
<tr>
<td>To Comprehend</td>
<td>0.55</td>
<td>0.56</td>
<td>0.40</td>
<td>1.55</td>
<td>+1.15</td>
</tr>
<tr>
<td>To Explain</td>
<td>0.77</td>
<td>0.70</td>
<td>0.67</td>
<td>0.39</td>
<td>-0.28</td>
</tr>
<tr>
<td>To Resolve</td>
<td>0.11</td>
<td>0</td>
<td>0.13</td>
<td>0</td>
<td>-0.13</td>
</tr>
<tr>
<td>To Situate</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.39</td>
<td>+0.39</td>
</tr>
<tr>
<td>To Verify</td>
<td>0.55</td>
<td>0.84</td>
<td>0.13</td>
<td>0.19</td>
<td>+0.06</td>
</tr>
<tr>
<td>To Evaluate</td>
<td>0.55</td>
<td>0.29</td>
<td>0.67</td>
<td>0.39</td>
<td>-0.28</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4.38</td>
<td>3.76</td>
<td>-0.62</td>
<td>5.39</td>
<td>5.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FORMULATIONS</th>
<th>(Formulations per minute of tape)</th>
<th>FORMULATIONS</th>
<th>(Formulations per minute of tape)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions</td>
<td>0.11</td>
<td>0.70</td>
<td>0.13</td>
</tr>
<tr>
<td>Learning</td>
<td>0.08</td>
<td>0.42</td>
<td>0.02</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>0.55</td>
<td>0.28</td>
<td>0.81</td>
</tr>
<tr>
<td>TOTALS</td>
<td>4.38</td>
<td>3.76</td>
<td>-0.62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DURATION (MIN.)</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formulations</td>
<td>6</td>
<td>10</td>
<td>+4</td>
<td>4</td>
<td>2</td>
<td>-3</td>
</tr>
<tr>
<td>Operations</td>
<td>40</td>
<td>27</td>
<td>-13</td>
<td>40</td>
<td>26</td>
<td>-14</td>
</tr>
</tbody>
</table>

USE OF DOMAINS: (Percentage of Total Operations)

<table>
<thead>
<tr>
<th>DOMAINS</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect</td>
<td>12</td>
<td>37</td>
<td>+25</td>
<td>7</td>
<td>15</td>
<td>+8</td>
</tr>
<tr>
<td>Cognition</td>
<td>55</td>
<td>44</td>
<td>-11</td>
<td>63</td>
<td>58</td>
<td>-5</td>
</tr>
<tr>
<td>Imagination</td>
<td>33</td>
<td>19</td>
<td>-14</td>
<td>30</td>
<td>27</td>
<td>-3</td>
</tr>
<tr>
<td>TOTALS</td>
<td>100</td>
<td>100</td>
<td>-14</td>
<td>100</td>
<td>100</td>
<td>-14</td>
</tr>
</tbody>
</table>
informant-made video. In this case, the difference is 0.35 operations per minute. The rank of the proportions in which Rex used cognition, imagination and affect during both of his sessions remained the same in spite of slight changes in the percentages to which each was used. Suzie's use of the three domains did change from the audio to the video sessions. In both sessions, her use of cognition was first in rank, but it decreases by 11 percentage points in the video. In her audio session, imagination ranked second and affect third, while in her video this order is reversed. Her use of imagination decreased by 14 percentage points and her use of affect increased by 25 percentage points. However, an extra .59 operations/minute were formulated as questions. In her video, Suzie's use of operations decreased by .62 operations/minute, although the only single operation whose use decreased noticeably was the operation To state, which was down by 1.17 operations per minute.

Rex's performance in his video also shows a noticeable decrease (0.97 operations/minute) in the use of the operation To state. It is quite probable that these reductions in the use of statements are due to the fact that the production of a visual record using the camcorder reduces the informants' need to describe what they are looking at. In the production of his videotape, Rex increased his use of two other operations: To Comprehend (1.15 additional operations/minute) and To Manifest (0.58 additional operations/minute). The increase in comprehension operations is highly noticeable, but difficult to explain. The increase in the operation To Manifest is in keeping with the increased use of affect
during the video session, as this operation always occurs according to the affective domain.

Results of the comparative analysis for the expert informants, Julien and Diane, are presented in Table 13. Although Julien's video is 3.89 minutes shorter than his audio-taped session, his use of operations increased by 1.04 operations per minute during the production of his video. In his audio-taped session, he uses cognition noticeably more often than the other two domains of experience combined. In his video, the proportions in the use of domains change radically. Imagination now ranks first (54%), cognition ranks second (43%), and affect third (3%). The change in the use of imagination in the video represents an increase of 27 percentage points in comparison with the audio-taped session. Another noticeable change occurring in Julien's video is his increased use of operations formulated as hypotheses: 1.38 more hypotheses/minute. His use of operations also increases in his videotape, which contains 1.04 more operations per minute than his audio-taped session. More specifically, two different types of operations increased noticeably: To Situate (up by .50 operations/minute) and To Comprehend (up by 1.19 operations/minute). In keeping with the results reported for the non-expert informants, Julien's use of the operation To State is down by .72 operations/minute in his video.

Results for Diane are as follows. Of the four informants selected for this particular analysis, the duration of Diane's two tapes are almost the same. Her video is longer than her audiotape by difference of only .20 minutes, yet her use of operations in the video tape is down by a
## TABLE 13
A COMPARISON OF THE AUDIO-TAPED AND VIDEO-TAPED SESSIONS OF EXPERT INFORMANTS

(INCIDENCE OF OPERATIONS AND FORMULATIONS PER MINUTE OF TAPE)

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>JULIEN</th>
<th>DIANE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Audio</td>
<td>Video</td>
</tr>
<tr>
<td>To Manifest</td>
<td>0</td>
<td>0.15</td>
</tr>
<tr>
<td>To State</td>
<td>1.31</td>
<td>0.59</td>
</tr>
<tr>
<td>To Identify</td>
<td>0.28</td>
<td>0</td>
</tr>
<tr>
<td>To Recall</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>To Associate</td>
<td>0.09</td>
<td>0.30</td>
</tr>
<tr>
<td>To Compare</td>
<td>0.28</td>
<td>0.59</td>
</tr>
<tr>
<td>To Comprehend</td>
<td>1.03</td>
<td>2.22</td>
</tr>
<tr>
<td>To Explain</td>
<td>0.47</td>
<td>0.59</td>
</tr>
<tr>
<td>To Resolve</td>
<td>0.09</td>
<td>0</td>
</tr>
<tr>
<td>To Situate</td>
<td>0.09</td>
<td>0.59</td>
</tr>
<tr>
<td>To Verify</td>
<td>0.19</td>
<td>0</td>
</tr>
<tr>
<td>To Evaluate</td>
<td>0.28</td>
<td>0.15</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4.13</td>
<td>5.17</td>
</tr>
</tbody>
</table>

**FORMULATIONS**

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions</td>
<td>0.02</td>
<td>0.30</td>
<td>+0.28</td>
<td>0</td>
<td>0.20</td>
<td>+0.20</td>
</tr>
<tr>
<td>Learning</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>1.13</td>
<td>2.51</td>
<td>+1.38</td>
<td>2.68</td>
<td>0.40</td>
<td>-2.28</td>
</tr>
</tbody>
</table>

**TOTALS**

<table>
<thead>
<tr>
<th>DURATION (min.)</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>10.66</td>
<td>6.77</td>
<td>-3.89</td>
<td>4.85</td>
<td>5.05</td>
<td>+0.20</td>
</tr>
<tr>
<td>Formulations</td>
<td>13</td>
<td>19</td>
<td>+6</td>
<td>13</td>
<td>3</td>
<td>-10</td>
</tr>
<tr>
<td>Operations</td>
<td>44</td>
<td>35</td>
<td>-9</td>
<td>24</td>
<td>18</td>
<td>-6</td>
</tr>
</tbody>
</table>

**USE OF DOMAINS: (PERCENTAGE\(^{29}\) OF TOTAL OPERATIONS)**

<table>
<thead>
<tr>
<th>DOMAINS</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
<th>Audio</th>
<th>Video</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect</td>
<td>14</td>
<td>3</td>
<td>-11</td>
<td>33</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>Cognition</td>
<td>59</td>
<td>43</td>
<td>-16</td>
<td>25</td>
<td>44</td>
<td>+19</td>
</tr>
<tr>
<td>Imagination</td>
<td>27</td>
<td>54</td>
<td>+27</td>
<td>42</td>
<td>22</td>
<td>-20</td>
</tr>
<tr>
<td>TOTALS</td>
<td>100</td>
<td>100</td>
<td></td>
<td>100</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

\(^{29}\)Percentages do not always add up to exactly 100 because of the rounding-off of the values.
total of 1.39 operations per minute. This change is probably due to the large proportion of non-narrated segments in her videotape. Furthermore, a decrease in the number of comprehension operations in her video (1.66 less operations/minute) is particularly noticeable. In her audio-taped session, imagination was the domain of experience most used (42%), whereas in her video, cognition is most prevalent (44%). This represents an increase of 19 percentage points in her use of cognition and a decrease of 20 percentage points in her use of imagination in the video when it is compared with the audiotape. Another highly noticeable change is a decrease (2.28 formulations/minute) in the number of operations formulated as hypotheses.

In summary, the objective, in comparing the audio-taped and video-taped data for each of four informants respectively, was to determine whether the use of the camcorder influenced (to any extent greater than the audiotape recorders) these informants' attempts to understand the works of art. In this section of the chapter, we have seen that, indeed, many differences exist between the sets of data gathered using the two collection methods. In the next chapter, our discussion of this section's findings will focus on identifying the source of these differences. Are the differences attributable to the informants' use of camcorders or, instead, are they the result of the use of a different work of art in conjunction with each of the two data collection methods?

This concludes the presentation of the results of the comparative analysis of the video-taped and audio-taped records of two expert and two non-expert informants' aesthetic responses to works
of art. This also concludes this chapter on the presentation of the overall results of the data analysis.

Summary

The various analyses conducted on the ten informants' videotaped accounts of their aesthetic understanding can be grouped into four broad categories according to their focus. First, the tapes were analyzed for cinematographic orientation. Second, the informants' use of filmmaking techniques was investigated. Third, non-narrated segments were analyzed for the informant's intent. Fourth, discourse analysis was conducted using the verbal transcripts of the tapes. In all cases, analysis was undertaken in such a way as to allow for a comparison of results between the five expert and the five non-expert informants participating in the study. Comparisons were also made between data obtained by analyzing the informant-made video tapes with data obtained using the more traditional audio-tape recording as the data collection method.

The typological analysis of the informant-made videos revealed that the cinematographic orientation adopted by all ten informants was essentially the same. All videos analyzed were classified as interpretations using Barrett's (1986) Typology for the Interpretation of Photographs. However, some differences between the two subsets of the study group were found in the informants' use of filmmaking techniques. Non-experts used more zooms, pans and travels per minute during the production of their videos, whereas experts exceeded the non-experts in their use of edits. Furthermore, experts (as a group) devoted, on average, a noticeably higher percentage of
their videos to non-narrated segments that were intended to allow the video image to "speak" for itself. However, the performance of just a few informants accounts for the major portion of these results: the tendency to use non-narrated segments is not prevalent within either subsets of the study group.

Results of the discourse analysis point to just a few minor differences between the two subgroups in terms of their use of psychological operations during the process of aesthetic experiencing. Non-expert informants preferred to use a cognitive approach for such experiences, whereas expert participants tended to use cognition and imagination almost equally. When the functions of the psychological operations were examined, both groups came out about equal in terms of the proportion of operations devoted to each function. Both experts and non-experts devoted the greatest portion of operations to the task of constructing meaning about the works of art. Finally, when the sequence of the functions of the operations for participants in both groups was examined, only minor differences in sequence were found.

Finally, results of the discourse analysis were also used to compare the two data collection methods used in the study: the audio-taped interviews and the informant-made videos. Differences between the two sets of data were found, but these are probably related to the fact that different works of art were used in conjunction with the different methods of data analysis. Overall, the verbal data collected using informant-made videos compared quite favorably to the verbal data gathered using audiotape recordings: it was possible to use this data in order to undertake the same kinds of analyses normally conducted with audio-taped recordings: for example, discourse
analysis. Furthermore, video-based verbal data yielded the same kinds of information as audio-taped recordings: for example, the thought processes used by informants in their attempts to understand the works of art.

Beginning in the next chapter, the significance of these various results will be discussed at length. The findings presented so far suggest that few distinctions exist, according to the documentation, in the aesthetic understanding process used by the expert and non-expert informants. Yet, I believe that there is a difference between the two groups. This difference resides, not in the thought processes used to understand the works of art, but in the types of prior knowledge that experts and non-experts bring to bear upon their aesthetic experiences. As a consequence, we will need to look at some of these other aspects of aesthetic experience, if we are to better understand the distinctions in the aesthetic responses of these two groups of informants.
CHAPTER V

Discussion of Findings

Abstracting is more active and interfering; more selecting-rejecting than the aesthetic attitude of savoring, enjoying, appreciating, caring, in a noninterfering, nonintruding, noncontrolling way. The end product of abstracting is...further and further [removed] from raw reality ("the map is not the territory"). The end product of aesthetic perceiving, of nonabstracting is the total inventory of the percept, in which everything in it is apt to be equally savored, and in which evaluations of more important and less important tend to be given up. Here greater richness of the percept is sought for rather than greater simplifying and skeletonizing.  

--Abraham Maslow

Introduction

This chapter will be devoted, first and foremost, to a discussion of the research findings reported in Chapter 4. To assist in this deliberation, an overview of the study results is presented in Table 14. In addition, the discussion will extend to considerations arising from some of these findings and to various remarks about the use of informant-made videos as a method of data collection.

The Cinematographic Orientation of Informants' Videos

The results of the typological analysis using Barrett's (1986) Typology For Interpreting Photographs are surprising, as they reveal a general consistency in the cinematographic orientation of all the informant's videos. Indeed, the intellectual stance adopted by all informants in the production of their videos is similar. All informants,  

30A. Maslow, 1971, p. 69.
<table>
<thead>
<tr>
<th>Analysis Type</th>
<th>Non-Experts</th>
<th>Experts</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
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<td>All classified as Interpretations</td>
<td>No differences between subsets</td>
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<td></td>
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</tbody>
</table>
whether they were part of the expert or non-expert group, produced videos that presented a personal interpretation of their understanding of a work of art.

As expressed in my prediction, I had expected that the experts would produce videos that were noticeably different in overall orientation from the non-expert videos mainly because of their professional training in studio art. This was clearly not the case. Except for the few short deviations presented in detail in Chapter 3, a similar interpretive approach was adopted by all the informants, regardless of their professional backgrounds. What accounts for this lack of difference?

When briefed about the task of producing their final data videos, the informants were not instructed to take this or any other approach. The selection of a specific cinematographic approach for the production of the videos was left to the discretion of the informants. In fact, the subject was never raised by the researcher. However, because of this, informants may have taken their cues about what approach might be appropriate in the production of their videos from their earlier experiences in the study. I suspect that the informants may have relied on the first component of the study protocol, the audio-taped responding session, as a model on "how to" structure their video tapes. The audio-taped verbal responding session was an exercise in which the informant simply communicated their understanding of a work of art to the researcher. The recording of their comments was done automatically by the researcher using a tape recorder. The task at hand, during this initial part of the protocol, was straightforward, and the informants were given little leeway as to
how it should be done: they were asked to convey their impressions about the work of art in question.

Later, during the production of the video tapes, the participants were not informed that they were free to select any cinematographic point of view for the production of their data video. In the absence of clear instructions in this regard, they may have assumed that the structure of their videos should mimic the structure of the audio-taped responding session in which they participated earlier. Therefore, in an attempt to reduce the ambiguity of this new situation, the study participants may have generalized the parameters of their earlier experience to the new task at hand.

However, it is also possible that the consistency in the orientation of the informant-made videos is also a reflection of a general congruity in the approach taken by all the informants in their attempts to understand and appreciate the works of art. In other words, the similarity in orientation of the videos could be an indication that all the informants actually proceeded in a similar fashion when looking at and responding to the works of art before them. Since participants knew that the study focused on their art viewing experience rather than on their artistic creativity, it is likely that participants concentrated on communicating their understanding and appreciation of the works of art in a straightforward and documentary fashion. In all likelihood, they probably wanted to convey information about their aesthetic experiences in a manner that was consistent with the way these events occur in their daily lives. Therefore, informants probably did not feel a need or a desire to demonstrate their creativity as filmmakers.
However, regardless of whether one of these two or another explanation is the correct one, the results of the typological analysis provide evidence that all the informants saw the task of producing the videos in essentially the same way. This similarity in the orientation of the informant-made videos provides a solid basis for their further study. In essence, since we are dealing with documents that are of a common nature because they belong to the same category, analyzing them using existing instruments (such as discourse analysis instruments) is methodologically defensible. It would be much more difficult to compare the various videos if, indeed, they were all different in orientation. On what basis could a strictly "theoretical" video be compared with a strictly "descriptive" one? Such an attempt would not only be difficult to undertake in practical terms, but also questionable from an epistemological point of view. Because of the consistency in the orientation of the informants’ videos, no problems of this nature were encountered.

**Factors influencing the production of the videos**

Informants' use of various filmmaking conventions during the production of their videos was mainly influenced by two factors. The first factor was the suitability of certain techniques or sequences of techniques for producing images that were congruent with the informants' narratives about the works of art. The second was the particularities of the works of art being filmed, and how they dictated that certain approaches (and not others) be used.
Informants' exploration of techniques.

Differences between the two study groups did emerge from the analysis of the informants' use of filming techniques. These findings are contrary to the results predicted by the second prediction. Non-experts used far more zooms, pans and travels than the experts. The experts, however, used a greater number of edits during the production of their videos.

These variances suggest that the non-experts may have been more interested in exploring video technique during the production of their videos. Conversely, they may also mean that the expert informants concentrated less on an exploration of filmmaking techniques and more on the content of their videos. Because of their professional training, the experts' greater familiarity with many of the conventions of visual communication may have freed them from the necessity of searching for the appropriate visual syntax by which to convey their ideas about the works of art. Furthermore, their training may have taught them to have a greater concern for the end product, rather than for the technical means by which to achieve it. In turn, many of the non-experts may have had little choice, but to learn how to convey their ideas video-graphically by trial and error, while actually engaged in the process of making their videos. If this is true, they would naturally use a far greater number and variety of filmmaking techniques in their search for the ones that best communicate their ideas.
The scale of the artwork.

One of the characteristics of the works of art that influenced the informants' use of filming techniques was scale. For the production of their videos, the informants, as a whole, mainly selected paintings or other two-dimensional works to explore (14/20). To a lesser extent, they also selected a fair number (6/20) of very large photographic or sculptural installations. Installations are works of art that consist of a number of components that, together, form a single work of art occupying a large area of floor or wall space. These components are usually displayed according to a spatial arrangement that is determined by the artist at the time of the creation of the piece.

In order to film an entire installation, informants had to use one of two approaches. They could use a long shot to show the entire piece, but in most cases this meant standing farther away from the installation than they normally would. The result was a loss of information about the details of the piece and a loss of physical intimacy between the informant and the art work. The second option available to informants -- the one used most often -- was to stand a normal distance from the work and use pans and/or travels to convey on video tape a sense of the wholeness of the piece.

Four informants (one non-expert and three experts) produced final data tapes about installations: Rex, Mona, Paul, and Diane. All made extensive use of pans during the production of their tapes. In addition, Mona and Diane used a large number of edits. The use of in-camera editing permitted both informants to reposition the camera, and change the viewing angle for looking at the piece with each new
edit. In this way, they were able to walk around the installation and provide various views of the installations from all sides. In addition to pans, Rex used a large number of travels during which he was able to effectively convey the way in which he would walk about and around two different installations while viewing them. His video about René Derouin's *Equinox Series: Homage to the People of Mexico City* (1990) clearly demonstrates that, during filming, he walked a full circle around the installation. Paul was the only informant to film a photographic installation which consisted of a sequential arrangement of about a half-dozen large colour photographs (Krzystof Wodiczko, *Projections on Venice*, 1986). Once more, his particular use of filming techniques was well suited to the piece. He used a large number of pans, and some edits, to move from one part of the installation to the other. Because he was dealing with two-dimensional works, Paul made extensive use of zoom-ins in order to show details of each photographs. In some ways, his use of some techniques, such as zoom-ins, resembled that of informants who produced tapes about paintings or other two-dimensional works.

Informants' use of techniques in producing videos about paintings was somewhat different from the techniques described above for installation works. In looking at a painting and filming it, informants do not need to move around as much as if they were looking at a three-dimensional work, such as a sculpture or an installation. Most informants, who made videos about two-dimensional works of art, tended to remain in one location: at the center, in the front of the work of art. Zoom-ins and zoom-outs, as well as pans were used extensively to show various parts of the work as they talked about
it. Sometimes, the informants changed their position in relation to the two-dimensional works but, overall, there was less need to move about during the production of the video tapes about paintings, prints, or photographs. These works are usually much smaller in size than sculptures or installations. Therefore, every square centimeter of surface, every detail is easily accessible with the camera from one central location using zooms and pans.

Filmmaking Techniques as an Additional Source of Data

The meaning provided by filmmaking techniques.

In addition to providing panoramas of installations and other large scale works of art, pans and travels supply other kinds of important data. Pans yield information about the filmmaker's visual interaction with the work as he or she directs his or her gaze to the areas of the works of art that attract attention. Travels, on the other hand, have the advantage of providing facts about the filmmaker's physical interaction with the work of art as he or she moves around and about it while filming it.

Filmmaking techniques convey different meanings about the filmmaker's relationship to the work of art, when they are used for the exploration of smaller two dimensional pieces such as paintings. At times, different uses of the same technique render totally different messages. As in the case of installations, pans of paintings do communicate a kind of mapping of the filmmaker's gaze as it moves about the surface of the painting. However, the meaning of the use of some techniques can change depending on the context in which the technique is used. In each case, the narration of a particular segment,
as well as the particularities of the segments that precede or follow it. provide the additional information necessary to deciphering the exact meaning of the particular use of a technique. For example, some zoom-ins are clearly meant to be interpreted as the equivalent of a gesture, as if the informant was pointing out a part of the painting with his or her arm, hand and fingers, and saying: "Here, this is what I want you to look at". At other times, a zoom-in can mean something entirely different: a zoom-in followed by a pan over the surface of the painting may represent an attempt by the informant to search for and relocate some lost detail, as if to say: "Where is that strange mark on the surface of the canvas? I can't find it anymore". Again, it is the contextual clues provided within the video tape that allows the researcher to discern the specific meaning of a particular use of a filming technique.

**Informant-made videos as a source of kinesthetic information.**

One of the most interesting characteristics of informant-made videos is their ability to capture kinesthetic information about the way informants negotiate, during their aesthetic experience, the physical space surrounding the work of art and, in the case of sculptural installations, the space within it. This kinesthetic information is captured automatically whenever informants use the camcorder to record their impressions about a work of art. No additional training is required in order to do this: informants do it without even thinking about it.

As a separate set of information, kinesthetic data can be used for a number of different types of analyses. First, the video-taped
record of an informant's displacements through a gallery, or through a group of galleries, can be used to produce trackings of visitors' trajectories in these spaces. This information can be very useful in evaluating the effectiveness of exhibition design, specifically as it relates to the sequential presentation of information and exhibits. Second, kinesthetic information can also be used to study informants' movements and body language in respect to their interaction with displays and with other visitors within the galleries. Some segments of the informant-made videos, produced during the course of this study and the various pilot projects that led up to it, convey quite adequately viewers' discomfort with the spatial arrangements of exhibits and with other materials included in some exhibitions. Likewise, the videos can also document the onset of viewer fatigue, as captured by a sudden and persistent increase in uncontrolled camera movements. Third, kinesthetic data can be helpful in studying informants' use of gestures as they interact with works of art, thus providing insight into the role that such gestures play in the process of aesthetic understanding. Finally, data of a kinesthetic nature can also be used to examine the factors that influence the way a viewer direct his or her attention (or gaze) to various features of a work of art, and the role of this process in the construction of meaning about a work of art.

Within the scope of this study, it was not possible to undertake a thorough analysis of the kinesthetic data contained within the informant-made videos. Adequate instruments for this purpose could

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As simulated by appropriate videographic equivalents such as zooms and pans.
not be found. In order to engage in such an undertaking, it would have been necessary to develop an instrument to permit the analysis and, then, validate it before proceeding any further. This represents a major undertaking, that could not be adequately carried out within the parameters of this dissertation. This endeavor is best suited to a separate research project.

**Non-Narrated Video Segments**

Readers will recall that a thorough analysis of the non-narrated segments in each informant's videotapes was conducted in order to determine if expert informants had indeed used more non-narrated segments (than the non-experts) during the production of their videos, as I had predicted they would. My prediction was simple: because of their professional training in the visual arts, members of the expert group should be more aware of the communicative potential of video images; they would therefore tend to exploit that possibility to a greater extent than the non-experts by including a greater number of non-narrated segments within their videos.

The results of this second analysis indicated that, as a group, the experts did indeed devote 39% more time to non-narrated video segments in which the intent was to allow the video image to speak for itself. However, within the expert group, two informants together account for most of the variance that makes up this difference in the percentage of time devoted to such segments by the group as a whole. Diane used 188 seconds of this type of non-narrated segments in her two videos, while Paul produced 48 seconds of such segments. Of the non-expert participants, one informant (Rex) accounts for most (94
seconds) of the variance, within his own group, in the use of this category of non-narrated segments. These three informants have one thing in common: they all have a considerable amount of videomaking experience, which they acquired (before their participation in the study) as part of their university training as artists (Diane, Paul), and journalist (Rex). Of the remaining informants, only Nicole (a non-expert) had limited previous video experience. These results indicate that the determining factor in the informants' use of this category of non-narrated segments is not related to professional training in the visual arts per se, but to professional training in video or film production. It appears that it is during this training that the informants in question acquired notions about the communicative potential of non-narrated video images. However, in spite of their use of non-narrated segments, these informants (like all the other informants) still used considerable amounts of narration as a complement to the visual footage presented in their videos.

**Discourse Analysis**

Some of the predictions made at the beginning of the chapter32, regarding the differences in the process of aesthetic understanding of the expert and non-expert study participants, were confirmed while others were not.

Overall, expert informants did use imagination to a greater extent in responding to the works of arts, and they also generated a greater number of hypotheses about the meaning of these objects. However, the non-experts also used imagination to a considerable

32See pp. 87-88.
extent in their accounts of their aesthetic experiences, and they also formulated many of their operations as hypotheses about the works of art. Although noticeable, the differences between the two groups were not as great as originally anticipated. However, we can conclude, based on these results, that the experts were more creative in their attempts to understand the works of art since, as a group, they used imagination to a greater extent than the non-experts. Nonetheless, it would be misleading to dismiss the non-expert videos as strictly literal or factual accounts of the works of art.

By viewing the informant-made videos, it becomes clear that the expert informants’ videos are different from the non-experts’ in another noticeable way. Expert participants made greater use of disciplinary knowledge (art history, art theory, etc.) in their attempts to understand the art objects, whereas the non-expert participants relied, to a greater extent, on their past, personal experience as a source of knowledge to inform their understanding of the works of art.

The next three sections discuss, in detail, the outcomes of the analyses of the informants’ use of operations, the domains from which these operations originate, and the sequencing of the operations according to their intended function.

**Use of operations.**

The three Dufresne-Tassé operations\(^3^3\) used most often by the non-expert informants, in order of frequency, were: To State, To Comprehend, and To Explain. For the expert informants, the three most used operations are the same, but the order is slightly different:

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\(^3^3\)See Tables 7 & 8, pp. 112-113.
To Comprehend, To State, and To Explain. When the frequency of use of each operation is transposed according to function, it becomes obvious that the differences, in the results of the discourse analysis, between the two groups are very slight indeed. There is only a difference of one percentage point in the number of operations used by both groups in order to construct meaning regarding the works of art. Furthermore, there are only minor variations in the percentages of operations that both groups devoted to the other three functions. Non-expert informants used 4 percentage points more operations allocated to the function of perceiving the work of art (experts 33% of total operations; non-experts 37%). Experts utilized 4 percentage points more operations than non-experts in order to control the accuracy of their emerging ideas about the works of art (experts 18% of total operations, non-experts 14%) and 1 percentage points more operations in perfecting these ideas (2% of total operations; non-experts 1%). In sum, there is no noticeable difference in the two groups' use of operations.

Domains of the operations.

If the differences between both groups' use of psychological operations are negligible (as it appears they are), is it because both groups are alike, or is it because the two groups are different in other respects? Indeed, it is when we begin to examine the domains of the operations used by both groups that a difference begins to emerge. Non-experts informants clearly preferred to approach the work of art from a cognitive point of view: 48.9% of their operations were

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34 See Tables 7 & 8, pp. 112-113.
formulated with such a stance. The remainder of their operations were almost equally divided between constructions that were either imaginative (29%) or affective (21.9%) in orientation. Expert informants, on the other hand, preferred to approach the investigation of the works of art by alternating, almost to an equal extent, between operations that had an imaginative construction (43.6%) and those that had a cognitive construction (41.8%). A very small percentage of their total operations were actually affective in orientation (14.5%). When the percentages for the two groups are compared, a noticeable difference emerges in the percentage of operations originating within the domain of imagination. Experts formulated 14.6 percentage points more operations with an imaginative construction than the non-experts did.

Another important difference between the two groups relates to the total number of operations that were formulated as hypotheses about the works of art. Once again, in this respect, the experts supersede the non-experts by formulating 9.1 percentage points more hypotheses about the meaning of the works before them.

I believe that these two differences in the performance of the experts are related. To generate an hypothesis about a work of art, one has to use the imagination to "see" beyond what is presently known about the work and, in the process of doing that, formulate a supposition about what is, or might be, its meaning.

Dufresne-Tassé and Lefebvre (1993) define imagination as a subset of cognition. They see the application of imagination, in the exploration of an idea, as an extension of one aspect of the overall function of cognition.
Le champ de l'imaginaire est un sous-champ du cognitif. C'est celui de la reproduction ou de la construction des images. (...) L'exploration du fonctionnement imaginaire équivaut à un approfondissement d'un aspect du fonctionnement cognitif. L'importance accordée ici à l'imagination tient à sa contribution au fonctionnement créatif, essentiel chez le visiteur, vu la situation de découverte que lui offre habituellement le musée. (pp. 34-35).

Since imagination can be understood to be a subset of cognition, the expert informant's preference, for using imagination and cognition almost equally, takes on new meaning. We can now see the expert's art understanding process under a new light: it is a process where 85% of the activity is conducted under the auspices of cognition. It is a process where the continuity in thought processes is only seldom interrupted by occasional forays into the affective domain.

For the non-expert informant, however, this new information adds another dimension to his or her art understanding process. For such an informant, affect plays a much greater role in forming his or her aesthetic understanding of works of art. Twenty-two percent of the non-experts' art understanding operations were formulated with an affective orientation. Overall, this means that the flow of cognitive and imaginative operations is interrupted more often, -- about once in every four operations -- so that affect can play a greater role in informing the non-expert's aesthetic understanding process.

If we view the various informant-made video tapes, we do indeed get a sense that these differences exist. Even though the informants use the same operations in exploring the works of art, the content of these operations differs somewhat between experts and non-experts. Overall, non-expert take a more subjective approach in
their videos: they talk more about themselves and more about their own personal reactions to the works of art. Personal experience, it seems, may be the source of the affect-laden operations. Experts, on the other hand, try to be more objective: their overall stance is more intellectual, and they try to relate the work of art to their understanding of art world concepts and theories.

These differences between the expert and non-expert informants' aesthetic experiences may be linked to a question of aesthetic development. It is in Housen's fourth stage of aesthetic development -- the Interpretive Stage -- that affect takes on the importance that we have witnessed here according to the results of the discourse analysis of the non-expert informants' statements about the works of art.

Now, with the Interpretive viewer, there is a resurgence of the emotional, sensual response, almost an adulation of the emotions....The viewer plays with his intuitive sensibilities, aware of the role affect-laden memories, half-conceived perceptions, gauzy feelings all play in the interpretation of the work's symbols....Although rigorous analysis no longer dominates the encounter, it has not been totally rejected, but rather put in service to the emotional encounter. The critical skills cultivated in the prior stage -- distancing, objectivity, flexibility of perspective -- have been re-directed. The process is one of structuring feeling over the foundation of an amassed body of information....Distancing is no longer interpreted as being distanced from one's emotional side, but rather, as responding to, accepting and then reflecting on one's emotional reactions (Housen, 1983, pp. 155-156).

The Interpretive Viewer's approach to looking at the work of art is also similar to that of this study's non-expert viewer in the way that "the viewer is engaged in an individualized quest as he gazes at works of art. Focusing on the expressive aspect of the work, he
accepts and tries to cultivate his intuitive reading of the work of art" (p. 155).

In Housen's fifth and last stage of aesthetic development (The Recreative Stage), affect is still regarded as important by the viewer. However, he or she now sees affect as only one of many valuable components of the aesthetic encounter.

While aware of the critical skills necessary for the viewing process, she is also aware of the role of sentiment in picture-viewing. However, feelings like thoughts are but a part of the fabric of the response and as such, these feelings are alluded to rather than trumpeted (p. 165).

Furthermore, the Re-creative Viewer, just like the expert informants who participated in this study, uses his or her art-related knowledge as a means to begin to understanding the work of art. However, once again, like the expert informant, the Re-Creative Viewer strives for more than a strictly literal or rigorous interpretation of the object and, therefore, fully engages his or her imagination in order to encounter the work of art in a truly creative fashion.

The Re-creative Viewer approaches the work of art with knowledge about art in general, and most likely, information about this work of art in particular. This knowledge, however, is only a point of departure for the encounter with the aesthetic object. The standards, rules, theories he has learned in the past, he realizes must be willingly transcended as the artist himself transformed or transcended, even violated, those very rules in the creation of the work. Thus, with self-conscious permission to playfully encounter the work of art, he suspends disbelief, and engages the work as he would a friend...Central to this approach is a concern with discovering the problems, the choices and the solutions the artist confronted, considered and finally resolved....A trained eye, critical mind, and responsive
attitude allow the viewer to meet the work on many levels. He searches for the ways in which the work of art communicates through visual plays, ambiguities, and paradoxes (p. 161).

The similarities in the approach to aesthetic encounters taken by the non-expert informants and Housen's Interpretive Viewer's approach are very striking. Similarly, the facility with which a parallel can be drawn between the expert informants and Housen's Re-creative Viewer is equally arresting. These similarities suggest that the two subsets of the study group may be only one stage apart in terms of their aesthetic development. Furthermore, the characteristics which define these two stages in Housen's aesthetic development theory seems to circumscribe as well the main differences between the two subsets of the study group.

**Sequences in the function of operations.**

In Chapter 3, I introduced an analysis of the charts (see pp. 120-126) representing the sequence in the function of operations used by the majority of informants in each subset of the study group. This analysis provides a basis on which a number of inferences about the informants' process of aesthetic understanding can be made.

In essence, the charts demonstrate that there is no major difference in the patterns of functions used by the informants in the two subsets of the study group. Therefore, the sequential use of operations for specific functions cannot be attributed to group characteristics. In this respect, the majority of expert and non-expert informants are the same. Two basic purposes guide the selection of most of their operations: the need to become acquainted with an
unfamiliar work of art through acts of perception, and the need to create meaning about that work of art based on those perceptions. Not surprisingly, as the informants became more familiar with the works of art, the need for function one and two operations wanes considerably. During the last quarter of the aesthetic encounter, they are noticeably absent from the two charts presenting the sequence of functions of the operations of each group.

Considered individually, each of the informants' own charts (see Appendix 5, p. 294) confirms the observations enunciated in the previous paragraph. The individual charts contain a predominance of operations whose functions are to become acquainted with the work of art (function-one) or to construct meaning about it (function-two). In fact, we can conclude that the construction of meaning about the work of art is the main objective of the aesthetic understanding process of the informants in this study. We may also deduce that the operations that permit the perception of the work of art (function-one operations) are, not only, a prerequisite for the creation of meaning, but also the basis by which meaning is then created. Operations whose functions are to control for accuracy (function-three) and operations whose functions are to modify meaning in order to perfect it (function-four) are analogous to the feedback mechanism within a system. If they are used, these operations ensure that the meaning under construction is constantly adjusted, so that it takes into account the information actually contained within the work of art. Indeed, all informants in this study did engage in the exercise of controlling the accuracy of their understanding of the work of art. All used function-
three operations, while three informants (Roger, Mona, and Paul) used 2 or 3 function-four operations.

Comparison of the Two Data Collection Methods

In the previous chapter, I compared the findings of the discourse analysis of four informants' (two experts and two non-experts) videos with the results of the same kind of analysis of each of those subjects' respective audio-taped interview. This comparison was intended, of course, to shed some light on the validity of the informant-made videos as a research methodology. My prediction was as follows: of the differences to be found in the outcome of the discourse analysis of the data (collected using the two different methods), I expected that few of these would be attributed to the data collection methods themselves. This comparison of the video data with similar data collected using the more traditional audio-taped interview was instrumental in confirming the prediction. The informants' involvement in the production of video tapes did not distort, in any noticeable way, the data that was collected about their aesthetic experiences.

The comparison of the two sets of discourse analysis results did reveal some differences between the two data collection methods which we will now discuss. First, in three of the four informants, a noticeable reduction was observed in use of the operation To State during the video-taped accounts. It is obvious that this difference is due to the fact that the use of video reduces the need to describe the work of art, because the camcorder makes a simultaneous visual record of the aspects of the object to which informants' comments
pertain. This interpretation of the finding was confirmed by the comments of some of the informants during follow-up interviews. This is one example of such a statement from an expert informant, Diane.

"When there was only the audio [...] that's when I felt that, perhaps, I had to describe what people could not see. When I had the video [camera] [...] I felt that my words would be understood because the visual component would be there to back up what I was saying. [...] I felt I didn't have to talk as much. I felt that the video would pick up a lot of what I was trying to express, such as standing at different angles, or how I was looking [...] at a work". (Lachapelle, 1993, p. 335).

Second, three of the four informants -- the exception is Rex -- actually used less operations during their videos than during their audio-taped interviews. This result should not surprise us. In making their videos, informants must attend to a second task in addition to responding to the works of art: they must operate the camcorder. This second task takes time and, as such, consumes some of the time that, in the audio-taped sessions, was devoted exclusively to commenting about the work of art. This difference, then, accounts for the reduction in the number of operations-per-minute in the informant-made video tapes.

Third, the rank and frequency of use of each of the three domains of experience -- affect, imagination, and cognition -- does differ when each informant's video is compared with an audio-taped session. I am convinced that these differences are due to the fact that, in each case, we are comparing an individual's responses to two different works of art: one work of art for the audio-taped interview
and a second, different work of art for the informant-made video. In essence, the rank and frequency of each domain is different in each of these aesthetic encounters, precisely because the works of art themselves are different. For example, a conceptual work of art may dictate that the viewer adopt a cognitive approach in attempting to understanding it. Conversely, the content of an abstract work may be so open-ended that it necessitates, on the part of the viewer, a more imaginative approach in order to explore its meaning. This is precisely the case, with the two works of art selected by the informant Julien. His audio-taped session consisted of his response to a sculptural installation by Robert Fones (Butter Models, 1979). In this installation, various components -- butter models in a display case, maps of the distribution of dairies, and charts listing each producer's brand names -- were displayed in such a manner as to invite the viewer to explore and discover the relationship between all of these various elements. Understanding the installation required that the viewer become a sleuth in order to search for a logical solution to the enigma arising from the apparent disparate nature of the components of the installation. Not surprisingly, Julien discourse about this work of art consisted of a majority (59%) of operations with a cognitive structure. In contrast, Julien's selection for his video tape -- Charles Gagnon's November Steps, 1967-1968 -- could not support such an approach in exploring its meaning. This large painting can best be described as an abstract-expressionist "all-over" painting. It consists of two main components: a large painterly rectangle which touches the bottom edge of the canvas, and a flat border which surrounds the large rectangle and touches the other three edges of the canvas. As
such, the painting offers little concrete information to the viewer who wishes to understand it, and it seems to invite us to fill in the gaps in our attempts to construct meaning about the work. Once again, it is not surprising that Julien’s approach to understanding this work is well adapted to the nature of the work itself. In responding to November Steps, Julien resorted to using imagination as the domain from which the majority (54%) of his operations where formulated. Like Julien, the other three informants also adapted their approach to investigating a work of art to the specific demands and challenges presented by each work of art.

In Diane’s case, some of the differences between the results of the discourse analyses of her audio-taped interview and her video are quite dramatic. Like Julien, Diane adapted her operations to fit the nature of the work of art under consideration by using imagination as the preferred domain for structuring her audio-taped response, and cognition as the preferred domain in her video. However, two other differences in the frequency of her use of operations stand-out. In her video on Walter Murch’s Enlarged Doll (1965), Diane’s use of the operation To Comprehend drops dramatically, by 1.66 operations per minute, in comparison with her use of the same operation in her audio-taped response to Jenny Holzer’s Inflammatory Essay (1978-1983). Once again, I believe that these differences are due to the nature of the works of art and not the data collection methods per se.

Jenny Holzer’s Inflammatory Essay is a work of art that fits well with Diane’s interests, and it challenges her abilities as a viewer in a positive way. It is not unusual, then, that she makes use of a large number of comprehension related operations in her exploration of its
meaning. She has no trouble in responding to this work, and she
derives pleasure from the experience. Diane states that this work is
simple yet powerful. She realizes that the work is political and social
in nature, and that it has a feministic point of view which is of particular
interest to her. She relates the work's formal qualities to its message
and, at the same time, is intrigued by the artist's use of text in the
installation: "I guess that, after being attracted to the work for a lot of
political reasons, I start to question my aesthetics in terms of [...] I'm
intrigued by the text, yet at the same time, I question it. I question
why I am intrigued by reading. Is it because it gives me more of an 'in'
into the work?" (Lachapelle, 1993, p.309).

On the other hand, Walter Murch's Enlarged Doll (1965) is also
an intriguing work of art, but its meaning is much more ambiguous.
This painting consists of a still life of a headless doll sitting on a block
of some kind. The doll is seen from the back. What makes this work
particularly enigmatic is the fact that the torso of the doll is rendered
with the musculature of an adult male, as if this was a painting of a
headless human figure. Because of this ambiguity, the painting can't
be dismissed as a simple still-life. At the same time, it is very difficult
to pinpoint the exact meaning of the work and the reason that
motivated the artist to paint it. Diane spends a lot of time talking
about the appearance of the work and about its effect on her.
However, she doesn't come to any definite ideas about what it means.
To illustrate this, here are the two last statements that she makes
about it in her video. First she says: "There is something very
haunting about the work. And, that kind of appeal to me. That
mystery appeals to me" (Lachapelle, 1993, p. 320). Later, after a
pause to reflect, she adds: "And, of course, there seems to be something very ... kind of physically, sexually threatening ... in the way this doll is positioned. It seems very vulnerable" (Lachapelle, 1993, p. 321). Normally, informants tend to bring their responses to some kind of closure by summing up their understanding of the work of art at the end of their tapes, but this doesn't happen here. The video concludes with open-ended statements that suggest that Diane has not yet made up her mind about the meaning of this work of art. It is not astonishing, therefore, that the frequency of her use of the operation To Comprehend reflects this indecision about this particular work of art.

In addition, the reduction in the overall number of operations per minute that Diane used in her video is consistent with the fact that this video includes a large number of non-narrated segments. Diane is the informant who made the most use of non-narrated segments -- 207 seconds in total -- during the production of her two video tapes. Furthermore, she did this quite deliberately.

"I felt I didn't, perhaps, have to talk as much. I felt that the video would pick up a lot of what I was trying to express, such as standing at different angles, or how I was looking [at the work of art]. [...] So, even though there may be out-of-focus or blurry segment, what I was trying to give you, or any viewer, was a sense of how my eye would move, and how my body moved in conjunction with the artwork (Lachapelle, 1993, p. 335).

Finally, not all the differences in the results of the discourse analysis involve reductions in the performance of informants. In fact, in some cases, the informants' performances improved during their video-taped responses. Unlike Diane, both Rex and Julien noticeably
increased their use of the operation To Comprehend during the production of their videos. Julien also increased the frequency of his overall use of operations in his video session in contrast to his audio-taped session. Once more, I believe that these variances are related to the informants' choice of different works of art for each session. These positive results add more credibility to the argument that the differences observed in the informants' performances, when comparing the two methods of data collection, does not call into question the validity of research using informant-made videos. Instead, these variances are attributable to other factors. Among these are the divergence that stems from the selection of a different work of art for each session in which the informants participated, and the possibility of an effect due to the order of production of the audio and video taped sessions.

**Follow-up Interviews**

One of the advantages of a research protocol based on informant-made videos is that it offers the possibility of following up the data collection with additional information-seeking activities. For example, the protocol used for this study includes a follow-up interview that takes place once the informant-made video is completed. During the course of this interview, the informant and the researcher review the informant's video tape together and, in doing so, they are able to clarify and expand on the content of the videos. The follow-up interviews conducted during this study provided three different types of additional information about the informants' aesthetic experiences. First, clarifications were sought and given
about some of the informants' statements about the works of art. Second, in some cases, viewing their tapes led some informants to additional insight about the meaning of the work of art. Third, for the majority of informants, reviewing their videos brought them to a better understanding of their own personal art-viewing process.

Clarification of statements.

There were basically two different kinds of clarifications of statements. The first kind was clarifications that were given spontaneously by the informant in order to ensure that his or her comments, as captured on video, were understood correctly by the researcher. The second type of clarifications were those that were provided by the informant at the request of the researcher. Here is an example of a clarification initiated by the informant.

Can you stop it [referring to the playback of the video tape] there for a second? When I make reference to the fact that it deals with war, that is not want I meant. [...] You don't see war, it's just [a representation of] men on their horses. [...] I just assumed they were going off to war\textsuperscript{35}. (Suzle on Kenneth Lochhead's \textit{Minotaur}, 1960).

The next excerpt provides an example of a clarification that is requested by the researcher. In this example, Roger has mistakenly identified the left side of an installation as being "the right side". There is also some confusion about where Roger began looking at the work: the right side or the left side.

\textit{Researcher}: On vient d'arrêter la bande. On devrait peut-être clarifier. Je pense que tu te trompes. Quand tu dis "par la droite", tu veux vraiment dire "par la gauche"?

\textsuperscript{35} Lachapelle, 1993, pp. 28-29.
Roger: Je viens de dire «la droite» là?

Researcher: Oui.

Roger: Oui, c'est «la gauche»! C'est «la gauche».

Researcher: Puis quand tu as montré les deux parties de l'œuvre de chaque côté de la porte, tu as indiqué «la droite» pour le côté gauche et puis ...

Roger: [Il rit]. Ça se peut ça. Oui.

Researcher: Mais quand tu as commencé à regarder l'œuvre, c'était de quel côté?

Roger: du côté gauche36.

(Roger on William Kurelek's The Ukrainian Pioneer, 1971).

These two examples are a good indication of the nature of the clarifications given by the informants during the follow-up interviews. The clarifications tended to be about questions of order or accuracy and, therefore, these did not bring any new information about the informants' understandings of works of art. Instead, they were corrections that were brought to existing information in order to prevent the possibility of misunderstandings.

New insight into the works of art.

On a few occasions, viewing the video tapes did help the informants to gain new insight into the meaning of the work of art about which they had just made videos. In the following citation, Roger has just understood why the artist, William Kurelek, decided to group the six panels of his large mural, The Ukrainian Pioneer, into two distinct triptychs (with panels one, two and three together, and

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panels four, five and six together) with a space separating the two. The landscape depicted in the fourth panel is the exact same geographical site as the third panel, but the land has been dramatically transformed from a forest to a farmer's field. In the sequence of panels, this transformation is not depicted: instead, the space between the two triptychs is intended as a symbolic rupture representing the dramatic transformation of the land as well as the tremendous breach between the pioneers' present and former lives. Roger came to understand this only while viewing his video during the follow-up interview.

Si tu veux arrêter la bande [vidéo] juste quelques minutes....C'est à ce moment que j'ai compris comment il a vraiment coupé [sic] l'œuvre...en deux unités, en deux triptyques, parce qu'il n'a pas montré tout le travail que c'a pris pour se rendre à ce chemin-là. C'est comme s'il y a eu une coupure. C'est comme s'il y a eu un espace d'entrée....La tâche à faire [d'un côté] et la tâche qui est bien commencée [de l'autre].

There were only a few instances where informants gained new insight into the meaning of the works of art by viewing their videos. This surprised me somewhat. In previous research (Lachapelle, 1990), I was able to demonstrate that viewing a work of art for a second time, a week or so after the initial visit, can lead to dramatic new insights about the meaning of a work of art. I believe that this did not occur in this case because the time lapse between the two sessions -- the taping and viewing sessions -- was just too short. In most cases, the follow-up interview took place within 15 or 20 minutes of the completion of the video taping. The elapsed time period between the

37 Lachapelle, 1993, p. 66.
taping of the videos and the follow-up sessions was insufficient to promote the spontaneous development in the understanding of the works of art that I witnessed in some art viewers during my previous research.

**Increased awareness of the art viewing process.**

One effect of the follow-up interviews was quite widespread. By viewing their completed videos, most informants gained a better understanding of the process by which they viewed and understood the works of art. Here are some examples of the informants’ statements about their own particular ways of viewing the works of art.

*Diane:* I guess what I’m just realizing is how I just described the work. I...looked at the medium. Then, [I] started thinking about the content, and then I sort of used both, going back and forth, using both kinds of approaches in looking at the work and continuing my process of looking at the work (Lachapelle, 1993, p. 331).

*Nicole:* J’ai appris quelque chose au moins....Mais peut-être que moi dans tout cela, j’ai essayé...de trouver quelque chose de plus que vraiment l’artiste essayait de montrer par ce tableau avec toutes ces questions que je me suis posées pendant six minutes. C’est après tout, peut-être, quelque chose de très simple (Lachapelle, 1993, p. 99).

*Julien:* D’ailleurs, ce que je remarque beaucoup lorsque je regarde des toiles, c’est que je semble faire un mouvement circulaire autour d’une description, d’une étude, d’une constatation, d’une description, d’une étude, d’une constatation. Je semble être plutôt circulaire. Je ne passe pas toutes les étapes d’une description et puis après ça toutes les étapes d’une étude, et d’une... Cela semble être plutôt entremêlé (Lachapelle, 1993, p. 130).
*Diane:* In watching the video, I realized that, because I perceive the work as being humorous to a certain extent, [...] I found myself taking about it in a humorous way [...]. So, it is interesting that I realized that the work really kind of -- not that it dictated my mood -- but that it put me into a certain kind of mood or that it helped me get into a certain kind of mood (Lachapelle, 1993, p. 332).

The follow-up procedures used in this study did seem to promote a greater self-awareness about the art understanding process. All informants appear to have profited from this aspect of the follow-up interview. Since the follow-up procedures had such a positive effect on promoting self-awareness and understanding, there may be aspects of the procedures used here that might be useful in the context of teaching art appreciation. For example, could adult museum visitors profit from an increased awareness about the way in which they typically approach the contemplation of a work of art? Could informant-made videos, along with follow-up interviews, serve as an effective teaching tool in order to foster the development of art viewing skills? The results of follow-up interviews conducted as part of this research project suggest that such possibilities may not only be feasible but also quite effective.

**Summary**

In this chapter, the discussion centers mainly on the different analyses conducted on the informants' videography, on the results of the discourse analysis of their statements about the works of art, and on the validation of the data collection method based on informant-made videos.
In regard to the first focus of the data analysis (the informants' videography), the classification of all informant-made videos as Interpretations according to Barrett's (1986) typology reflects a general congruity in the manner in which all the informants attempted to understand and appreciate the works of art. Minor differences in each subsets' use of filmmaking techniques suggest that the non-expert participants were still learning, by trial and error, about how to convey their ideas video-graphically while actually engaged in the production of their videos. Finally, it was found that the determining factor in informants' use of non-narrated segments within their videos was not related to expertise (professional training) in the visual arts per se, but to professional training in film or video production.

Let us now consider the second focus of data analysis: the discourse analysis. As evidenced in the informants' statements about the works of art, the expert informants are somewhat more creative in their attempts to understand the works of art since, as a group, they use imagination to a greater extent during this process than the non-experts. There is also a noticeable difference in that the number of hypotheses about the works of art formulated by the expert informants is greater. These two findings are related since imagination is essential to the formulation of hypotheses about the meaning of the works of art. Finally, in viewing the informant-made videos once more in light of these findings, expert informants are seen to make greater use of disciplinary knowledge during their aesthetic experiences, while non-expert participants rely, to a greater extent, on their personal experiences as a source of knowledge to inform their
understanding of the works of art. The differences, between the two groups, identified in this study echo the characteristics used by Abigail Housen (1993) to define the fourth and fifth stages of her aesthetic development model. Just like the non-expert informant, the Interpretive (fourth stage) viewer attaches considerable importance to an intuitive interpretation of the work of art, in which affect plays a major role. In contrast, the Recreative (fifth stage) viewer, like the expert informant, seeks to construct a truly creative, multilayered interpretation of the work of art, in which affect, knowledge and a critical attitude each play an meaningful part. These parallels between Housen's viewers and this study's informants suggests that the differences identified between the expert and non-expert informants participating in this study are probably related to aesthetic development.

The examination of the functions of the operations used by the informants during their aesthetic experiences indicates that all informants adapted their use of operations to the specific challenges encountered in different art objects.

This brings us to the third and final focus of the data analysis: the validation of informant-made videos as a means of data collection. Although variations can be seen in the results of the discourse analysis of data collected using informant-made videos as opposed to audio-taped interviews, I have demonstrated (pp. 158 - 164) that these differences stem, not from the data collection methods, but from noticeable variations in the types of artwork selected by the informants for the different data collecting sessions.
In addition to a review of the findings of the study, parts of the chapter are devoted to a discussion of other considerations related to informant-made video as a method of data collection. These include an examination of informant-made videos as a source of kinesthetic information about viewers' aesthetic experiences, and an inquiry into the use of follow-up interviews as a means of collecting additional information about the informant-made videos.

In the next chapter, I will discuss how, from the vantage point of the viewer, the process of aesthetic understanding can be understood to be a learning experience. I will also present a model to explain the differences observed in this study between the content of the expert and non-expert informants' aesthetic experiences. This model will also provide a practical basis by which educators can approach the challenge of teaching art appreciation to adult learners.
CHAPTER VI

Aesthetic Understanding as a Learning Experience

The repeatedly perceived picture, however, it should be noticed, is not a continuant. The perceived picture consists of a succession of intermittent perceptions -- at least so far as we gather from any ordinary direct evidence concerning the situation. And what is particularly striking about this situation is that it is the perceived picture, not the continuous physical picture nor the continuous self who looks at it, that is the object appreciated and, if so be, critically judged. The central aesthetic object turns out to be an intermittent object made up of fugitive successive perceptions.\(^{38}\)

--Stephen Pepper

Introduction

As we saw in the discussion of findings conducted in Chapter V, variances in the record of the aesthetic experiences of the expert and non-expert informants were minor. Few noticeable differences were found either in the informants' use of thought processes during the aesthetic encounters or in regard to informants' use of videography. Yet, upon viewing the informants' tapes, some differences in the two groups' videos are readily apparent. To put it simply, the content of non-experts' videos (as evident in informants' statements about the works of art) is more subjective and appears to be related, to a greater extent, to personal experience. The content of experts' videos, on the other hand, is more objective and seem related, to a larger degree, to art world concepts and theories. These differences are accentuated

\(^{38}\) S. Pepper, 1945, p. 145-146.
when informants from both groups attempt to consider more difficult works of art, such as abstract or contemporary art.

These content-related differences do not surface in the results of the discourse analysis. The instrument (Dufresne-Tassé, Lapointe, Morelli & Chamberland, 1991) used for that analysis was designed as a means of studying viewer's use of psychological operations during museum visits. In its present form, the instrument is not sensitive to the content of the operations used: it only identifies the operations themselves. Since no noticeable differences (between the subsets of the study group) were found using this instrument, one might erroneously conclude that there are no differences at all between the performances of the two groups. I must caution the reader against jumping to such a conclusion. Differences do exist. When we take a closer look at informants' statements about works of art, we notice that differences exist, not in how those statements are derived, but, rather, in what the statements are about. Therefore, it is not necessarily the use of psychological operations per se that distinguishes the expert from the non-expert informants in this study but, rather, it is the content of the psychological operations used to understand the works of art that identifies experts and non-experts.

Differences in the Content of Informants' Statements
The excerpts that follow are intended to illustrate this divergence in the content of expert and non-expert informants' statements. In the first example, Suzie, a non-expert informant, communicates her impressions about an abstract-impressionist painting (Kenneth Lochhead, Minotaur, 1960) whose forms suggest
Figure 1: K. Lochhead, *Minotaur* (1960) National Gallery of Canada.
marching horses (see Figure 1). In this part of her account, we see that she is relating her understanding of this painting to her own past experience: a trip to Austria. And, to a certain extent, she also calls upon her knowledge of the role of Lippizaner horses in shaping Austrian history and culture. Most importantly, akin to the Interpretive Viewer in Housen's (1983) aesthetic development theory, she allows her emotional response to the piece to guide her exploration of its meaning.

This first part is the first horse, and that's what I saw from so far away. And, what this reminds me of is all of the times I was in Europe, all of the statues [I saw there]....Most importantly, though, was the time I was in Austria [where] there is so much emphasis on their past history and on the Lippizaner horses....That's exactly what I saw, and I could hardly wait to start talking about this one. This painting, the mood, the tone of this one was one of excitement. To me, it's very fascinating, interesting. The longer you look at it, the more there is to see. It's almost like they're a group of men riding off to war. And I get a sense of excitement. Although they're going off to war, I see, I sense a happy [mood]. I'm happy looking at this painting....I'm amazed...considering that the issue deals with war, or that's how I see it anyways. It deals with war. They're off, possibly to march to their deaths....I see it as an exciting, uplifting painting, very complex. The use of colour: the white and the black and the grays. The painting is large. It's actually one of the largest ones I've looked at today. It's just visually appealing (Lachapelle, 1993, p. 16).

In the next citation, an expert informant, Paul, communicates part of his understanding about a photographic installation by Krzysztof Wodiczko, *Projections on Venice*, 1986 (see Figure 2). At first, like Suzie, he is attracted to the piece because its content reminds him of a trip he has taken to Europe, more precisely, his trip to

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39 Readers may wish to view Paul's video about this photographic installation. It is included in the dissertation's video addendum.
Figure 2: Krzysztof Wodiczko, *Projections on Venice* (detail), 1986, National Gallery of Canada, Ottawa. Photo: Reale Fotografia Giacomelli.
Venice. However, the nature of his commentary changes as he realizes that the installation in question is by an artist whose work he knows. Because of this, what he already knows about this artist and his work begins to inform and shape his understanding of this particular installation.

J'ai été attiré en regardant, en jetant un coup d'œil dans cette salle-ci, par les œuvres de Krzysztof Wodiczko parce qu'elles représentent une architecture qui m'est, bon, un peu familière : celle de Venise et que, pour les représenter, il a choisi la photographie. Mais les photographies ont une qualité esthétique indéniable qui m'a attiré au premier plan. En fait, je n'avais pas remarqué que c'était de Wodiczko. Ce qui m'a mis la puce à l'oreille c'est...[les détails] dans chacune des cinq images de la série Vénitienne qu'il a faite pour l'exposition La biennale : la quarante-deuxième, je crois, en 1986. Bon, en fait, ça c'est une information qualitative. Qu'est-ce qui m'a mis la puce à l'oreille, c'est les détails dans les photographies sur les architectures. Wodiczko est reconnu pour utiliser des diapositives des projections immenses, qu'il projette sur des édifices eux-mêmes de tailles monumentales, qui transforment et l'image qu'il y envoie et l'édifice et l'architecture qui les reçoivent. Alors en regardant ces images, on peut s'imaginer se promener à Venise, ville du tourisme international, et rencontrer ces drôles de transformations que Wodiczko y a intégrées. Alors, je vous invite! (Lachapelle, 1993, p. 266).

Not all comments by non-expert informants are necessarily subjective in nature, nor are all statements by experts necessarily objective. Both groups tend to explore the work of art from both a subjective and objective point of view. Rather, suffice it to say that non-expert accounts have a greater tendency to be related to the informant's personal experience, whereas expert narratives tend to be related to professional concerns. The two excerpts presented above make that point quite clearly.
Differences in the Overall Content of the Aesthetic Encounter: The Case of One Expert Informant

However, to continue the comparison started earlier, Paul's aesthetic experience distinguishes itself from Suzie's in a second, equally important, way. Unlike Suzie's exploration of Lochhead's painting, Paul engages Wodiczko's installation in a two-stage process. At first, he constructs meaning about the work of art by relying on his skills as a viewer and by calling upon what he already knows about the artist and his body of work, and upon his knowledge of art in general. The excerpts presented above illustrate this first phase in his approach. However, at about the halfway point in his exploration of the installation, Paul begins to confront his emerging understanding of the work with the information about the installation provided by the Gallery in the form of a wall text. This text communicates facts about the context in which the photographic installation was made, as well as statements by the artist about his intentions in producing it.

Dans un texte, il [Wodiczko] s'explique. Et, pour lui, ces images-là sont un peu une révélation de la fonction de Venise telle qu'elle a aujourd'hui et qu'elle avait jadis avec l'invention de la caméra obscura. C'était, bon d'accord, un lieu marchand, mais aussi un lieu, une ville très guerrière. Puis, comme la montre l'Arsenal, c'était un empire aussi qui fondait sa force sur, bon, la force brutale aussi....Je pense ce que Wodiczko fait c'est, un peu, confronter le passé avec le présent et les ... présenter un à-côté de l'autre dans le même décor architectural et tout cela. Elle [Venise] est devenue, dans les mots de Wodiczko, un genre de "Disneyland" touristique où les touristes armées d'un petit guide vont réussir à être atteints par les chefs-d'œuvres artistiques de Venise.

Paul uses this new knowledge to reassess his understanding of the installation and, in the process, to construct a new interpretation of the work: one that takes into account his earlier, personal,
experience with the work as well as what he has now learned by reading the wall text. The result is a multilayered reconstruction of his understanding of the installation, that acknowledges both the personal and social meanings that Wodiczko’s installation now holds for him.

Je m'imagine c'est ce que Wodiczko voulait faire : marier ses images à l'architecture pour un révéler peut-être un peu le caractère oppressif. Cela me fait surgir plein d'idées sur les liens qu'il y a entre l'architecture dont s'entourent les gens et les gens qui l'habitent. En fait, ce qui est particulier avec Venise, c'est que les gens qui l'habitent sont souvent en sous-nombre par rapport aux gens, en surnombre, qui viennent visiter leur ville. Alors, ils doivent ressentir leur présence comme un genre d'invasion....Je me demande ce que les Vénitiens ont pensé de ces images-là (Lachapelle, 1993, pp. 270-273).

Paul's encounter with Wodiczko's installation takes into account all of the sources of information at his disposal. With this information, Paul constructs a multifaceted and rich interpretation of the meaning of this work of art. His interpretation takes stock of the situational context of the installation, of its referential content, of the history of Venice as a cultural and economic center, of the artist's intentions in creating the piece, and of his own personal encounter with it. In the process of encountering this work, Paul appeals to the various kinds of knowledge at his disposal: his general knowledge of art, his knowledge about the artist and his work, the information contained within the work of art itself, and the information provided for him by the Gallery in the form of a wall text. In many ways, Paul's engagement with this installation embodies an ideal aesthetic
experience: one that is at once personal and social, subjective and objective, affective and intellectual, factual and imaginative.

By comparing Suzie’s and Paul’s statements, we have seen how expert and non-expert informants’ experiences may differ. These distinctions consist of differences in the content of informants’ statements about the works of art. More specifically, they seem to consist of differences in content according to the various kinds of information used by some of the informants during their encounter with the work of art. Like Houseen’s Re-creative Viewers, expert informants tend to exploit all of the sources of information at their disposal in their attempts to understand the works of art. These sources may include their affective response to the object, personal past experiences, their general knowledge of art, any available information about the specific work in question, and knowledge or evidence about the aesthetic problems which the work of art addresses. Non-expert viewers sometimes (but not always) chose to ignore some of the most basic of factual information about the work of art, such as, for example, the facts provided on the object’s label. In the words of one non-expert informant, Rex: “To be honest, when I go to a gallery I don’t want to read....I tend not to read at all. If I’m reading, I’m reading and if I’m in an art gallery, I tend to want it to be looking more, hearing, or something other than reading” (Lachapelle, 1993, p. 169).

The Role of Training in Regard to the Differences Observed

This brings us to consider the factors that account for the differences observed between the expert and non-expert informants.
Clearly, an important distinction to be made about the aesthetic encounters of the study's expert and non-expert informants concerns the skills and/or prior information that these viewers bring with them to their art-viewing experiences.

During the course of their professional training, the experts have honed and perfected their viewing skills. In addition, they have acquired considerable theoretical knowledge about the nature of art objects. However, the development of non-experts' aesthetic skills and knowledge has been limited to whatever skills are transferable from their own non-art training and to whatever insights are provided by previous viewing experience. In addition, non-expert viewers form their understanding of the nature of aesthetic experience from whatever notions about art are prevalent within popular culture, because popular culture -- not training -- is the main source of non-experts' acquaintance with such issues.

Aesthetic exposure, then, can include both formal or informal training as well as previous art viewing experience. Its role in the development of aesthetic ability has also been given consideration by other researchers. Csikszentmihalyi and Robinson (1990) state that "the skills of the viewer -- what it is that he or she needs to bring to the aesthetic encounter -- are very much at the center of what leads to aesthetic experiences. Although there was no wholesale agreement among the [expert] respondents [interviewed by us] as to what these skills are, there was considerable consensus as to the centrality of the issue" (p. 150). One of the museum experts, to which they refer in the previous citation, made particularly interesting and insightful
comments about the differences between expert and non-expert aesthetic experiences.

"I don't think that a trained art historian necessarily ... has a more complete aesthetic experience," says one respondent, although it may be "slightly different ... it might be intellectualized in a slightly different way than [that of] a person who didn't have these associations with history. Perhaps the untrained, the non-art historian, would have associations with more personal types of history." Nevertheless, for better or worse, she also notes that "there will be more intellectual engagement in front of an object about which one had a great deal of knowledge"; it will have added to it "a different, another dimension than the experience before an object about which one had very little knowledge" (Csikszentmihalyi and Robinson, 1990, p. 151).

Csikszentmihalyi and Robinson make it clear that the acquisition of factual knowledge about a work of art does not constitute, by itself, an aesthetic experience. "Despite the obvious importance of knowledge and education, there is more at stake than the mere application of knowledge" (1990, p. 152). The interaction of knowledge and experience leads to what they have called informed experience. "Informed experience is a good term to characterize the process by which exposure to works of art gradually transforms the nature -- and the experience -- of aesthetic interactions. Informed experience involves developing the ability to see as well as developing understanding" (1990, p. 152). Finally, Csikszentmihalyi and Robinson see "continued exposure to and interaction with works of art" as the means by which aesthetic development occurs in the viewer (pp. 125-126).

In her own research, Abigail Housen has identified exposure as a very significant factor in accounting for aesthetic development.
However, Housen's use of the term is much more narrow and specific than the same term as used by Csikszentmihalyi and Robinson. She defines exposure as formal or informal "training in art appreciation, art history, or art making" (1983, p. 75). In fact, in Housen's model of aesthetic development, only the first two stages -- the Accountive Stage and the Constructive Stage -- are within reach of the untrained viewer. Stages three through five all require, to some extent, formal or informal training in the arts. The impact of training is already clearly evident by Stage III. In this stage of development, the classifying viewer uses an "active analytical approach" in order to apply (to his or her attempts to understand the work of art) the theory that "the meaning of a work of art can be decoded from the information present, patterns, shapes, forms, colors, lines, as well as information not present, art historical names and dates" (p. 151).

The following citation summarize Housen's findings regarding the factors that influence aesthetic development.

At the very least it appears that exposure is not unrelated to aesthetic development. Exposure alone does not ensure development since adolescents exposed to the arts do not attain the highest stages. However, age alone does not ensure growth either, for educated adults with no aesthetic exposure do not reflect a high stage of aesthetic development. Some exposure appears necessary for the highest aesthetic development to take place.... [In fact], the interaction effect of age and exposure on aesthetic development is significant (Housen, 1983, p. 116).

Let us consider one last finding in regard to the role of exposure in fostering aesthetic development. Housen reports that, for subjects whose exposure to works of art is limited, the growth in aesthetic development occurs mainly during the period of life from adolescence
to young adulthood. However, for subjects with high levels of aesthetic exposure, aesthetic development during the same period of life takes place at almost three times the rate. Furthermore, for the high exposure group, aesthetic development "continues on into adulthood, at a rate of about 3:2" over the low exposure group (p. 119). These findings, then, underscore the central importance of education in regard to aesthetic development. Exposure, in the form of both formal and informal training, is the key to nurturing museum visitors' aesthetic development.

**The Connection Between Experience and Knowledge in Aesthetic Encounters**

In devising the term *informed experience* to describe the special nature of aesthetic experience, Csikszentmihalyi and Robinson have opened the door to an entirely new understanding of that experience. The term suggests an important connection between two components: information and experience. That is, an aesthetic encounter always involves interaction between these constituents. "The most basic avenues for facilitating meaningful encounters with works of art seem to derive from the interpenetration of knowledge and experience. If they are to obtain maximum benefit from the experience, viewers simply cannot enter the museum empty handed; they need skills, especially visual ones, and they need practice" (1990, p. 169). However, the prerequisites of aesthetic experience, to which Csikszentmihalyi and Robinson refer here, are not limited to visual skills only.

[In] the present century, and particularly in the field of art education, the psychology of perception has become
the most readily accepted art-related 'scientific' discipline, the one in which 'visual artists' most readily identify their own concerns.... Certainly such studies in the psychology of appearances are necessary, if only to provide a corrective to the naïve idea of purely retinal vision. But if the explanation of seeing is arrested at this point it serves to support an error of even greater consequence: that ubiquitous belief in 'the visual' as a realm of experience totally separated from, indeed antithetical to, 'the verbal' (Burgin, 1986, p.53).

Granted, perceptual skills are important, even essential, but the viewer also needs to hone his or her skills according to the other three dimensions of aesthetic experience: emotion, communication, and intellect. Of these three dimensions, the last two, in particular, are dependent on the viewer's acquisition of knowledge about the content and the context in which specific works of art, or certain categories of works of art, are created. Viewing skills -- that is, perceptual skills only -- are not enough in themselves to ensure satisfying aesthetic experiences. In encounters with complex works of art, a strictly "perceptual" viewer would be limited to identifying and enumerating the elements presented in the piece. Skills in all four dimensions of the aesthetic experience are therefore essential in order to create meaning about a work of art. Furthermore, it is the skills that the viewer brings to the museum experience that are critical in determining the accessibility of the works of art encountered. Csikszentmihalyi and Robinson refer to this accessibility in terms of determinability, which they define as "the perceived opportunity to find, on a fairly direct level, some point of entry into the object....we might best think of it as the relative balance of challenges and skills at the levels of meaning, intention and interpretation" (1990, p. 147).
Works of art that are not part of the viewer's everyday aesthetic reality pose a particular problem in regard to determinability. Most often, the outer reach of non-expert viewers' aesthetic understanding is defined by the parameters of the aesthetic arena established and transmitted by their mainstream cultures. For most viewers, works of art that fall outside of popular cultural delineations are difficult to understand, because they are automatically perceived as void of determinability. As the distance that separates a work of art from the aesthetic locus\textsuperscript{40} of the mainstream culture increases, the greater is the problem of comprehension posed by that work of art. Examples\textsuperscript{41} of artworks that fall within this category include the aesthetic objects of other cultures, historical works of art from our own culture, and works of contemporary art. Works of art that originate from other cultural contexts (e.g. sacred Hindu art, tribal African art) present a problem of understanding because our own cultural education does not provide the right codes for interpreting such works of art. The artistic production of some of the historical periods within our own culture (e.g. Romanesque art, Etruscan art) may also present problems of comprehension for a similar reason: the codes of aesthetic interpretation learned through the normal course of acculturation are suited mainly to understanding a very limited body of works, consisting mainly of current, mainstream, cultural products. Similar

\textsuperscript{40}The "categories of objects in which aesthetic expectations and performances are concentrated constitute what we call the aesthetic locus of a culture. In thirteenth-century Western Europe, the Christian ritual defined the aesthetic locus of the society. The aesthetic awareness of the society converged on the material items associated with the ritual, from cathedral architecture to church furniture, liturgical garments, statues and paintings (Maquet, 1986, p. 69).

\textsuperscript{41}This list of examples is not exhaustive: readers may think of other examples to be added to it.
factors also come to play in regard to contemporary art (e.g. Minimal art, Installations), whose main sphere of activity resides outside of mainstream culture. However, problems in regard to the comprehension of contemporary art are compounded by the shear rate and number of recent developments in thinking about the nature and the function of the work of art. Since the advent of Impressionism in the last half of the 19th century, contemporary art has become increasingly theory driven, while artistic craftsmanship has been relegated to the back burner. Without some knowledge of the theoretical concerns which have motivated artistic production during the last century, viewers will be poorly equipped to find any level of determinability in the works of art they will encounter in the contemporary wing of their local museum. Not only does the contemporary viewer require theoretical knowledge in order to decode works of contemporary art, but the problem is compounded by that fact that he or she must now be acquainted with an ever shifting set of theories.

The recent anthology *Theorien der Kunst* edited by Dieter Henrich and Wolfgang Iser suggests that there no longer exists an integrative aesthetic theory. Instead a multiplicity of specialized theories compete against one another, shattering the work of art into discrete aspects, disputing over the functions of art, treating even aesthetic experience itself as a problem. Some of these theories correspond to contemporary forms of art which, to quote Henrich, have 'relieved the work of art of its traditional symbolic status' and 'reassociated it with societal functions' (Belting, 1983/1987, p. 5).

The specialized theories of contemporary art have not found their way into the realm of popular culture, and there is no reason to believe that this will happen soon. It is understandable, therefore,
that a viewing experience based solely on the immediacy of an unprepared chance encounter with a work of contemporary art is almost certainly doomed to failure. This sort of unsatisfactory encounter is the case, as we have seen, when the non-expert viewer looks at a contemporary art work. For such a viewer, a strictly experiential encounter can never provide enough information by which to construct meaning out of such a difficult work of art. Yet, for the expert viewer the same encounter probably offers unlimited potential for an enriching experience -- one that will result in the acquisition of knowledge about the art work in question -- because the expert viewer brings to the encounter the skills required for understanding. The experts' skills provide a starting point from which aesthetic understanding can begin to form. They also provide a structure that sustains the viewer's learning process once it is engaged. Which is not to say that the expert viewer will not encounter obstacles to his or her full understanding of the work. Rather, once the encounter is underway, chances are that such obstacles will be interpreted by this viewer as a motivational challenge to his or her viewing skills, rather than as an insurmountable barrier to understanding. Therefore, provided there is determinabllity, the viewer's "face to face" encounter with the work of art can indeed result in the acquisition of a certain kind of knowledge, one that is experientially based. But, as we will see next, experience-based knowledge is but one of a number of different kinds of knowledge that come into play during the learning process that leads to aesthetic understanding.
Objectives in Proposing a New Model

An attempt to explain the learning process that underlies aesthetic understanding will need to (1) identify the different kinds of knowledge involved in that process. (2) It will also need to clarify the role of determinability in the process, and (3) unravel the manner by which aesthetic exposure increases the viewer's perception of determinability. (4) Finally, the theory will need to explicate the mechanism by which aesthetic development occurs.

The model of aesthetic understanding as informed experience, that I am about to propose, has emerged from the findings of this study. These findings can be summarized as follows: the differences observed between the aesthetic encounters of the expert and non-expert informants are related, not to the use of psychological operations, but to the content of those operations and to the different kinds of information used in the construction of meaning about the works of art. The model has also been developed from my observations of the two-stage approach taken by one expert informant, Paul, in his encounter with Krzystof Wodlezko's Projections on Venice (1986). In this encounter, Paul attempts to better his understanding of the installation by making full use of all the information at his disposal.

Before presenting the model, it will be useful to conduct an overview of the objectives in proposing it. First, let us consider what the model explains about the findings of the study. The model presents a way of understanding how the aesthetic encounters of both subsets of the study group were similar in their overall nature as learning experiences aimed at understanding a specific object: the
work of art. Furthermore, the model explains how and why the aesthetic encounters of the expert and non-expert informants were also found to be different according to the content of those experiences. In addition, the model identifies the various kinds of knowledge that the informants encountered during their aesthetic experiences, and it explains the role of each of these sorts of knowledge in the construction of meaning about the works of art.

Second, let us consider what the model clarifies about the nature and process of aesthetic encounters. The most important claim that this model makes is that the process of aesthetic understanding can be learned. Furthermore, if it can be learned, then it can be taught. The model also proposes that in order to complete a full cycle of aesthetic learning during an encounter with a work of art, the viewer must have access to theoretical knowledge about that work of art. In other words, museums must provide this information as a way of promoting well-rounded aesthetic experiences for their visitors. A third claim is that an awareness of the role of each kind of knowledge in the process of aesthetic understanding will encourage the viewer to make use of all of these different kinds of knowledge. Fine art museums can promote this awareness by teaching their visitors about the process of aesthetic understanding. Finally, because the key to continued aesthetic development is seen to reside in the interaction of experiential and theoretical knowledge, the model predicts that the long-term aesthetic development of visitors can be promoted if visitors are taught how to make use of these two different kinds of information. Once again, this prediction hinges on the
characterization of aesthetic experience in terms of a learning process.

An additional objective in proposing this new model is to provide an explanation of the process of aesthetic experience that truly reflects its nature as a form of learning. Existing models of adult learning do not provide an adequate explanation of the learning process as it take place in the museum environment. Artaud's (1989) model of the re-creation of knowledge attempts to explain the process of the transmission of knowledge as it happens within a traditional academic setting like a university. There is no construct in his model to account for experiential learning as a dynamic process: that is learning based on experience as it happens. Artaud's model addresses the problem of experiential knowledge in a limited way; he restricts his definition of experiential knowledge to designate only the body of knowledge that the learner has already acquired through experience before entering university. This is an important distinction because, in the museum, experiential learning has a different connotation: it is the practical object-centered learning that occurs "on the spot" as the learner encounters the art object. In the museum, this actual encounter between viewer and object is highly valued; without it there can be no aesthetic experience and, therefore, a model of museum learning must take into account this object-centered aspect of the experience.

Kolb's (1975, 1984) model of experiential learning does describe experiential learning in dynamic terms. Kolb's conception of the process of experiential learning can be superimposed onto the process of aesthetic experience, and as such can provide insight into
the mechanisms that might underlie aesthetic understanding. However, Kolb juxtaposes with his model a taxonomy of learning styles, in which each step in the experiential learning process is associated with a different, preferential, learning style. In adopting the position, summarized here by Sugarman (1985), that "few people are equally effective at and comfortable with all these processes" and that "people have preferred and habitual ways of learning" (p.265), Kolb casts doubts on his model's applicability as a prescriptive method for the aesthetic education of individuals. Each successive step in the process of experiential learning is contingent upon mastering a different learning style; this implies that, by themselves, individuals cannot successfully negotiate all parts of the learning process. Kolb, therefore, is proposing an approach to experiential learning that is more appropriate for a classroom setting, because learning using this approach requires a cooperative, group effort. Furthermore, if Artaud's model does not account for experiential learning as a dynamic process, then Kolb's model is open to the criticism that it does not account for the role that theoretical bodies of knowledge play in the process of aesthetic learning. As we have seen above, a model of aesthetic learning -- if it is to provide a prescriptive means by which to teach about all kinds of art (including non-western and contemporary art) -- must take heed of the need to access and accommodate theoretical knowledge at some point in the learning cycle.
A Model of Aesthetic Understanding as Informed Experience

I am proposing a new approach to conceptualizing adult museum visitors' aesthetic experiences. This model is different from others in that it focuses particularly on the learning process which, I believe, is imbedded in all aesthetic experiences. In order to describe this learning process, the different kinds of knowledge implicated in aesthetic experience are identified, and the manner in which they interact is outlined.

Knowledge is defined as "an individual's personal stock of information, skills, experiences, beliefs, and memories. This knowledge is always idiosyncratic, reflecting the vagaries of a person's own history. This use of the term knowledge contrasts with the use of the term in the field of epistemology, where knowledge often refers to justified true beliefs and is reserved for universal, or absolute, truths. Rather, in the [psychologically oriented] literature we are reviewing here, knowledge encompasses all that a person knows or believes to be true, whether or not it is verified as true in some sort of objective or external way" (Alexander, Schallert, & Hare, 1991, p. 317). For the purposes of this model, aesthetic experience is further defined\(^{42}\) as a learning process by which the viewer, in encountering an art object, constructs new knowledge about the object in question and (in occasional ideal situations) about the nature of art itself. An aesthetic experience leads to an aesthetic understanding of the work of art, that the viewer can then share with others through social interaction.

\(^{42}\) See definition presented also on pages 13-14.
The Informed Experience model addresses the problem of the interaction of two very different kinds of learning, whose deployment in tandem has tremendous potential for fostering aesthetic development. The first part of the model circumscribes the experiential learning that occurs when the adult learner encounters the art object. Experiential learning is central to the conceptualization of aesthetic learning proposed in this model. Works of art must be experienced. Learners must not only look at the work of art, but they must also take the time required to really see it. For these reasons, reading about a work of art, in a newspaper review for example, may not constitute an aesthetic experience. And, although reproductions can stand in as acceptable substitutes for two-dimensional works of art, they are only second best to the actual work itself.

The second part of the model defines the meta-level learning that takes place if the learner confronts the knowledge that results from his or her experiential encounter with external sources of knowledge. This external knowledge is essentially theoretical in nature: it is, as Artaud (1989) defined it, a logical, coherent and well articulated body of knowledge. The adult learner can encounter this theoretical knowledge in a variety of ways: it may come to him or her in the form of a lecture by a curator or an artist; it may be accessed by reading an exhibition catalogue, a hand-out provided by the museum, or a series of wall panels included in the exhibition; it may be located as the result of a search for information at a library. In sum, there are various ways in which a learner can access theoretical information. However, this phase of the learning (contrary to the first phase) can
take place either in the presence or in the absence of the work of art. It is also essential to note that the objective of this second phase is to generate a new understanding about the work of art from both the insights provided by experiential learning and the intellectual distancing provided by theoretical information. This new understanding results from the interaction of these two bodies of knowledge, yet it is different and distinct from either of these original sources.

The model of aesthetic learning that I am proposing here is not intended to supersede the models of aesthetic experience and aesthetic development discussed in this dissertation but, rather, to compliment them. Kolb's (1976, 1984) model of experiential learning, Artaud's (1989) model of the re-creation of knowledge, Houseen's (1983) model of aesthetic development and Csikszentmihalyi and Robinson's (1990) model of interaction in the aesthetic experience each address a different facet of adult learning or aesthetic experience.

As a descriptive model.

The model of aesthetic understanding as informed experience can be seen as a descriptive one, in that its first part deals with experiential learning in a manner that, in all likelihood, accurately describes what actually happens (in terms of learning) when viewers look at works of art. Under present circumstances, the theoretical learning that is described in the second part of the model is less likely to occur spontaneously in the natural setting (the museum) for two reasons. First, theoretical information is seldom provided by art
museums in support of the works of art on display. Second, viewers are not always aware of the contribution that such information can make to their understanding and enjoyment of works of art and, therefore, they sometimes ignore this information, even when it is provided. Ultimately, the model is an account of aesthetic experience not necessarily as it occurs, but as it can occur in its ideal form. As a model of the ideal aesthetic experience, it explains how experiential learning can interact with theoretical learning in such a way as to result in real gains in terms of the learner's aesthetic understanding and aesthetic development.

In addition, the model is sequential as well as cyclical. It is sequential because it describes the phases of aesthetic learning as they unfold in a time-bound sequence. The model is cyclical in that it identifies three different routes by which phases of aesthetic learning can recur in a more or less repetitive fashion.

As a prescriptive model.

The new model is also a prescriptive model in that it proposes a particular approach for the teaching of aesthetic understanding to adult learners. As such, it is anticipated that museum and art educators will find the model useful in providing a step-by-step approach to the study of art appreciation. The following is presented as a typical scenario for the application of this model. Adults are invited to enroll for a series of workshops during which they will learn, not only about specific works of art, but also about how to approach an encounter with a work of art. As an introduction to the series, the adult learners participate in various short exercises
designed to make them aware of their expectations about art and the art viewing experience. Once these are identified, the workshop instructor helps the group to review the expectations and to determine whether they assist or hinder the viewer in his or her attempts to engage a work of art. Once the group has sorted fact from fiction about these expectations, the instructor brings his or her group into the galleries to view and discuss a work of art. The process used in viewing works of art is always the same for the duration of the workshop series. It is repeated several times, each time with a different work of art. Initially, the group is encouraged to encounter works of art that are fairly accessible. However, over time, the level of difficulty that the works of art represent is gradually increased. Once the work of art is selected\textsuperscript{43}, viewers are encouraged to view it first in silence for about five minutes. During this time, it is suggested that they take stock of the components of the work and try to understand how these come together in the work. Eventually, the instructor may suggest other activities to do during this initial period, that are adapted to the different types of art work encountered by the group. After the initial viewing is over, participants are invited to share, with the other members of the group, their understanding of the work in question. As the discussion proceeds, they are also invited to propose questions for further study about this particular work of art. When the group has exhausted all the possibilities offered by this first encounter with the work of art, it returns to a quiet study area. There, it conducts an investigation of the work of art using materials provided

\textsuperscript{43} Participants may take turns in selecting the works of art to be viewed by the group.
by the instructor. These materials can include published articles about the work or related topics, videos and films about the work and the artist who produced it, discussions with curators knowledgeable about that particular work, a meeting with the artist in question, and so on. Once the information provided by these investigations has been fully explored and shared among all members, the group is invited, by the instructor, to formulate a number of new hypotheses about the meaning of the work of art in light of what has been learned during the investigation. Once the hypotheses have been duly noted by the group, it returns to the galleries to view the same work of art a second time: first in silence, then in a group discussion. The group's first impressions as well as the hypotheses just formulated are now verified against the physical reality of the work of art. If appropriate, new hypotheses are formulated and discussed, or existing ones are adjusted in light of the evidence contained in the work of art. This completes the process by which the group encounters different works of art over the course of the series of workshops. As the series proceeds over a number of weeks, the instructor helps the group to take stock of the process that it is using in its encounters with the art objects. He or she leads the group in discussions about the contribution of each phase of the process towards their understanding of the works of art. Finally, he or she assists the group in become aware of the distinction that exist between the different kinds of meaning that stem from a work of art, and he or she helps the group to understand the function of these different kinds of meaning. For example, personal meaning is valued for the intimate connection that it provides between the viewer and the work of art, even though not
Figure 3: Model of Aesthetic Understanding as Informed Experience
everyone will agree on that interpretation. Conversely, social meaning will be prized for the opposite reason: the fact that it can provide a certain consensus about how the work of art should be interpreted.

Components of the Model

Experiential Learning.

In the first phase of the model, experiential learning (part "A" of Figure 3) occurs as the viewer encounters the work of art for the first time. Subsequent and additional experiential learning takes place each time the learner returns to the work of art in order to view it again. Experiential learning is the result of the interaction of two types of knowledge: mediating knowledge and objectified knowledge.

Mediating Knowledge. Our encounters with works of art are never neutral or objective. We bring with us to an aesthetic experience a whole set of previous art-viewing experiences and numerous assumptions about the nature and the functions of art. These assumptions are derived mainly from former viewing experiences and from what we have learned about art through training or through the social process of acculturation. In an encounter with a work of art, we bring all our personal and professional past. Memories may be awakened by salient features of the work, and these will probably alter the experience. In addition to our assumptions and past experiences, we also apply our skills in looking at and understanding works of art, and our knowledge about the history of art, aesthetics, art criticism and art production.

Mediating knowledge, then, is the personalized body of knowledge that the viewer brings with him or her to the aesthetic
encounter. It is comprised of the assumptions, the skills, the personal experiences, and the theoretical knowledge -- all acquired prior to the experience immediately at hand -- that relate directly or indirectly to our personal practice of aesthetic appreciation. I have called this body of knowledge *mediating knowledge* because of the role it plays in our aesthetic encounters. As the name implies, mediating knowledge is an intermediary that "stands" as a link between us and the art object. At the same time that it assists us by providing a structure for our exploration and discovery of the art object, in some respects, it hinders any possibility of experiencing the art object either "directly" or objectively. Mediating knowledge always plays a determining role in the outcome of all our aesthetic encounters, and these experiences are, therefore, essentially subjective. Two different people in front of the same art work will have two entirely different experiences, even though there may be some agreement on the sensory properties, referential content, iconography and social meaning of the work of art. This is what I mean when I say that aesthetic encounters are essentially subjective experiences. By the time we reach adulthood, we have already amassed a considerable aggregate of past experiences and we have acquired vast quantities of all kinds of knowledge. It is impossible, therefore, for any adult in sound neurological health to encounter a work of art without bringing to the experience his or her store of accumulated mediating knowledge.

Differences in each person's "cache" of mediating knowledge account for a major part of the variations in the nature of aesthetic experiences from one person to the next. Indeed, it is essentially
each person's body of mediating knowledge that determines whether a work of art will be seen to have determinability: that is, the adequacy of mediating knowledge is the factor that decides whether or not a viewer will be able to initiate and then sustain an aesthetic encounter with a particular art object. Therefore, a work of art may provide an interesting and challenging encounter for one viewer equipped with the appropriate body of mediating knowledge while, at the same time, rebuffing another, whose previous learning and viewing experience has left him or her inadequately prepared for the experience.

The large body of past experience and knowledge, that as adults we amass over the years, provides us with the potential for engaging in many different and meaningful experiences. However, our stores of such knowledge are highly personalized, and their content depends, to a large extent, on the history of our personal antecedents. As with any personal endeavor, the more you have invested in cultivating your knowledge and skills in aesthetic appreciation, the better you are equipped for engaging in aesthetic experiences. It is no surprise, then, that some bodies of mediating knowledge are better suited to facilitate the tasks of aesthetic experience than others.

Viewers with little previous art viewing experience -- the true novice viewers -- bring to their aesthetic experiences stores of mediating knowledge that contain very little aesthetic content. Such stores of mediating knowledge provide only a very low level of determinability. During a museum visit, the novice viewer will often have considerable trouble in locating works of art that he or she finds accessible. Since the novice viewer is entirely dependent on his or her non-art related past experience as the means of providing access
to the work of art, his or her aesthetic understanding will often take the form of recognizing subject matter and reminiscing about associated personal events.

Viewers with considerable art-viewing experience, but little or no formal art training, will come to the aesthetic experience with a better adapted store of mediating knowledge. This body of knowledge will be comprised of personal past experiences, previous art-viewing experience, common knowledge about the arts (acquired mainly from popular culture via the mass media) and, sometimes, formal knowledge of disciplines (other than the fine arts) that this viewer will often attempt to transfer to her or his aesthetic experiences. The intermediate viewer’s store of mediating knowledge provides for aesthetic encounters with a moderate level of determinability and, therefore, a larger number of the works encountered in the museum will be accessible to this viewer. However, less familiar works, such as non-western or contemporary art, will still pose a particular problem, because this viewer does not bring with her or him the background knowledge that provides access to such works of art.

Viewers who have extensively practiced and studied the visual arts will be even better equipped to respond to a wider range of works of art. Their store of mediating knowledge consists of personal past experiences, previous art-viewing experience, and practical as well as theoretical professional training in the arts. Such a diversified body of mediating knowledge provides the expert viewer with a high level of determinability in his or her encounters with works of art. As such, expert viewers are much more likely to find that most works of art encountered in the museum are accessible to them on some level or
another. Furthermore, in the course of their professional training, expert viewers acquire familiarity with the specialized knowledge that is the key to understanding many kinds of art, including some contemporary and non-western art, and they also acquire the knowledge-seeking skills essential for the periodical updating of this knowledge.

Examples of the use of mediating knowledge during an aesthetic encounter are provided in the following citation. For the sake of clarity, the parts of the text that provide evidence of mediating knowledge have been emphasized. Throughout this presentation of the Model of Aesthetic Understanding as Informed Experience, I will provide examples of each component of the model by presenting excerpts taken from a detailed account of an aesthetic encounter, published in 1986, by the noted aesthetic anthropologist, Jacques Maquet. In this account, Maquet shares with us the process by which he came to understand and appreciate Constantin Brancusi's (1876-1957) sculpture, *Adam and Eve* (1916-1921)44.

It was a complex wood structure, about eight feet high. It looked like a pillar, but strangely, it was made of two statues, each on its own pedestal, and one on top of the other....

Because of the title, I assumed that each statue was a human figure, and I tried to identify Adam and Eve. Rendition was at the limit of the figurative. The style was Cubist in the sense that the two figures were represented by a few geometric-like forms selected from the human body repertory. Each figure seemed to have been carved out of a beam; symmetry and verticality dominated. [...] Eve was the figure on top.

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44 Maquet saw this carving at a retrospective of Brancusi's work held at New York's Guggenheim Museum in 1969.
Looking at the other figure, which was supporting Eve's pedestal, I did not see it as clearly masculine. Rather, to me, the general shape suggested a squatting woman, perhaps because it reminded me of a Luba chief's stool supported by a caryatid. The horizontal half-cylinder supporting the capital (which was at the same time Eve's pedestal), the capital itself, and the forms behind the caryatid's "neck" evoked to me a woman's face under a hat (the capital), and locks behind the neck [emphases added] (Maquet, 1986, p. 152).

In sum, mediating knowledge is viewer-centered knowledge; it is the knowledge that the viewer brings with her or him to the aesthetic encounter. Through the mechanism of determinability, mediating knowledge provides viewers with their initial access to works of art.

Objectified Knowledge. Contrary to the subject-centered nature of mediating knowledge, objectified knowledge is centered in an object: it is the knowledge that the work of art makes concrete and perceptible. In other words, the work of art is objectified knowledge. I have chosen this term to describe the art object, because it encapsulates the manner by which the artwork conveys knowledge. The verb "to objectify" is defined as follows: "to treat as an object or to cause to have objective reality; to give expression to (as an abstract notion, feeling, or ideal) in a form that can be experienced by others" (Merriam-Webster's Collegiate Dictionary, 1993, p. 801).

More specifically, objectified knowledge consists of the ideas and feelings that are communicated by the artist through the process of creation and dissemination of his or her work of art. Each aspect of the work of art conveys meaning, and therefore each is a source of objectified knowledge. Knowledge is embodied in a work of art each time the artist makes a decision regarding the work's message,
subject matter, stylistic qualities, structure, medium, format, materials, and production processes.

The idea that the work of art embodies thought -- and, therefore, knowledge -- is supported by the work of other researchers. Rudolf Arnheim has argued forcefully for a definition of intelligence that includes the faculties of visual perception.

My contention is that the cognitive operations called thinking are not the privilege of mental processes above and beyond perception but the essential ingredients of perception itself.... These operations are not the prerogative of any one mental function; they are the manner in which the minds of both man and animal treat cognitive material at any level. There is no basic difference in this respect between what happens when a person looks at the world directly and when he sits with his eyes closed and "thinks" (Arnheim, 1969, p. 13).

Arnheim has also taken the position that all visual representation, whether in the form of a scientific diagram or a work of art, are both the product and the material of cognitive activity.

The aesthetic element is present in all visual accounts attempted by human beings.... The value of visual presentation is no longer contested by anybody. What we need to acknowledge is that perceptual and pictorial shapes are not only translations of thought products but the very flesh and blood of thinking itself and that an unbroken range of visual interpretation leads from the humble gestures of daily communication to the statements of great art (Arnheim, 1969, p. 134).

The work of art encapsulates, in the form of objectified knowledge, the intentions of the artist who created it. Furthermore, via the creative activities of the artist, ideas can make their way into the work of art either consciously or unconsciously. As Csikszentmihalyi and Robinson have pointed out, the work of art also consists of the meaning conveyed by "all of the sociocultural factors
that influenced the work in an indirect fashion" (1990, p.134). Therefore, for example, information about some of the social and artistic conventions, specific to the object's historical period, may be included in the work of art without the artist being fully aware that he or she is communicating such information.

The objectified knowledge that is the work of art provides the initial parameters for the aesthetic encounter between the viewer and the aesthetic object. It is in response to the specificities of the object encountered, that a viewer begins to construct an aesthetic understanding of the work of art. For an example of objectified knowledge, please refer to Figure 4: a reproduction of Constantin Brancusi's *Adam and Eve* (1916-1921), which I present here in the context of Jacques Maquet's text about his aesthetic encounter with this work of art.

*Constructed Knowledge.* When a viewer encounters a work of art, he or she makes use of his or her store of mediating knowledge as a means of accessing and exploring the work of art. The viewer responds to the content of the work of art by using his or her skills according to the four dimensions of aesthetic experience identified by Csikszentmihalyi and Robinson (1990): affect, perception, cognition, and communication. The aesthetic experience unfolds much in the same manner as a dialogue between two individuals, except that in this case, the exchange occurs instead between a viewer and an aesthetic object. This first phase of the cycle of aesthetic understanding -- the experiential learning phase -- can be thought of as a dialogue, because the two agents involved in the event -- the viewer and the object -- contribute equally to a process of communication. The viewer
contributes his or her skills, knowledge and previous art viewing experience (as embodied in his or her store of mediating knowledge). and the work of art contributes its objectified knowledge which is manifested through its physical presence. Through aesthetic dialogue, the interaction of these two bodies of knowledge -- mediating knowledge and objectified knowledge -- produce a new kind of knowledge. This new knowledge embodies the meaning that the viewer has constructed about the work of art and, for this reason, I have called this third and entirely distinct kind of knowledge: constructed knowledge. Constructed knowledge is a highly individualized form of knowledge; it consists of the personal meaning that the viewer has assigned to the work of art based only on his or her experiential encounter with it. Apart from the objectified knowledge contributed by the work of art itself, no other external source of knowledge has contributed, at this point, to the construction of the viewer's interpretation of the work of art. Therefore, constructed knowledge consists of the personal meaning that the viewer constructs to resolve the problems of understanding posed by the encounter with the work of art. Constructed knowledge is created through the interaction of mediating and objectified knowledge and through the creative process of imagination. Because the aesthetic experience has remained so far a private experience, the solutions that constructed knowledge provides to the questions raised by the work of art need only, for the time being, satisfy the viewer. This is possible only because the viewer has yet to confront his or her ideas about the work of art with anyone else's. The personal interpretation embodied in the constructed knowledge may or may not correspond,
in whole or in part, to the artists' intention in producing the work of art in the first place. It may or may not correspond, in whole or in part, to anyone else's understanding of the work of art. Constructed knowledge consists of a viewer's personal understanding of a work of art but, yet, it is not pure fabrication. It is the understanding that arises from an encounter with the objectified knowledge to be found in the work of art. It is, more precisely, the viewer's re-creation of the work of art based on both fact and imagination: the facts apparent in the work of art and the intuitive insight provided by the viewer's imagination. It is also the final outcome of the first, experiential learning phase of the aesthetic understanding process.

The next citation from Maquet's encounter with Brancusi's Adam and Eve provides evidence of the constructed knowledge that results from the interaction of mediating and objectified knowledge.

Without the Adam and Eve caption, I would have read Brancusi's message as stating that an older woman, represented as sexually neuter, supported a younger one, beautiful (the elegant long neck) and sexually attractive. The message could have been "mother superseded by daughter." But this was not the message. The title clearly indicated that the figures were not two women. Adam was to be found....

Returning to Adam and Eve, I noticed that the top figure could as well be interpreted as including the masculine motive of another Brancusi sculpture, the [Male] Torso. The trifurcated form was as much pents and testicles as neck and breasts. In that perspective, maybe Adam was the top figure, supported by Eve as caryatid. However, the mouth above the trifurcated form definitely was not masculine. If it was a mouth, it was a woman's mouth; its proximity to the phallic form also suggested the meaning of vulva.

Still perplexed, I saw another Brancusi: a columnlike carved wood piece, dated 1915 and called Caryatid II. The head and the capital it supported were
different from the corresponding forms in the lower figure of Adam and Eve, but revealed some similarities too. The word caryatid, used in the title by Brancusi himself, referring to a supporting pillar in the form of a woman, not a man -- which, as a sustaining column, was called a telamon. Caryatid II, with the protuberant abdomen of an African ancestress figurine, was distinctly feminine. How strange, I thought, to represent Adam by a figure without any sexual attribute (whereas Eve's sexuality was ostensibly displayed) and formally so close to a female caryatid. Perhaps Brancusi wanted to say that a dominant Eve had castrated a dominated Adam (Maquet, 1986, pp. 152-153).

Theoretical Learning.

For many museum visitors, the aesthetic encounter with a work of art ends once constructed knowledge about the work of art has crystallized as a result of experiential learning. This is unfortunate because it is only in very exceptional cases that experiential learning, by itself, contributes to meaningful advances in viewers' aesthetic development. I believe that when experiential learning is combined with theoretical learning, the result is a potent partnership for fostering not only aesthetic understanding but also aesthetic development itself. In conceptualizing this model, I have chosen to separate, for the sake of clarity, experiential learning and theoretical learning into two successive phases of learning. In fact, I am proposing that educators, who wish to use this model as a methodology for teaching aesthetic understanding, maintain this separation. Apart from the fact that this makes the process of aesthetic learning easier to grasp, there is another tremendous advantage in maintaining a clear distinction between experiential and theoretical learning. There can be no substitute for attentively looking at the work of art; yet, at the same time, few visitors are so self-
sufficient that they can do without any sources of external information. Adult learners initiated to a two-phase process of aesthetic appreciation will fully realize the importance of both kinds of learning. They will be less inclined to overestimate the value of one over the other and, hopefully, they will continue to give equal weight to these two different and complimentary ways of accessing the work of art. In doing so, they will be ensuring and continuing their own long-term aesthetic development.

However, having clarified this, I acknowledge that spontaneous museum visits are rarely structured in such a coherent fashion. Theoretical learning, when it does occur, often gets thrown into the experiential learning phase, as visitors read wall texts, paddle boards, museum handouts and copies of exhibition catalogues. However, to teach this as a way of proceeding can only add confusion to the way in which, ideally, a work of art can be approached.

*Constructed Knowledge.* The outcome of the experiential learning that occurred during the initial phase of the encounter with the work of art, can now be used by the viewer as a construct to engage in an exchange with others about his or her understanding of the work of art. This knowledge can also be used in a similar fashion to encounter the information about the work of art, that the museum sometimes makes available, in various forms, to its visitors. Through this second encounter (part "B" of the model), the viewer takes advantage of the insight and knowledge of others in order to further his aesthetic understanding about the work of art.

*Theoretical Knowledge.* In the context of a museum visit, the information available to the viewer can take many different forms: the
artist's written account of his or her own work, the curator's formal justification for an exhibition, the complex treatise of a scholar, the carefully constructed argument of a critic, the journalistic exposé of a reviewer, the synthesis of the museum educator's didactic text, and the informative excursion provided by the museum guide or docent. Earlier in this chapter (p.187), I made the point that much of contemporary art is "theory driven". If this is the case, we are right to assume that evidence of these theories is somehow subsumed within the work of art. However, this specific type of theoretical information -- the theoretical information subsumed within the artwork -- is a component of objectified knowledge: it is not the theoretical knowledge to which I refer here. Within the parameters of this model, the term theoretical knowledge is used to designate a very specific body of knowledge. This body of knowledge exists independently from the work of art, even though it often refers to it. Theoretical knowledge, therefore, is to be found mainly in the text that results from the intellectual work of curators, historians, critics, educators and reviewers. Sometimes, artists also engage in this kind of intellectual activity but, in doing so, they tend to leave behind their role as artists and adopt, instead, the frame of mind of a scholar.

For the purposes we are considering here, theoretical knowledge must retain some important characteristics, if we are not to lose sight of the role of theoretical learning in fostering aesthetic development. Theoretical knowledge is organized according to traditional disciplinary boundaries relating to the scholarly study of artistic production, art history, art criticism, and aesthetics. Theoretical knowledge must be logical, unified and well articulated.
It must provide the concepts that will assist the viewer to separate fact from fiction, to eliminate any stereotyped ideas from his or her thinking, and to go beyond premature conclusions and initial, tentative, inferences about the meaning of work of art. In sum, theoretical knowledge must provide the means by which the viewer achieves a new and more satisfying understanding of the work of art based on a synthesis with the evidence observed in the work of art. Theoretical knowledge helps the viewer to stand back from his or her initial viewing experience in order to see the work of art more clearly. It provides "the bigger picture": a panoramic view of the work of art and situates it within the context from which it originated (Artaud, 1985, pp. 26-27; 1989, p. 128).

Here, once again, is an excerpt from Maquet's account of his encounter with Brancusi's sculpture *Adam and Eve* that provides evidence of the role that theoretical knowledge plays in the process of aesthetic understanding.

Finally, I read the notes in the exhibition catalogue. I learned that the two statues had been brought together long after they had been independently carved. The upper one was called *Eve* when created in 1916, and the lower one, "now figure, now base," probably did not acquire its appellation *Adam* before its association with *Eve*, in 1921. Art critic Sidney Geist concluded: "The work surely reflects Brancusi's current attitude on the social relations of the sexes: beautiful woman is now the crushing burden of responsible man."\footnote{Cited by Maquet (1986) from Geist, S. (1969). *Constantin Brancusi, 1876-1957: A Retrospective Exhibition*. New York: The Solomon R. Guggenheim Foundation, p. 104.}

Disappointed, I left the museum. If Brancusi wanted to say what Geist assumed he wanted to say -- that "beautiful woman is now the crushing burden of responsible man" -- he had produced a poor vehicle for his message. In this work, he proved to be the unskilled

As we have seen in the preceding example taken from Maquet's account, theoretical information will sometimes appear to contradict the emerging understanding of a work of art that the viewer has expressed earlier in the form of constructed knowledge. In entering this second phase of aesthetic experience, the viewer must approach the body of theoretical knowledge with an open mind. There is no point in engaging in an exercise of theoretical learning with the attitude that one must defend and maintain, at all cost, the point of view formulated during experiential learning. In the beginning of the theoretical learning cycle, it is essential to become, first of all, familiar with the concepts and the mechanisms of the theory under review. Artaud (1989) describes this point in the adult's learning process as a rupture during which experiential knowledge must be temporarily set aside so that the learner can concentrate instead on assimilating theoretical content (p. 140). However, in the next phase of learning, the continuity between the two learning cycles is re-established. Once the learner has mastered the concepts presented in the body of theoretical knowledge, he or she can then review the constructed knowledge arising from the earlier encounter with the work of art. This review is conducted in light of the viewer's newly acquired theoretical knowledge and, as it proceeds, an entirely new form of knowledge results from the integration of constructed knowledge and theoretical knowledge.

Reconstructed Knowledge. Reconstructed knowledge is the name that I have given to the distinct type of knowledge that is
created by a process of exchange between constructed and theoretical knowledge. As the name implies, the knowledge constructed during the phase of experiential learning is reconstructed, during this second phase of learning, in light of the new understanding provided by a theoretical framework. Reconstructed knowledge is akin to the integrated knowledge that, in Artaud's (1989) theory, results from the integration of a learner's entire corpus of experiential knowledge with a newly acquired body of theoretical knowledge. As we have seen in Chapter 1, integrated knowledge represents "a passage from an initial symbolization to a more elaborate symbolization [through] the clarification of the content of the initial intuitions, the reformulation of questions from a different point of view, the disclosure of the implications of this new knowledge" (Artaud, 1989, p. 141) (original translation). However, reconstructed knowledge differs from integrated knowledge in that one of its initial sources -- constructed knowledge -- is the product of a complex and dynamic experiential learning process that began just minutes, hours or days earlier. Furthermore, the theoretical learning process that leads to reconstructed knowledge is a continuation -- a second phase -- of the learning initiated earlier by the encounter with a work of art. Finally, in the process of aesthetic learning, a third phase of learning (part "C" of the model) is possible if the viewer decides to return to the work of art to view it one or more times. When the learner returns to the work of art for another viewing, the reconstructed understanding of the work of art (that has emerged during the second phase of learning) can be strengthened and fine-tuned by confronting it to the actual work of art itself.
Here is Maquet's account of the final outcome of his attempt to understand Brancusi's *Adam and Eve*. This last excerpt presents the reconstructed understanding of the sculpture that Maquet has formulated as a result of the confrontation between his earlier understanding of the piece (constructed knowledge) and the information (theoretical knowledge) he encountered by reading Sidney Geist's exhibition catalogue.

A few days later, I had another opportunity to see the same piece.... The composition, divided by a central wooden block, presents an evident duality. I do not perceive the upper part as a human figure in which forehead and mouth, neck and breasts, or pents and testicles are parts of a body. I see it as a composite emblem of sexuality, feminine and masculine, rather than feminine or masculine....

The lower part, which I perceive as a human shape, is an asexual figure. Its sexuality -- the neuter gender seems appropriate here -- is separated from the human figure and dominates it. The squatting or sitting figure represents the self, the self of a woman or a man. Dominated by its sex impulses, the self supports the burden of the triumphant desire. The stooped, but enduring and sustaining, figure suggests that the struggle, if there was any, is over. The victory of sexuality has been secured and the self has accepted, or is resigned to being servant and provider of desire.

This is how this beholder verbalized and explained his second encounter with the Brancusi sculpture when he reflected upon his experience-as-recalled. For him, it symbolized the domination of self by sex impulses (Maquet, 1986, pp. 154-155).

Although they may wish to add nuances of their own to the preceding account, chances are most readers of this dissertation will agree, at least to some extent, with Maquet's final interpretation of the meaning of Brancusi's *Adam and Eve*. 
Ultimately, the concept of reconstructed knowledge presented in this model distinguishes itself from Artaud's concept of integrated knowledge in that reconstructed knowledge is also understood to be the locus of the social meaning of the work of art. Through the reconstruction of knowledge, the viewer's personal meaning for the work of art (embodied in constructed knowledge) enters into a dialogue with the public meaning of the work of art conveyed by disciplinary (theoretical) knowledge. The result is a new meaning for the work of art: one that, at least in part, is socially shared by the viewer and all other contributors. The viewer has become part of a much larger social interchange: an enterprise that is focused on the extraction and explication of a common understanding of the work of art. In a sense, the viewer has shed the constricting parameters of the former, strictly personal, explanation of the work of art in order to embrace a new, potentially more rewarding, socially-shared interpretation. However, in doing so, the viewer does not discard the personal meaning constructed during the experiential learning phase. Personal meaning is embedded in the new socially-shared meaning; both now reside within reconstructed knowledge. The preservation of personal meaning during the construction of social meaning gives to the new interpretation of the work of art a strength of conviction that can only come from having personally experienced the work of art. In this way, the reconstruction of aesthetic knowledge almost always results in a gain in understanding and appreciation.
The Pathways of Aesthetic Understanding.

The Full Cycle. The process of aesthetic understanding may follow a number of different patterns, which may be more or less cyclical in nature. Taken together and in proper sequence, all of the components of the model (Figure 3) represent a full cycle in the process of aesthetic understanding. The cycle begins with phase "A", an experiential encounter with the work of art, and continues with phase "B", the theoretical learning phase. The cycle comes full circle when the viewer returns to the work of art to encounter it once more in light of the reconstructed understanding acquired in phase B. This third phase of the cycle is represented in Figure 3 by the pathway labeled "C". Once a full cycle is completed, the aesthetic experience can either come to closure or begin once again. If the experience continues, it can either follow the same sequence as before or take an alternate route.

The Experiential Learning Loop. Many aesthetic experiences never go beyond the first experiential learning phase. Sometimes, this phase is simply repeated a number of times as the viewer returns again and again to view the same work of art. This pattern of viewing is considered (from a prescriptive educational point of view) to be an incomplete cycle of aesthetic understanding. It is represented in the diagram by the pathway labeled "Experiential Learning Loop". Sometimes, the experiential learning loop is used, days or weeks later, as a follow-up to a full cycle of aesthetic understanding.

The Theoretical Learning Loop. It is possible to attempt to understand a work of art by reading about it first and then going to see it. However, this is a very problematic approach to aesthetic
experience, because there is a risk that the learner will simply assimilate what is read, and then apply that to his or her encounter with the work of art. There is no real potential in this scenario for the reconstruction of knowledge during the theoretical learning phase of the process, because the learner has no real experience of the work of art with which to confront the theory. The reversal of the normal direction of the learning process short-changes the experiential learning phase prescribed by the model, and the result is that the viewer goes to the work of art with pre-conceived notions about the meaning of the work. Under these conditions, it is doubtful whether such an undertaking can actually qualify as an aesthetic experience, because it is likely to be devoid of the personal investment that characterizes a truly aesthetic experience.

In a more normal course of events, it is possible for the first phase of experiential learning to be followed-up with more that just one cycle of theoretical learning. In such a case, each cycle of theoretical learning is actually separated from the others by a pause lasting hours or days. This pathway in the learning cycle is represented in the diagram by the theoretical learning loop. Ideally, the viewer, who chooses to approach the work of art in such a fashion, should return to view the work, either at the end or at some other point in the cycle, because our ability to recall what the art object actually looks like fades considerably after just a few hours.

The Effect of Social Interaction on Aesthetic Understanding. Many viewers visit art galleries with their friends and families. The effect of social interaction on aesthetic understanding is not to be
underestimated. It can play an important role in promoting comprehension of the works of art encountered. However, the social exchange between friends must not be confused with the role of theoretical learning described by the model. Figure 5 clarifies how the dialogue between friends and families can contribute to the development of aesthetic understanding. As each person encounters the work of art, their aesthetic learning proceeds in a more or less parallel fashion. The dialogue between participants is not a substitute for any one type of knowledge identified in the model. Instead, it acts as a supplementary source of information which can influence learning at any point in the aesthetic understanding cycle.

**Aesthetic Development.**

By teaching an approach to aesthetic experience that combines two different yet complementary kinds of learning (the experiential and the theoretical) museum and art educators can accomplish much more than just offering a method for looking at works of art. They will equip their students for continued, individual, life-long learning in aesthetic appreciation, because following the principles outlined in the Informed Experience Model can actually promote aesthetic development.

The reconstruction of knowledge during the second phase of aesthetic learning not only results in a greater understanding of the work of art under consideration, it can also modify the way in which the viewer will relate to other works of art. According to

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46 For more information on the role of social interaction on aesthetic understanding, particularly in cases of inter-generational interaction, consult Marie Brûlé-Currie (1994). *Quand les enfants entre trois et cinq ans et des adultes contemplant ensemble des tableaux modernes et abstraits ...*
Figure 5: The Effect of Social Interaction on Aesthetic Understanding
Gérard Artaud, profound changes in the very structure of personality are indeed the end product of a learning process, where experiential knowledge and theoretical knowledge come together to generate a new body of integrated knowledge.

Le mot intégration signifie précisément que ce nouveau savoir ne peut prendre forme qu'en s'intégrant à la structure de la personnalité et en la modifiant.... L'apprenant, qui vient ainsi d'acquérir un nouveau regard sur son monde, qui accède à une compréhension plus profonde des phénomènes qui lui étaient demeurés cachés, ne peut plus se situer comme avant : son attitude est changée. Et il y a tout lieu de penser qu'il ne pourra plus se comporter de la même manière. Alors le but de l'apprentissage est atteint : par interaction avec le savoir scientifique, le savoir d'expérience non seulement s'est élargi et consolidé, mais s'est transformé en un nouveau savoir-être, condition indispensable d'un nouveau savoir-faire (1989, p. 141).

The insight from the successful outcome of an informed aesthetic experience -- reconstructed knowledge -- has now become a permanent reference within the viewer's personal store of mediating knowledge. Reconstructed knowledge is not transferred as a simple addition to mediating knowledge, instead, it modifies the very structure of that body of knowledge. Pre-existing ideas about entire categories of works of art and even about the very nature of aesthetic experience are changed and sometimes even discarded in light of the new understanding that reconstructed knowledge can provide. Furthermore, new skills in aesthetic understanding are acquired and old ones are upgraded. It is through this continual restructuring of mediating knowledge that aesthetic development occurs.

Initially, the changes in the structure of mediating knowledge may be too slight to be really noticed but, as countless viewing
experiences succeed one another over time, the accumulated effect of these learning experiences can lead to real developments in aesthetic understanding and in aesthetic viewing skills. At the lowest level, aesthetic development can sometimes occur simply as the result of repeated experiential learning. Abigail Housen (1983) reports that the acquisition of a framework for interpreting the work of art is one of the requirements for achieving Stage III in her model of aesthetic development. She also speculates on the various ways in which these frameworks can be acquired: "Now an analytic framework, in turn, can be attained in several ways; one can learn about existing distinctions or one can develop a framework by oneself. In either case, the elaboration of the framework may take time, and is unlikely to proceed rapidly in the absence of exposure to art" (1983, p. 186). The reader will recall that Housen's definition of "exposure to art" is an all-inclusive term which encompasses aesthetic education as well as viewing experience. It is clear, therefore, that the additional insight that is provided by measuring one's experiential learning against an appropriate theoretical body of knowledge should enhance the probability and the rate of aesthetic development in adult learners.

Critique of the Model

The Model of Aesthetic Understanding as Informed Experience was conceived as an explanation to bring together, as coherently and completely as possible, the empirical evidence collected and identified during this study. However, as a theoretical endeavor, it goes beyond a mere description of the evidence and attempts to explain the relationships between the various components of aesthetic
learning witnessed during the course of the research project. Like any other undertaking of this nature, the proposed model is open to any number of criticisms about various aspects of its structure and mechanisms. Although it is impossible to anticipate all possible objections to the model, in this section of the chapter, I will address at least some of the most likely concerns in this regard.

First, it can be said that the model is more prescriptive than it is descriptive. That is to say that the model proposes an approach to aesthetic encounters for which only limited evidence has been provided by the findings from this study. Although all of the informants' experiences corroborate the existence of the first phase of the model (the experiential learning phase), the second phase of the model (the theoretical learning phase) rests on observations that relate to one case study only. Some may question whether a single case study provides a sufficient basis on which to ground that component of the model. In order to answer this objection, I must first provide additional information on some of the particularities of the field site where this research was conducted. Although this is now gradually changing, works of art displayed at the National Gallery of Canada are not usually accompanied by support materials in the form of extended labels, wall text, paddle boards and/or hand-outs. Of the forty encounters with works of art filmed by informants during the course of this study, only one -- Paul's encounter with Wodiczko's Projections on Venice (1986) -- was based on an exhibit which was accompanied by such information. Because this was the only display in which such information was available, I think it is of definite interest that the information provided by the Gallery was actually used by the
study participant to initiate a second phase of learning in his encounter with the work of art. In other situations, where information has accompanied a display of works of art, I have observed\textsuperscript{47} that most visitors do indeed take the time to read and ponder this information as they work their way through the galleries. Not only do they read the information provided but, because of it, they also prolong the amount of time they spend looking at the works of art. Under the circumstances in which the field work for this study was conducted, one can assume that a greater number of informants would have entered the second phase of aesthetic learning predicted by the model (the reconstruction based on theoretical knowledge about the work of art) had additional information about the works of art had been available in the galleries. Considered, along with the findings of previous investigations into the process of adult learning or aesthetic experience (Artaud, 1989; Kolb, 1976, 1984; Csikszentmihalyi & Robinson, 1990), these arguments provide a good defense for the inclusion of theoretical learning as a second phase in the cycle of aesthetic understanding. These arguments also provide a foundation for the model, that I believe, meets accepted standards in research for the formulation of such theoretical frameworks.

The most salient influence of theory at the conclusion of a research project is its provision of a framework for interpreting the meaning of what a researcher has discovered or established. This framework indicates how results are built upon a foundation of categorized

\textsuperscript{47}I am thinking, in particular, of a recent exhibition, \textit{The Dance of Death} (National Gallery of Canada, Ottawa, October 1993 to January 1994) where I spent a couple of hours observing visitors' behaviour. Each of the works of art included in the show was accompanied by an extended label (written by the exhibition curator Richard Hemphill) that provided information on its content and/or the context in which it was created.
data, elaborated by the relationships discovered among categories, and placed in context by integration with and application to previous studies.... The nature of the theory and its comprehensiveness also may influence the level of application claimed for the findings of the study.... More commonly, researchers in the social sciences use substantive and middle-range theories to seek probabilistic applications where relationships may be expected to obtain in certain cases under given circumstances [emphasis added] (Goetz and LeCompte, 1984, p. 61).

A second objection, that may be levelled against the model, is in regard to the sequence in which each of the learning phases are said to occur. Some may interpret these sequences as the equivalent of a certain linearity in the process of aesthetic experience. Furthermore, they may argue that aesthetic experience almost never proceeds in such a linear fashion, and that the model makes a distinction between two phases of learning where, in fact, none exists. My argument for answering this objection is simple. Paul's experience with Wodiczko's *Projections on Venice* (1986) did follow the pathway described by the model. At first, he encountered the installation and began to construct meaning about it by relying only on his skills and insights as a viewer; it is only about halfway into the encounter that he began to reconstruct his understanding of the work by making use of the external information provided in the wall text. I concede that, in all likelihood, many aesthetic encounters probably do not proceed according to the clearly demarcated process found in Paul's encounter. However, the three different pathways of learning identified in the model provide for countless possibilities in the way aesthetic experiences can unfold. The model is, therefore, not linear at all: rather, it is cyclical in nature. The clarity with which the
different phases of aesthetic understanding are demarcated in the model should not be interpreted as an attempt to propose a linear conception of aesthetic understanding. Nonetheless, a theoretical model must seek to clarify some of the ambiguity that surrounds many of these experiences; otherwise, it will be useless as a research and teaching tool. It is precisely because of the clarity of its components, that the model can provide a panoramic overview of the learning cycles involved in aesthetic understanding. The distancing that such an overview provides will prove useful to researchers as a tool for identifying the different phases of the aesthetic experiences that they will witness during their investigations. I believe the model will prove very useful for museum educators as a practical approach for teaching a method of aesthetic appreciation, because it gives equal weight to the two phases of learning that occur within encounters with works of art.

Third, some may question whether the second phase of aesthetic experience can indeed qualify as an aesthetic activity in the absence of the work of art. The question here is: "Don't aesthetic experiences always depend on the presence of an aesthetic object?" My response is that experiences take on their aesthetic quality as a result of the nature of that experience, not as a result of the presence of the object to which they may refer. In the following citation, John Dewey provides an example of an aesthetic experience in the absence of an aesthetic object. He also describes how intellectual activity can be aesthetic.

Hence an experience of thinking has its own esthetic quality. It differs from those experiences that are acknowledged to be esthetic, but only in its materials.
The material of the fine arts consists of qualities; that of experience having intellectual conclusion are signs or symbols having no intrinsic quality of their own, but standing for things that may in another experience be qualitatively experienced....Nevertheless, the experience itself has a satisfying emotional quality because it possesses internal integration and fulfillment reached through ordered and organized movement. This artistic structure may be immediately felt. In so far, it is esthetic (Dewey, 1934, p. 38).

However, readers should keep in mind that, upon entering, the phase of theoretical learning, viewers bring with them a specific vision of the work of art: one that is encapsulated in the constructed knowledge that results from the interaction of mediating knowledge and objectified knowledge. Even in the absence of the physical object, a certain presence of the work of art is conserved by the viewer. The reconstruction of meaning during the second phase of aesthetic learning is never carried out in a vacuum devoid of all reference to the work of art.

Finally, let us consider the possible payoffs that the new model can provide. The model promotes understanding of the art viewing and art understanding process by proposing a kind of cognitive map of the terrain and pathways involved in such activities. Researchers, educators and learners can all profit from this kind of knowledge. For example, it is far easier to plan educational activities for the development of skills in aesthetic appreciation, when educators have a clear idea of the learning objectives that must be met if adult learners are to have successful aesthetic experiences.

Furthermore, the model emphasizes an active approach to aesthetic learning, that meets the needs of adult learners. Rather than becoming the passive recipients of interminable art history
lessons, adults will learn, through a theoretical appreciation as well as a practical application of the model, the skills required for viewing and researching works of art in ways that will maximize their own understanding. Furthermore, the model acknowledges, through its emphasis on mediating knowledge during the first phase of the learning process, the considerable body of knowledge that adults bring with them to their aesthetic encounters. From the very beginning of their involvement in an aesthetic training program, this acknowledgment empowers the adult learner by placing him or her in the position of a knower. Thus, it allows the learner to build on what he or she already knows. It encourages the learner to take charge of his or her own training from a very early point in the learning program.

Finally, the teaching of aesthetic appreciation by adherence to the principles laid out in the model will promote, in the long term, the independent learning of adult viewers. More precisely, the teaching of the theoretical learning phase, as an essential part of the process of aesthetic experience, will ensure that the adult learners exposed to these notions acquire the research skills necessary for the continuous updating of their own skills and knowledge in aesthetic appreciation. In doing so, these learners will act as the guarantors of their own aesthetic development.

Summary

As we saw from my study, the process of aesthetic understanding was the same for both the expert and non-expert informants in one major respect: the psychological operations used by
the informants, in order to create meaning about the works of art, were essentially the same for all regardless of subset membership. However, noticeable differences were found in the content of those operations, especially in regard to the types of information that expert and non-expert participants used to construct an understanding of the works of art. Non-expert informants relied on their experience-based knowledge as the major source of content to fuel their aesthetic experiences, whereas expert informants derived content in large part from their familiarity with disciplinary knowledge (art history, art criticism, art production and aesthetics).

In an attempt to explain these differences in the content of the informants' aesthetic experiences, a prescriptive model is proposed in which aesthetic experience is conceptualized as a type of informed experience. The model proposes two phases of learning. In the first phase of experiential learning, the viewer encounters the work of art using mediating knowledge, a form of experiential knowledge which differs from person to person based on the extent of their previous art viewing experience. The interaction of this mediating knowledge with the knowledge contained in the work of art (objectified knowledge) results in the creation of meaning about the object. This new understanding of the work of art, called constructed knowledge, is used by the viewer during the second phase of learning (theoretical learning) to confront an external body of related theoretical knowledge. As demonstrated in the excerpts provided from a video tape by the expert informant Paul, the process of theoretical learning results in a reconstruction of knowledge about the work of art. This reconstructed knowledge not only expands the viewer's understanding
of the work of art, it also changes the very structure of his body of mediating knowledge in such a way as to favor aesthetic growth and development.
CHAPTER VII

Review of the Research Questions

Thinking calls for images, and images contain thought. Therefore, the visual arts are a homelground of visual thinking.\textsuperscript{48}

--Rudolf Arnheim

Introduction

This chapter is devoted a review of the findings of the study in regard to the four research questions identified and presented in the introduction, Chapter I.

This research project had two overarching objectives: one, the validation of the use of informant-made videos as a source of data for research into adults' aesthetic understanding; two, through a comparison of the aesthetic responses of expert and non-expert viewers, the search for insight into the learning processes involved in adults' aesthetic understanding. Four research questions were formulated in order to operationally define these objectives. In the next few pages, the results of the study will be reviewed in response to these questions.

New Insights into the Process of Aesthetic Understanding

The first goal of the study was to seek new insight into the process underlying adults' aesthetic understanding by comparing the experiences of expert and non-expert informants.

To that end, informants' statements about the works of art were employed as indicators of their thought processes. Discourse analysis

\textsuperscript{48}Arnheim, R., 1969, p. 254.
of these statements revealed that the utilization of psychological operations for the purposes of art appreciation was essentially the same in both the expert and non-expert study groups.

Differences between the two study groups were found in terms of the preferences which different informants had for exploring the meanings of the works of art from either an affective, cognitive or imaginative approach. While members of both study groups used all three domains of psychological experience in their attempts to understand the works of art, expert informants used imagination to a greater extent than the non-experts. The expert informants' greater use of this domain is probably related to their professional training in the arts: such training encourages and reinforces a creative approach to activities like art production and art criticism. Furthermore, although members of both groups generated a number of hypotheses about the meaning of the works of art during their aesthetic encounters, expert informants tended to formulate a greater number of such hypotheses. This is related, no doubt, to expert informants' greater use of the domain of imagination, because the formulation of hypotheses requires the use of imagination. Taken altogether, these differences in domain preference and formulation of hypotheses are probably explained by variances in aesthetic developmental levels among the informants.

The most important difference between expert and non-expert informants to emerge from the informant-made videos was related to the content of the psychological operations deployed in informants' attempts to understand the works of art. In this study, the overall content of the non-experts' aesthetic experiences was found to be
more subjective and related mainly to personal experience. In contrast, the overall content of the experts' aesthetic experiences was more focused on the object, and it related to a greater extent to art world concepts and theories. In particular, one participant (Paul) gave a clear demonstration of the way in which experiential knowledge and theoretical knowledge interact in an aesthetic experience. This discovery led to the development of the theoretical model (discussed above) in an attempt to explain the origins of these differences. The model was also intended to propose ways in which non-experts could be guided in having an aesthetic experience.

Insights Provided by the New Methodology

The second question asked whether a research protocol based on informant-made videos would yield a new understanding of the process of aesthetic experience.

In this regard, the informant-made videos revealed that the way in which an informant approached a work of art was influenced by its scale and physical characteristics. The informant's physical interaction with the work was captured automatically on tape; differences in the way informants interacted with two-dimensional and three-dimensional works were also documented by the video. The audio-tape recording of data cannot provide this kind of visual information. Furthermore, informant-made video methodology is the only electronic-imaging data collection method that can capture this evidence without the intervention of a technician to operate the video cameras.
In addition, informant-made videos were found to provide information about the relationship between the informant's thoughts (as represented by verbal statements) and his or her actions as they unfolded during the course of the aesthetic experience. Some of these actions are, of course, of considerable interest to researchers; they include gestures, changes in posture, changes in the focus of attention, and the trajectories taken when moving through the gallery spaces. However, analytic tools must still be developed in order to systematically analyze these sources of data.

Methodological Effectiveness of Informant-Made Videos

The third research question asked whether informants were actually able to use the camcorder in order to effectively record and communicate their particular understanding of specific works of art.

The comparison of the video-taped and audio-taped sessions of four of the informants, using discourse analysis, validates the use of informants' videos as a means of collecting verbal statements about works of art. The informant-made videos were shown to be equal in this respect to the traditional audio-taped interviewing method. Any differences found between the use of the two instruments were attributable to differences in the works of art selected by the informants.

During the follow-up interviews, informants were asked to comment on the strengths and weaknesses of the two data collection methods used in the study: the audio-taped interviews and the informant-made videos. In response to this request, most the informants reported that producing video tapes about their aesthetic
responses was indeed more difficult than simply responding verbally to the works of art (as they did during the audio-taped interviews). Two informants, Janet (Lachapelle, 1993, pp. 243-246) and Nicole (pp. 101-102), attributed this difficulty to the fact that producing the videos required the simultaneous completion of two different tasks: responding to the works of art and operating the video camera. However, they both found that this became much easier with practice. All informants felt that it was possible to effectively communicate their ideas about the works of art using the camcorder. Mona (pp. 208-211) and Paul (pp. 282-283) felt that each technology presented certain advantages and that, in choosing one method over the other, researchers should be guided by the needs of their research. Paul, Suzie (p. 40) and Diane (pp. 334-337) reported that producing informant-made videos eliminated the need to describe the work of art while responding to it verbally. Julien (pp. 135-136), Janet and Diane felt that the video data was somehow more complete because it provided an image of the work of art in question. Julien also noted that the video provided a record of the changes in his gaze while he was responding to the work of art, and Diane commented on the videos' ability to effectively convey her physical movements. Three informants, Rex (pp. 172-174), Mona and Albert (pp. 303-307) stated that using the camcorder helped them to see differently by providing a focus for their exploration of the art work or by providing a means of psychologically distancing themselves from the work of art. Mona felt that one of the strengths of the video methodology was that it allowed her to review her experiences and to elaborate on them during the follow-up interview. Finally, two informants (Paul and Diane) reported
that their videos had somehow managed to capture and reveal, in visual terms, their mood while they looked at the works of art.

Some informants also commented on some of the weaknesses of the video methodology. Roger (pp. 71-72) and Janet felt that the black and white image provided by the camcorder's viewfinder was a distraction that prevented a full appreciation of the work of art. Roger also felt that the camcorder restricted his gestures and movements. Rex reported being distracted by the loss of peripheral vision that resulted from the use of the camcorder. Finally, Albert commented that he was almost always aware of the camera as an intermediary between him and the work of art, and that he found this distracting.

There can be no doubt that the use of camcorders for the purposes of data collection presents new challenges that researchers will need to address if they are to take full advantage of this new technology. However, solutions to some of the problems encountered during the course of this dissertation research are already on our doorstep. Since I first began this study three years ago, camcorder technology has made great strides. Sharp has introduced a new camcorder model, the Sharp "Viewcam", in which the viewfinder has been replaced by a 4 inch LCD colour video monitor screen. Sony has also innovated camcorder technology with at least two new models, the "Snap" and the CCDTR70. Unlike Sharp's product, these Sony cameras are still equipped with a viewfinder but, instead of the regular black and white version, they come with a full colour LCD viewfinder. Finally, JVC has developed a similar product, the model GRAX70, while Panasonic has developed a new a palmcorder, the PV2Q404K; both of these cameras are also equipped with colour viewfinders.
Adequate training is the solution to many of the problems that are related to ease of use and to comfort in the use of these new technologies. As more and more people become acquainted with the camcorders, the feeling of unfamiliarity and awkwardness that accompanies their use will greatly diminish. An encouraging note is the fact that the training procedures used in this study were far more elaborate than those actually required to adequately prepared the informants for their role as videographers. The training component of the research protocol consisted of a training session in the use of the camera followed by the production of three training videos, of which the last two consisted of taped responses to works of art. As it turned out, the newer model of camcorder selected for use in the study was much easier to operate than the camera used in the pilot studies. Since the camcorder training program was based on the results of the pilot studies, parts of the training program were now redundant. The two last training videos were not really necessary as training exercises: this fact is attested by the quality of these training videos, which turned out to be technically just as good as the final data tapes. This is welcome news. Based on these results, the training portion of the research protocol can be shortened without sacrificing the quality of the final data tapes. For the researcher, the shorter protocol will provide the possibility of working with larger number of informants. For the informants, the shorter protocol will represent a reduced commitment in terms of the time required to complete all of the components of the protocol and, therefore, greater numbers of potential informants will probably be inclined to accept the invitation to participate in future studies.
In considering the feasibility of informant-made videos as a research method, the crucial question remains whether or not the informants were actually able to communicate their impression about the works of art in an effective manner using the video technology. I believe that there is no longer any doubt that the informants were actually able to do this: the informant-made videos presented as an annex to this dissertation clearly demonstrate this. Another important question that still needs to be addressed is whether the inconveniences of the new methodology are offset by the additional gains in information that it provides.

The Usefulness of a Methodology Based on Informant-Made Videos

The fourth and final research question asks how informant-made videos prove useful as a means for studying adult subjects' aesthetic understanding.

Contrary to other means of data collection, informant-made videos provide visual documentation of the work of art to which the informant is responding. This makes the informant-made video recording a complete and coherent body of data. With the exception of biographical information about the informant, no other source of data is required to make sense of the recording. The researcher is not dependent on her or his memory of the session in question in order to interpret the informants' comments about specific aspects of the works of art. The study has shown that the informants spontaneously provide close-ups of those parts of the work to which they refer in their verbal comments. This use of image to accompany
verbal commentary greatly reduces the possibility that the researcher will misinterpret an informant's statements about the work of art.

Informant-made video recordings also provide visual documentation of the informant's physical interaction with a work of art. This kinesthetic information is captured automatically without any effort on the part of the informant. No other single means of data collection can provide a simultaneous record of both the verbal comments of the informants along with these other uniquely visual sources of information. This unique characteristic of informant-made videos provides a basis for multiple methods of data analysis (tracking; discourse analysis; study of gestures and physical relationships) using one single primary source of information.

As demonstrated in this study, a methodology based on informant-made videos provides an instant, yet permanent, visual and audible record of all data collecting sessions. The ease with which this record can be reviewed allows for the possibility of one or more follow-up screenings. These follow-up sessions can be conducted with the informant present for the purpose of clarifying the statements or images captured on the videotape or, again, for the purposes of exploring new insights into the works of art. Based on the use of follow-up sessions in this study, as well as in some of my previous research, I can report that these sessions are much more fruitful when a certain period of time has elapsed between the production of the informant-made video and the subsequent follow-up interview. Therefore, I recommend that a time period of between 3 to 7 days be allowed to elapse before the follow-up session is held. This amount of time between data collecting session seems to favor the emergence of
additional insights about the works of art featured in the informants' videos. It has also been demonstrated that follow-up activities, in which the informants views their own videotapes, can promote informants' awareness of their own art viewing processes. These could, therefore, prove useful as a pedagogical technique in the teaching of aesthetic appreciation. Here is an example to illustrate what I mean. Participants, in an aesthetic appreciation workshop, could be asked to produce videotapes about works of art in much the same manner as was done in this study. By reviewing their tapes and discussing them with their instructor, participants will probably become aware of any recurring habits in their approach to viewing works of art. If these habits are understood to be useful, the learner may choose to emphasize them in future sessions. However, if they are deemed to hinder understanding, then learners will probably attempt to eliminate them by developing new, more useful, ways of exploring the art object.

Finally, the fact that informant-made videos are self-contained as a form of documentation about aesthetic experiences provides the possibility of establishing data banks for the purposes of research. With the proviso that researchers use the same protocol to collect their data, they could then pool their data tapes in order to create a larger and richer common resource to support and sustain any number of independent studies on various aspects of aesthetic experience. This is, I believe, one of the very real potentials of the new methodology developed during this dissertation.
Summary

In this chapter, the findings of the study were reviewed in response to the four research questions presented in the first chapter of the thesis.

The first question asked whether new insight into the process underlying adults' aesthetic understanding would be found by comparing the aesthetic experiences of expert and non-expert informants. The study revealed that, in their attempts to understand the works of art, expert informants used imagination to a greater extent than the non-experts. Comparison of the two groups also revealed differences in the content of the psychological operations used by each subset of informants: the non-experts' responses to the works of art were found to be more subjective and related to personal experience, whereas the experts' experiences were more focused on the object and related, to a greater extent, to art world concepts and theories.

The second research question asked whether a research protocol based on informant-made videos would yield a new understanding of the process of aesthetic experience. The informant-made videos revealed that the way in which an informant approached a work of art was influenced by its scale and other physical characteristics. The videos were also found to provide information on the relationship between the informants' thoughts and actions while responding to the works of art.

The third question addressed the effectiveness of informant-made videos. It asked whether informants were actually able to use the camcorder in order to effectively record and communicate their
particular understanding of specific works of art. The results of the study validate the use of informants' videos as a means of collecting their verbal statements about the works of art: informant-made videos were shown to be equal in this respect to the traditional audio-taped interviewing method.

The fourth and final research question asked how informant-made videos prove useful as a means of studying adult subjects' aesthetic understanding. Contrary to other means of data collection, informant-made videos provide visual documentation of the work of art to which the informant is responding. Informant-made video recordings also provide visual documentation of the informant's gestures and movements in the course of his or her physical interaction with a work of art. Finally, the ease with which the video recordings can be reviewed, by researcher and informant together, allows for the possibility of follow-up interviews in order to gather additional data about informants' experiences.
CHAPTER VIII

Conclusions

Ring the bells that still can ring.
Forget your perfect offering.
There is a crack in everything.
That's how the light gets in\textsuperscript{49}.

---Leonard Cohen

Introduction

In the previous chapter, some of the principal findings of the study were discussed in the form of a review of the four research questions that were formulated at the beginning of the research project. However, this review did not address another significant and unexpected finding of the study: the Model of Aesthetic Understanding as Informed Experience. This model evolved from the data collected during this research project. Therefore, in this last chapter, I will summarize the findings as they relate to the model. I will also make recommendations for additional research, and I will address the implications of the present study for the education of adult museum visitors.

The Model of Aesthetic Understanding as Informed Experience

The Model of Aesthetic Understanding as Informed Experience was formulated as an explanation for the principal findings of the study. These findings can be summarized as follows: (1) the process of aesthetic understanding, as revealed by informants' use of psychological operations in order to create meaning about the works

\textsuperscript{49}Cohen, L., 1992.
of art, was essentially the same for all informants regardless of subset membership; (2) nonetheless, noticeable differences were evident in the informant-made videos which led to an investigation of the content of the psychological processes used for the purposes of aesthetic understanding. This inquiry led to the conclusion that, although the expert and non-expert participants used the same operations to construct meaning about the works of art, their efforts to construct an understanding were based on different types of information. In these endeavors, expert informants relied mainly on disciplinary-types of knowledge, such as art history and art production, whereas non-expert informants turned, to a greater extent, to knowledge based on personal experience.

In order to explain these differences in the content of expert and non-expert informants' aesthetic responses, the Model of Aesthetic Understanding as Informed Experience proposes that aesthetic understanding be conceptualized as a type of informed experience. Central to this notion is the idea that the viewer's encounter with a work of art depends upon the interaction of a number of different types of knowledge. The model identifies these bodies of knowledge, and it explicates how they interact, within a learning process, to foster the creation of meaning about the work of art.

The model proposes that the process of aesthetic understanding includes two phases of learning. In the first phase of experiential learning, the viewer encounters the work of art using mediating knowledge, a form of experiential knowledge which differs from person to person based on the extent of their previous art
viewing experience. The interaction of this mediating knowledge with the knowledge contained in the work of art (objectified knowledge) results in the creation of meaning about the object. This new understanding of the work of art, called constructed knowledge, is used by the viewer during the second phase of learning (theoretical learning) to confront an external body of related theoretical knowledge. The process of theoretical learning results in a reconstruction of knowledge about the work of art. This reconstructed knowledge not only expands the viewer's understanding of the work of art, it also changes the very structure of his or her body of mediating knowledge in such a way as to favor aesthetic growth and development.

The Model of Aesthetic Understanding as Informed Experience provides a functional explanation of the observations made during the course of this research project. It describes how the aesthetic experiences of expert and non-expert informants differed according to the content of some of the types of knowledge used in their respective encounters with works of art. However, it also explains that the process of aesthetic understanding was similar in both groups in one important respect: it is through a learning process based on the interaction of knowledge that all informants were able to create meaning about the art objects.

Recommendations for Additional Research

Additional research will be required to confirm the validity of the model as it pertains to other examples of viewers' encounters with works of art in various settings and situations. Additional research
should also be undertaken to establish the reliability of the model for use both in educational practice and inquiry by other researchers and educators. Further to these recommendations regarding the validity and reliability of the model, a number of other concerns have emerged from this research project that are worthy of more investigation.

As mentioned in the review of findings in regard to the third research question, the protocol used in conducting this study was far more elaborate that actually required. Therefore, another recommendation for additional research is to call for the pilot testing of a much shorter protocol which consists of a video training session, a non-art video training exercise, followed by the production of two in-gallery data videos according to the procedures outlined in Chapter 2. Since this revised protocol also yields two final data tapes, in future studies, the best of these two videos should be selected as the set of data for transcription and analysis.

It is also recommended that an instrument be developed for the analysis of the kinesthetic information contained in the video tapes. The informant-made videos produced during the course of this study can be used for that purpose. An inductive analysis of a few tapes can be used to generate categories for the development of a prototype for the instrument. Once the researcher is satisfied that the prototype of the categories of kinesthetic information is applicable to a variety of informant-made videos, validation of the instrument can proceed. It is recommended that validation and reliability tests be carried out by a panel of external judges using the standard and accepted procedures for such purposes.
So far, the use of a research methodology based on informant-made videos has been restricted to very limited situations. Studies should be carried out to determine the feasibility of using the approach to study the aesthetic experiences of true novices: that is, with adult informants with no prior history of art gallery visits or art training. To make the transition to the very public arena of the fine art museum easier for these informants, it is recommended that each novice informant first produce data tapes about works of art in a private setting. Once the novice informant is comfortable with the operation of the camcorder and the data collection procedures of the study, then the production of video-taped responses can move into the realm of the public museum.

Likewise, it would be interesting to test the possibilities of using the methodology with other age groups. It is unlikely that a methodology based on informant-made videos would be suited to studies with children, but it may prove extremely useful in studying the aesthetic experiences of adolescents. A number of short pilot projects with informants from various age groups would be useful in establishing the boundaries within which a methodology based on informant-made videos can be successful.

During the course of data collection for this study, we have seen that non-expert informants have sometimes devoted considerably more time (than the expert informants) to the process of selecting art objects for use in the various exercises called for by the study protocol. This observation raises the possibility that the amount of time spent by an informant on the task of selecting an artwork is somehow related to the determinability of an exhibition relative to that informant. If an
informant spends more time, than other informants, in selecting an artwork for contemplation, does this mean that the disparity between his or her viewing skills and the aesthetic challenge proposed by the exhibition is greater? Further research is required in order to answer this question. Additional study may also determine whether the amount of time spent by informants in making such selections can provide an objective measure of the determinability of certain exhibitions relative to specific audiences, such as expert and non-expert viewers.

In this dissertation, I have argued for the need to provide museum visitors with more in-gallery information, about the works of art on display, in order to promote and sustain their aesthetic experiences. Further research is required in order to determine more precisely the impact of the presence or absence of such information on the aesthetic experiences of visitors. This research should also attempt to determine the relative usefulness of different forms of in-gallery information, such as extended labels, wall text, paddle boards or CD-ROM technology.

Finally, the model of Aesthetic Understanding as Informed Experience, presented in Chapter 5, should be tested in educational trials in order to determine its suitability for the purposes of teaching aesthetic appreciation to adult museum visitors. Because of the nature of the model, the fine art museum is the ideal setting for these trials, but testing of the model could also be undertaken in high schools, colleges and universities if access to a collection of original works of art is possible. These experiments should attempt to translate the model into a series of exercises that would embody its various phases
of aesthetic learning. In order to guarantee the usefulness of these trials as tests of the efficacy of the model, the protocols developed for this undertaking will need to include a number of means for evaluating the trials. The success or failure of the endeavor should be determined by the extent to which participants report an increase in aesthetic understanding and enjoyment as a direct result of their participation in these trials.

Implications for Museum Education

Many of the non-expert informants who participated in this study are occasional visitors who, under normal circumstances, will visit the museum once or twice a year. They are well educated, and they already master the basic skills for viewing and understanding works of art. Yet, they don’t visit the public art gallery as often as they could, and when they do, they probably experience some frustration at not being able to relate to many of the works of art encountered. In fact, during the field work for this study, I observed that the non-expert informants would sometimes spend considerable amounts of time (30 or 40 minutes) searching, often through gallery after gallery, for works of art to select for the production of their informant-made videos. This is a measure, I think, of the principal reason why non-expert viewers visit public art galleries so rarely: they may feel that they have intellectual access to only a few of the art works on display there.

The segment of the population, to which the occasional viewer belongs, represents a prime target for museums wishing to expand their audiences. Furthermore, this potential audience is within
realistic reach. However, in order to establish a contact with occasional visitors and win them over as regular and loyal visitors, museums will need to meet their needs as viewers. Guided tours and lectures, while informative, do not provide the kinds of formative experiences that occasional visitors need to extend the reach of their aesthetic understanding. In order to contend successfully with a greater range of works of art and in order to begin to understand contemporary art in particular, the occasional visitor needs training to develop interactive strategies for looking at works of art and for understanding them. A series of unrelated one-shot activities does not constitute a training program. Museums must begin to offer courses that focus specifically on developing the viewing skills of their occasional visitors. The model of Aesthetic Understanding as Informed Experience provides a solid basis by which museums can begin to accomplish this goal.

In addition, many public art galleries still do not provide, for the benefit of their visitors, enough quality information about the works of art on display in their galleries. The mistaken belief that "the work of art can speak for itself" is still widely held by numerous museum professionals. The model presented in this dissertation provides the means for conceptualizing the role of theoretical knowledge in the process of aesthetic understanding, and it provides a forceful argument for the provision, in all of the museum's installations, of more information related to the works of art. This is another important way in which visual art museums can better meet the needs of their audiences.
The Ideal Aesthetic Experience

The findings of this research project indicate that the differences that exist between the two study groups are not as great as originally anticipated. Both groups of informants had already mastered the psychological skills required to effectively engage in an aesthetic dialogue with the art object. However, major differences were found in the content of that dialogue. Non-expert informants relied mainly on their personal experiential knowledge as the source of content with which to construct aesthetic understanding. In contrast, expert informants created meaning about the work of art by mainly exploiting the body of disciplinary knowledge which they had acquired during their professional training.

In order to avoid oversimplifying the aesthetic experiences of either of the two study groups, I wish to make clear that neither group constructed meaning about the works of art in any way that could be described as one-dimensional. Sometimes, the expert informants also made use of personal experiences in their attempts to understand the works of art, just as the non-experts would also occasionally exploit whatever art production or art historical knowledge they had.

It would be a mistake, I believe, to conclude from the findings of this study that the "best" aesthetic experience is somehow embodied in a strictly disciplinary approach to aesthetic understanding. This conclusion would invalidate the aesthetic experiences of the non-expert informants. My experience as a museum educator and as researcher into aesthetic experience does not support such a point of view: the aesthetic experiences of non-experts can be just as intense and satisfying for them as are those of
expert viewers. However, it would be just as erroneous to assume that
the opposite is true: that, within the realm of aesthetic experience,
"anything goes". These observations should bring us to question what
exactly constitutes an "ideal" aesthetic experience.

Nous sommes tous des individus, des *moi* ici et maintenant, et ce n'est pas cette *particularité* qui nous différencie les uns des autres. Dans l'espace de réflexion ouvert par la *Critique de la faculté de juger* [Kant, 1790] et repris par le romantisme allemand, l'individu véritable ne saurait résider que dans la synthèse d'une particularité concrète avec l'universel. Il faut, pour que l'individu apparaîsse comme tel, qu'il soit tout à la fois riche d'un contenu singulier et pourtant *générisable*. C'est à ce prix, et à ce prix seulement, que l'exigence d'authenticité peut être maintenue. L'individu ressemble alors à cet *idéal* dans lequel l'esthétique hégélienne désignait le sommet de l'art. Entendue en ce sens, elle ne se réduit en rien au n'importe quoi du consumérisme, à cette liberté arbitraire qui consiste à faire « ce que l'on veut » (Luc Ferry, 1990, p. 346).

The model of Aesthetic Understanding as Informed Experience
presented in the previous chapter explains that the meaning of the
work of art is constructed by the viewer through a series of
interactions with different bodies of knowledge. An aesthetic
experience is an extremely complex learning experience from which
emerge two different kinds of meaning about the art object: personal
meaning and social meaning.

The personal meaning of the work of art is the result of the
experiential learning phase of the aesthetic understanding process,
and it is, in many ways, the viewer's own private understanding of the
art object. This personal meaning of the art object is highly valued by
the viewer precisely because it forges a connection between the object
and the viewer's own life experience. It is this potential for the construction of personal meaning that provides us with the motivation to engage in aesthetic experiences. The promise of a personal dimension for aesthetic experience is what attracts us to the work of art in the first place. It provides the initial determinability required in order to initiate an aesthetic encounter, and its power to engage and involve the viewer should not be underestimated by the museum educator.

The social meaning of the work of art arises from the learner's exposure to disciplinary knowledge during the theoretical learning phase of aesthetic experience. The ability of a work of art to convey a message for which there is some degree of consensus resides precisely in its social meaning. The social meaning of the work of art is constructed through a process of public dialogue about the work of art. Art professionals play a major role in the construction of the socially-shared meaning of the work of art because of the influence that their professional activities (exhibitions, publications and lectures) exert on the creation of theoretical knowledge about the work of art. To a lesser extent, every viewer participates in the construction of social meaning through their exchanges about the work of art with friends and colleagues.

The fullest and richest meaning of a work of art is the result of a combination of personal and social meaning. With this combination, the work of art achieves its greatest potential as an aesthetic object: it moves us on a personal level, at the same time that it communicates on a social level. In this perspective, the extent of the quality of an aesthetic experience can be defined as a continuum that ranges from
the strictly personal (at one end of the continuum) to the strictly social (at the other end). The middle of the continuum is where aesthetic experience is the richest; here, it transcends the isolation of the private and the alienation of the public to become a truly shared experience that brings the individual and the society together. This is why experiencing a work of art for oneself is so important: reading or hearing about it will not suffice to bring about this depth and breadth of aesthetic understanding. Likewise, when we restrict our aesthetic experiences to only the private realm, we are cheating ourselves of the potentially highly rewarding social dimensions of the experience.
REFERENCES


APPENDICES
APPENDIX 1

BARRETT'S (1986) TYPOLOGY FOR THE ANALYSIS OF PHOTOGRAPHS

Barrett's typology consists of six "discreet and conceptually distinct" categories. (Barrett, 1986, p. 55). Using this instrument, photographs can be classified into specific categories according to their salient features. The six categories are: 1) descriptions, 2) explanations, 3) interpretations, 4) ethical evaluations, 5) aesthetic evaluations, and 6) theoretical photographs (Barrett, 1986, pp. 55-59).

Descriptions.

Photographs that qualify as descriptions are "visual recordings of empirical qualities and quantities, and are meant to be interpretively and evaluatively neutral. Their makers attempt no more than accurate recordings of objects and events onto photographic surfaces" (p. 55). Examples of descriptive photographs include photographs for identification cards, the x-rays used in medical diagnosis and the reproduction of works of art using slides. Equivalent examples of videos that qualify purely as "descriptions" include the video recordings made by a surveillance camera installed in a bank for security purposes, and the recordings made by researchers, using fixed automatically-operated video cameras, for the purpose of collecting data during experiments with live subjects.

Explanations.

Photographs that can be classified as explanations are "expressly made to explain, or are made to function as visual
explanations.... Individuals making photographic explanations attempt objectivity in explaining how things are.... The photographs are falsifiable in that potentially they could be empirically demonstrated to be true or false, accurate or inaccurate. These photographs are like empirical claims in language which seek to explain: all of them can be, or at least potentially could be, further verified or refuted through more testing procedures" (p.56). Barrett gives, among others, the following examples for this category: the animal and human locomotion studies conducted by researchers using photography in the late 19th century (Muybridge, 1887 and Marey, 1883, 1895); the use of photography by contemporary social scientists engaged in conducting visual sociology, visual anthropology, and visual ethnography. Equivalent examples of videos or film that qualify as explanations include videos that present and explain a specific process, such as the fabrication of a sculpture cast in bronze or, again, the ethnographic films made, since the early part of this century, by various anthropologists and ethnographers. Classic examples of such films include Robert Flaherty's *Nanook of the North* (1922) and Gregory Bateson and Margaret Mead's six films on the Balinese, edited and released in 1950 (Heider, 1976, p.28). Journalistic news reports are also good examples of videos, that can be classified in this category, because these reports usually attempt to explain current events from an objective point of view.

**Interpretations.**

"Interpretive photographs are nonfalsifiable explanations which are analogous to metaphysical claims in language in that their makers
use them to make assertions about the world independently of empirically verifiable evidence. Interpretive photographs depict an intentionally subjective understanding of phenomena and generally point up the world-views of the photographers who made them" (pp. 56-57). Barrett claims that much of the work that is classified within this category is artistic in nature. He gives as an example for this category Duane Michaels' *The Spirit Leaving the Body* (1968). This work consists of a group of eight double-exposure photographs depicting the progressive departure of a soul from the body of a man following death (p. 56). In the form of a video or film, an equivalent example would consist of a purely imaginative presentation of an event or experience, whether real or fictional in origin. Examples of such films include Norman McLaren's *Pas de deux* (Canada, 1967) and Jean Cocteau's *Le sang d'un poète* (The Blood of a Poet) (France, 1930).

**Ethical evaluations.**

According to Barrett, ethical evaluations "always describe, often attempt to explain, but also and most importantly imply moral judgments, generally depicting how things ought or ought not to be" (p. 57). For this category, Barrett gives the example of photographic advertisements which, for the most part, attempts to convince consumers that the particular lifestyle presented is highly desirable. He also cites, among others, the example of the photographic work of the artist Hans Haack which exposes and criticizes the hypocrisy of large corporations who, while engaged in business practices that are harmful to the environment or exploit workers, enhance their public images through corporate support of the arts or of other highly visible
and worthwhile causes. Television commercials are examples of videos that can be classified in this category. Another type of video exemplifying this category consists of exposés in which the filmmaker makes a strong argument in favor of his or her particular point of view on a specific subject and, in the process, attempts to convince others that this perspective is the only correct position to adopt on this particular issue. Examples include many of the episodes of the CBC series *The Nature of Things*, hosted by biologist Dr. David Suzuki, in which the argument is repeatedly made for an environmentally sensitive approach to science and industry.

**Aesthetic evaluations.**

Photographs that belong to this category are intended mainly as means of engaging the viewer in aesthetically pleasing experience. "These photographs function as visual notifications that the photographer deems certain people, places, objects or events intrinsically worthy of aesthetic apprehension; or they function as notifications that the *photographic presentation* of people, places, objects, or events is worthy of aesthetic apprehension" (p.57). This is the category of very familiar types of photographs: "pristine landscapes, solitary cityscapes, nameless nudes, and details of the world transformed into visually stimulating graphic images" (p.58). Equivalents in the world of video consist of some music videos, where unusual settings, creative camera work and fast-paced editing are used to produce an aesthetically pleasing and interesting vehicle that promotes an equally savoury pop song. Some of the informants' first training videos, produced during the course of this study, had all of
the qualities of an aesthetically evaluative video. One example is the training video made by Diane. She did an extremely beautiful tape about the effects of light and shadow that resulted from the interplay of architectural elements (such as columns and window frames) and sunlight pouring in from large glazed-in surfaces and skylights into the public spaces at the National Gallery of Canada.

Theoretical photographs.

Barrett defines theoretical photographs as photographs that are not about "people, places, object, or events in the world but are about art or photography. They function similarly to meta-language in verbal language or metacriticism in art discourse. They generally are made to address issues about photography, or issues about photographs, functioning as visual commentary or as visual art criticism. More simply, they are art about art or photographs about photography" (p. 58). Barrett cites Les Krim's book, Making Chicken Soup (1972) in which the photographer uses a photographic essay about the common practice of trying to cure illness with chicken soup as a metaphor for the ill-fated attempts of some photographers (those concerned with social issues) to use photography as a means of solving social problems. Krim's work addresses, therefore, the theoretical problems of some attempts to redefine the disciplinary boundaries of photography. A video, that could be classified as a theoretical video would probably address major theoretical issues relating to the practice of video production. For example, such a video might questions the epistemological limits and the validity of videos, and video production itself, as a form of knowledge and as a form of knowledge seeking
behavior. The best example of this comes from one of the study's informants, Paul. Paul made a video about Krzysztof Wodiczko's *Projections on Venice* (1986), a photographic installation which criticizes the invasion of Venice by tourists each year by comparing it to a military invasion. In parts of his video, Paul takes us on a guided tour of Venice via Wodiczko's photographs. Through his creative use of the video camera, Paul makes us aware of the parallel between his activity as a filmmaker and Wodiczko's activity as a photographer moving about the streets of Venice, from one architectural monument to another, very much like the tourists Wodiczko wants to criticize. Paul manages to subvert Wodiczko's message by making us aware of the incongruity of the artist's pictorial argument, and by making us aware of the various levels of photographic representation within Wodiczko's installation and within his own video about the installation.
Appendix 2
USE OF TECHNIQUES AND PATTERNS
IN INFORMANTS' VIDEOGRAPHY

The results of the analysis of informants' use of *filmmaking techniques* reveals that all informants had a preference for using certain techniques over others during the production of their videos. These preferences do not seem to be dictated by subset membership; rather, they seem related to personal preferences and to the nature of the works of art selected as topics for the videos.

For example, in addition to zooms, Rex used large numbers of pans (4.74/minute) and travels (2.03/minute) during the production of his videos, because this was the best or perhaps the only way to present an overall view of the two sculptural installations presented in his videos. Both of these works of art consisted of numerous components spread out over a large area of floor space. Therefore, his technical approach was well suited to his subject matter. Rex's use of pans and travels gives the viewer of the video a real sense of how he moved among and along these various sculptural components. Zooms alone could not adequately convey this information.

Another non-expert participant, Suzie, used pans (1.38/minute), zoom-ins (.74/minute) and zoom-outs (.52/minute) quite sparingly when compared to the other informants in her group. Her use of these operations was well below the group averages of 2.24/minute, 1.18/minute and .94/minute respectively. Roger used more zoom-ins (2.25/minute) and zoom-outs (1.75/minute) than any other non-expert informant. Nicole's use of filming operations stands out because she did not use any zooms in the actual taping of her
videos. Instead, she adjusted her shot ranges off-camera in between edits, so that each new sequence in her videos begins with a different pre-determined shot range. In this way, she was able to completely avoid using zooms in her videos. She preferred to use pans (1.74/minute), travels (.79/minute) and edits (.48/minute) as production techniques instead of zooms. Finally, Janet used almost equal numbers of zoom-ins (1.64/minute), zoom-outs (1.46/minute) and pans (1.55/minute) in the production of her videos. Along with Nicole, she was the only other non-expert informant to use in-camera edits in the production of her tapes, and she was by far the greatest user of edits (.73/minute compared to Nicole's .48/minute). Overall, the non-experts used mostly intermediate-range shots (1.04/minute on average) and close-ups (.85/minute on average) when filming their video tapes. One exception was Janet who, like the other informants in her group, also used a lot of intermediate-range shots. However, contrary to her group mates, also used a large number of long shots (1.55/minute). Her preference for these two shot ranges seems to suggest that she prefers to stand well back from a work of art when looking at it.

Among the group of expert informants, Julien demonstrated a preference for pans (1.92/minute) and zoom-ins (1.05/minute). He used equal number of zoom-outs and edits (.70/minute) and very few travels (.09/minute). Mona, like Julien, also used large numbers of pans (1.86/minute). She also made extensive use of in-camera edits (1.41/minute). This reflects her particular approach to filmmaking in which she would tape a segment, shut off the camera (thus producing an edit) and, then, think about the content of next segment before
taping it. Paul used more than twice as many pans (2.29/minute) as he did zoom-ins (.95/minute) which were his next preferred filmmaking technique. He also used almost as many zoom-outs (.89/minute) as he did zoom-ins. Albert's use of filming operations stands out from that of the other expert informants in that he used far less operations in producing his videos than did his group mates. Albert used more zoom-ins (.84/minute) than the average for the expert group (.76/minute). On the other hand, he used less zoom-outs (.42/minute), pans (.70/minute), and edits (.42/minute) than the averages for the group. Diane used large numbers of pans (2.00/minute) and edits (1.33/minute) in producing her videos. Like for the non-expert informant Rex and the expert informants Mona and Paul, her extensive use of pans seems related to her choice of subject matter: a sculptural installation by artist Greg Snider.

By analyzing the sequential arrangement of videographic techniques used by the informants in producing their two data videos, it is possible to identify, for each informant, a number of patterns in their use of filmmaking techniques. The table, on the following page, presents the patterns identified for each informant as well as the frequency with which each pattern was used.

Most informants relied predominantly on two basic patterns of filmmaking techniques, which they tended to use over and over again. When an informant used more than two basic patterns, the frequency with which they used each additional pattern dropped noticeably after the second pattern. For example, Diane (informant no. 10) used
TABLE 15
FILMMAKING PATTERNS USED BY EACH INFORMANT

<table>
<thead>
<tr>
<th>NON-EXPERT INFORMANTS</th>
<th>PATTERN 1</th>
<th>N</th>
<th>PATTERN 2</th>
<th>N</th>
<th>PATTERN 3</th>
<th>N</th>
<th>PATTERN 4</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ZI - P(n) - ZO</td>
<td>8</td>
<td>ZI - P</td>
<td>2</td>
<td>--</td>
<td></td>
<td>--</td>
<td></td>
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<tr>
<td>2</td>
<td>ZI - ZO</td>
<td>10</td>
<td>ZI - ZO - P</td>
<td>8</td>
<td>ZI - P - ZO</td>
<td>3</td>
<td>ZI - ZO - T</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>T - P(n)</td>
<td>7</td>
<td>E - P(n)</td>
<td>4</td>
<td>--</td>
<td></td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>ZI/ZO - P(n)</td>
<td>18</td>
<td>T - P(n)</td>
<td>11</td>
<td>P - T - P</td>
<td>2</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>ZI - ZO</td>
<td>7</td>
<td>E - ZI/ZO</td>
<td>6</td>
<td>ZI - P(n) - ZO</td>
<td>4</td>
<td>ZI - P</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPERT INFORMANTS</th>
<th>PATTERN 1</th>
<th>N</th>
<th>PATTERN 2</th>
<th>N</th>
<th>PATTERN 3</th>
<th>N</th>
<th>PATTERN 4</th>
<th>N</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>ZI - ZO - P(n)</td>
<td>11</td>
<td>E - P(n)</td>
<td>3</td>
<td>--</td>
<td></td>
<td>--</td>
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<tr>
<td>6</td>
<td>E - P(n)</td>
<td>19</td>
<td>E - P(n) - ZI</td>
<td>3</td>
<td>ZI - P</td>
<td>2</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>ZI/ZO - P(n)</td>
<td>15</td>
<td>E - P(n)</td>
<td>6</td>
<td>ZI - ZO</td>
<td>2</td>
<td>ZI/ZO - T - P(n)</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>ZI - ZO</td>
<td>3</td>
<td>--</td>
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<tr>
<td>10</td>
<td>E</td>
<td>9</td>
<td>ZI/ZO - P(n)</td>
<td>5</td>
<td>E - P(n)</td>
<td>1</td>
<td>E - T(n)</td>
<td>1</td>
</tr>
</tbody>
</table>

Legend:
- ZI = zoom-in
- ZI/ZO = zoom (in or out)
- E = edit (in-camera)
- T = travelling with the camera
- P = camera pan

(n) = a number consisting of one or more units of a particular filmmaking technique

N = the number of times the patterns was used by the informant

her first pattern nine times, the second five times, and the third and fourth only one time each.

Each informant tended to have his or her own unique patterns for using the various filmmaking techniques. Among the non-expert informants, Suzie (informant no. 1) used her preferred pattern a total of 8 times. It consisted of a zoom-in, followed by one or more pans,
followed by a zoom-out. This is expressed as “ZI - P(n) - ZO” in the Table of Filmmaking Patterns. The second pattern she used consisted of a zoom-in followed by a pan (ZI - P). She used this pattern twice. Roger used a pattern, consisting of a zoom-in followed by a zoom-out (ZI - ZO), a total of 10 times. He used the pattern of a zoom-in, followed by a zoom-out, followed by a pan (ZI - ZO - P), 8 times. He also used a third pattern (ZI - P - ZO) 3 times and a fourth pattern (ZI - ZO - T) 2 times. Informant no. 3, Nicole, used two patterns: a travel followed by one or more pans, which was used 7 times and an in-camera edit followed again by one or more pans (4 times). Rex, informant no. 5, employed three patterns. The first, a zoom (in or out) followed by one or more pans, was exploited 18 times, and the second, a travel followed by one or more pans, 11 times. Finally, he twice used the pattern consisting of two pans separated by a travel. Janet, informant no. 7, used four patterns 7, 6, 4 and 3 times respectively. The first pattern was a zoom-in followed by a zoom-out; the second, an edit followed by either a zoom-in or a zoom-out; the third, a zoom-in followed by one or more pans followed by a zoom-out; the fourth, a zoom-in followed by a pan.

The expert informants also tended to rely on patterns when using various filmmaking techniques. Julien, informant no. 4, used the pattern ZI - ZO - P(n), a zoom-in followed by a zoom-out followed by one or more pans, a total of 11 times. He used his second pattern, an edit followed by one or more pans, 3 times. Informant no. 6, Mona, used one particular pattern extensively. It was made up of an edit followed by one or more pans. She used it a total of 19 times. Her second pattern, an edit followed by one or more pans followed by a
zoom-in, was used 3 times. Her third and last pattern, ZI - P, was used 2 times only. Paul, informant no. 8, used the pattern ZI/ZO - P(n), consisting of a zoom (in or out) followed by one or more pans, a total of 15 times. He used his second pattern, an edit followed by one or more pans, 6 times. His third and fourth patterns were used twice each only. Informant no. 9, Albert, was the only informant to use very few patterns in his technical approach to filmmaking. The only pattern identified in his case was a zoom-in followed by a zoom-out, which he used only 3 times. Finally, informant no. 10 (Diane) used a simple in-camera edit as her most frequently used technique (9 times). She also used a pattern consisting of a zoom-in or a zoom-out followed by one or more pans [ZI/ZO - P(n)] a total of 5 times. Two other patterns were also identified but she used these only once each.

Some patterns were indeed used by more than one informant. This is the case with the pattern "ZI - ZO" (a zoom-in followed by a zoom-out) which was the preferred pattern of two non-experts and one expert (informants no. 2, 7 and 9). This was also the third pattern used by informant no. 8. The pattern E - P (n) (an edit followed by one or more pans) was the pattern used by the largest number of informants (five) including informants numbers 3, 4, 6, 8 and 10. The pattern zoom-in/pan/zoom-out was used by three informants (1, 2 and 7), as was the pattern zoom-in or zoom-out followed by one or more pans (informants no. 5, 8 and 10). Three other patterns were used by two informants each: ZI - P [informants 1 and 6], ZI - ZO - P(n) [informants 2 and 4], and T - P(n) [informants 3 and 5].
One difference between expert and non-expert informants in their use of filmmaking techniques is that four of the five expert informants mainly used one filmmaking pattern while four of the five non-expert informants mainly used two filmmaking patterns.
APPENDIX 3
WORD COUNTS BASED ON THE VERBAL TRANSCRIPTS
OF EACH RESPONDING SESSION

The word counts were conducted by using the transcripts of the audio-taped verbal responses and the informant-made video responses to the various works of art. The counts were conducted using Microsoft Word 4.0 software for the Macintosh computer. However, before the counts were done, a copy of each transcript was purged of parenthetical information and of all other discourse that was not directly attributable to the informant in question. Examples of deletions include any questions addressed to the informant by the researcher and numerical annotations regarding the duration of the tapes. The modified transcripts were then subjected to word counts using the software indicated above. The table on the next page presents the combined results of the two sets of audio and video tapes for each informant and compares them.

Results of the words counts for the informants in the non-expert group varied considerably. The range of the change in the number of words-per-minute used, when videotapes are compared to audiotapes, extends from a drop of 4.67 words-per-minutes for Janet to an increase of 19.58 words-per-minute for Suzie. Roger also used more words-per-minute (10.84) in his videotapes than in his audiotapes. However, Nicole's use of language changed very little (1.00 more words-per-minute in the video tapes), and Rex's changed only moderately (5.44 more words per minute).
<table>
<thead>
<tr>
<th>A) NON-EXPERTS INFORMANTS</th>
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<tbody>
<tr>
<td><strong>INFORMANTS</strong></td>
</tr>
<tr>
<td>Suzie (1)</td>
</tr>
<tr>
<td>Roger (2)</td>
</tr>
<tr>
<td>Nicole (3)</td>
</tr>
<tr>
<td>Rex (5)</td>
</tr>
<tr>
<td>Janet (7)</td>
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<tr>
<td>Group Averages</td>
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</tbody>
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<table>
<thead>
<tr>
<th>B) EXPERT INFORMANTS</th>
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<tbody>
<tr>
<td><strong>INFORMANTS</strong></td>
</tr>
<tr>
<td>Julien (4)</td>
</tr>
<tr>
<td>Mona (6)</td>
</tr>
<tr>
<td>Paul (8)</td>
</tr>
<tr>
<td>Albert (9)</td>
</tr>
<tr>
<td>Diane (10)</td>
</tr>
<tr>
<td>Group Averages</td>
</tr>
</tbody>
</table>
A marked drop in the use of language can be detected in the videos of four of the five expert informants. Diane demonstrated the greatest change; she used 23.06 less words-per-minute in her videos than in her audio-taped responses. This dramatic decrease is due, in large part, to a number of very salient non-narrated segments, which were included quite intentionally in the videos. Mona, Paul and Albert also used noticeably less speech in the making of their videos with drops of 15.88, 11.71 and 19.45 words-per-minute respectively. On the other hand, Julien differed from his colleagues in the expert group, in that the use of discourse in his videos actually increased by 20.93 words-per-minute.

When the average word counts for the expert and non-expert groups as a whole are compared, a very interesting phenomenon is detected. First, by comparing the group averages for the audio-taped responding sessions, it becomes apparent that the expert informants talked more (131.59 words-per-minute) during these sessions than the non-expert group (115.20 words-per-minute). The difference is 16.39 words-per-minute. However, this difference disappears when the group averages for the informant-made videotapes are compared. The expert group average for the videos is 121.77, while the non-expert group average is 121.64: a difference of only .13 words-per-minute in favor of the experts. What has in fact happened is that, as a group, the non-experts have increased their rate of speech by an average of 6.44 words-per-minutes during the making of the videos, while the expert informants, as a group, have slowed down their speech by, on average, 9.83 words per minutes. These changes cancel
each other out and, as a result, the rate of speech for both groups is the same in the informant-made videos.
APPENDIX 4

DUFRESNE-TASSÉ’S (1991) DISCOURSE ANALYSIS INSTRUMENT

Definitions that follow for the twelve operations included in the instrument are translations by the author from the original French text (Dufresne-Tassé & Lefebvre, 1993, pp. 30-33). Examples given are translations and/or adaptations, by the author, also from the original text. The twelve operations are:

1. To Manifest⁵⁰

To express one's feelings, emotions, desires, wishes; to give free reign and expression to the experience at hand.

Examples:

“Gosh! This is really interesting!” (affective domain).

2. To Note or State

To simply note that one has seen, looked at, observed, or processed something; to express having become acquainted with, having noticed, or examined something.

Examples:

“As usual, I am struck by the beautiful colours” (affective domain).

“I swear, it’s the Carribean” (cognitive domain).

3. To Identify

To establish the nature of something, to determine its belonging, to give it a name, to establish its characteristics in time and space.

⁵⁰This operation occurs only within the affective domain.
Examples:

"The knife (the viewer is reading the label), it attracts me" (affective domain).

"What is underneath (...) I can't see it, but it must certainly be of another colour" (imaginary domain).

4. To Recall

To remember, to evoke from memory.

Examples:

"I remember now, that's a kind of mollusk. I learned that in a course I took" (cognitive domain).

"I remember, last year on a trip, we went to this part of the Mediterranean" (imaginary domain).

5. To Associate

To link, join, or relate various elements together without explaining or qualifying their relationship.

Examples:

"I makes me think of wanting to be happy" (affective domain).

"That shell there makes me really think of the petroleum company, Shell" (imaginary domain).

6. To Compare

To examine simultaneously or succesively, to relate certain elements and establish similarities or differences.
Examples:

"I am much more surprised by the baroque paintings than by the medieval ones" (affective domain).

"You could say that it look likes the helmets that miners wear" (imaginary domain).

7. To Comprehend

To penetrate the meaning, the nature, the reason for something; to understand by bringing together the different elements.

Example:

"I am discovering that, in the end, this concept is very troubling" (affective domain).

"I understand: the knife is called that because of its shape" (cognitive domain).

8. To Justify or Explain

To make known in detail, to expound, to show the development of the cause or the reason of a phenomena, to demonstrate, to prove the characteristics or the legitimacy of a thing or an idea.

Examples:

"It's because it has two parts that it can move about" (cognitive domain).

"It's because Rome evokes the colour crimson" (imaginary domain).

9. To Resolve, Modify, or Suggest

To find a solution to a problem, to transform, to correct, to rectify, to suggest an improvement.
Examples:

"That hole is there so that the animal can leave its shell" (cognitive domain).

"That shell there, I would make a necklace from it and call it the sea" (imaginary domain).

10. To Situate Oneself

To determine the place occupied by oneself, to orient oneself, to give direction to one's activities.

Examples:

"I told myself: I have to leave here happy having refreshed myself by looking at these beautiful forms" (affective domain).

"Must I look at them all, one by one?" (cognitive domain).

11. To Verify\textsuperscript{51}

To control for exactness, to confirm, to recognize as true.

Examples:

"Is it in that, that a pearl can be found?" (cognitive domain).

12. To Evaluate

To estimate or determine the value of something according to either objective criteria or personal preference.

\textsuperscript{51} Occurs only within the cognitive domain of experience.
Examples:

"I find the shape of that shell very pleasing" (affective domain).

"A mollusk of that type costs at least ten dollars" (cognitive domain).

Results of the discourse analysis conducted on the informant-made videos, using the instrument presented above, are given in Table 14 below. It should be noted that this table presents the total number of units for each operation, domain, and formulation without taking into account variations in the duration of each informant's video tapes. For that reason, it is inappropriate to draw any conclusions about the results of the analysis using the unadjusted data in the table below. For additional discussion of these findings, please refer to the appropriate section in Chapter IV.
### TABLE 17
Results of Discourse Analysis of Selected Informant-Made Videos

(Incidence of Operations, Domains, and Formulations per Informant)

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>NON-EXPERTS</th>
<th>EXPERTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>To Manifest</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>To State</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>To Identify</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>To Recall</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>To Associate</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To Compare</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>To Comprehend</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>To Explain</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>To Resolve</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>To Situate</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>To Verify</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>To Evaluate</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Subtotals</td>
<td>27</td>
<td>35</td>
</tr>
</tbody>
</table>

| DOMAINS          |  |  |  |  |  |  |  |  |  |  |
|------------------|  |  |  |  |  |  |  |  |  |  |
| Affect           | 10| 8 | 4 | 4 | 5 | 1 | 6 | 10| 2 | 6 |
| Imagination      | 5 | 12| 11| 7 | 6 | 19| 16| 18| 18| 4 |
| Cognition        | 12| 15| 12| 15| 15| 15| 19| 16| 14| 8 |
| Subtotals        | 27| 35| 27| 26| 26| 35| 41| 44| 34| 18|

| FORMULATIONS     |  |  |  |  |  |  |  |  |  |  |
|------------------|  |  |  |  |  |  |  |  |  |  |
| Learning         | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Hypothesis       | 2 | 7 | 5 | 3 | 7 | 17| 13| 7 | 6 | 2 |
| Questions        | 5 | 0 | 3 | 0 | 0 | 2 | 1 | 1 | 0 | 1 |
| Subtotals        | 10| 7 | 8 | 4 | 7 | 19| 14| 8 | 7 | 3 |
APPENDIX 5

SEQUENCING OF OPERATIONS ACCORDING TO FUNCTION
FOR EACH INDIVIDUAL INFORMANT

In each of the bar charts, the x-axis presents, in sequence, the number of operations used by each informant. Each operation is represented by a separate bar on the chart. The y-axis presents the functions of each operation used. The function To perceive and become acquainted with the work of art is represented by the numeral “1”. The function To construct meaning on what has been perceived is represented by the numeral “2”. The function To control for accuracy is represented by the numeral “3”. Finally, the function To perfect what has been constructed is represented by the numeral “4”. It is essential to note that the numerals 1 to 4 are used here only as symbols, within the charts, to replace the lengthy verbal labels of each function. The numbers should not be construed as an indication that the functions are organized according to some kind of hierarchy with the number “1” function occupying the first and lowest rank and the number “4” function occupying the last and highest rank. The numbers are simply substitutes for the names of the functions. Although the functions do seem to occur within some kind of sequence within the process of aesthetic appreciation, these is no evidence at this time to support the notion that any of these functions are associated with higher orders of understanding in comparison to the other functions.

Table 18 charts the sequence of functions for the first informant, Suzie. Of the total of 27 operations used by Suzie in her informant-made video, the largest number (13) was devoted to the
construction of meaning (function-two operations). Eight operations were devoted to controlling for accuracy (function-three), and six were devoted to the task of perceiving the work of art (function-one). The middle part (operations 9 to 18) in the sequence of functions in Suzie's chart distinguishes itself from the rest of the sequence by the conspicuous absence of any function-one operations. Therefore, the sequence of operations appears to be naturally divided into three different sections. The first section (operations 1 to 11) consists of sequences of operations that follow a pattern in which one or more function-one operations are followed by two function-two operations which, in turn, are followed by one function-three operation. These sequences, of which there are two (operations 3 to 6 and 7 to 11), consists of one or more attempts at perceiving the work of art, followed by two attempts to construct meaning, and conclude with an attempt to control the accuracy of the meaning being constructed.
The second section of the chart (operations 12 to 18) consists of function-two operations (the construction of meaning) interspersed with function-three operations (the control of accuracy). In this mid-section, the construction of meaning has predominance over all other functions. Between operations numbers nine and eighteen, 6 out of 10 operations are aimed at constructing meaning. The third and final section of the chart resembles the first section in that the sequence follows the same 1-2-3 pattern. An attempt at perceiving the work of art is followed by one or two attempts to construct meaning, and the sequence concludes with an operation to control for accuracy. There are two such sequences in section three: operations 19 to 22 and operations 23 to 25. Suzie's video ends with two final operations whose function is the construction of meaning (operations 26 and 27).

**TABLE 19**

<table>
<thead>
<tr>
<th>Sequence of Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant no. 2 - Roger</td>
</tr>
</tbody>
</table>

The chart in Table 19 presents the sequence of operations for the second informant, Roger. Of the total of 37 operations, 18 were
function-one operations (To Perceive), 14 were function-two operations (To Create Meaning), 3 were function-three operations (To Control for Accuracy), and 2 were function-four operations (To Perfect the Meaning). Once more, the mid-section of the chart stands out, this time, because of a predominance of function-one operations, which begins with operation number 5 and continues until operation number 28. Sixteen out of twenty-four of the operations in this section are aimed at perceiving and discovering the work of art. The first section (operations 1 to 4) consists of three operations which are trained on constructing meaning. The section ends with one operation representing an attempt to control the accuracy of the meaning constructed in the previous three operations. The last section of the chart (operations 30 to 37) is dominated by the construction of meaning: five of these last eight operations are function-two operations. Overall, the chart reveals that meaning is constructed at three specific points in the experience: the very beginning, the middle (operations 16, 17, 19, 20 and 23) and at the end of the experience.

Table 20 presents the chart of the functions of the operations undertaken by the third non-expert informant, Nicole. From the total of 27 operations, the vast majority were function-one (13) and function-two (12) operations. Overall, the chart is characterized by a fairly even distribution these two kinds of functions. However, it is the 2 function-three operations in the last third of the chart that imply that there are two different sections to this chart. The first section (operations 1 to 18) consists of five repetitions of a sequencing of
TABLE 20

Sequence of Functions
Informant no. 3 - Nicole

operations where one or more attempts to perceive and become acquainted with the work of art are followed by one or more attempts at creating meaning. The first section ends with one operation whose aim is to control the accuracy of the meaning created in previous operations. The second section of the chart mimics the first in the sequencing of the functions of the operations. There are three sequences of function-one operations followed by one or more function-two operations. However, one difference between the two sections is noticeable. The second section is shorter, and it culminates much sooner in an operation (number 27) to control the accuracy of what has been constructed in previous operations.

Function-three operations dominate the mid-section of the chart (Table 21) depicting the sequence of functions for the fifth informant, Rex. Once more, this suggests that the viewing experience, documented by Rex's in his informant-made video, had
three distinct parts. In the first section (operations 1 to 8), the sequencing of operations follow a pattern consisting of a function-one operation followed by one or two function-two operations. In the first part of the experience, the function of the informant's operations alternates between the perception of the work of art (function-one)

**TABLE 21**

*Sequence of Functions*
*Informant no. 5 - Rex*

![Bar chart showing sequence of functions](chart)

and the construction of meaning about it (function-two). In the mid-section of the chart, the pattern changes. Function-one operations are still followed by function-two operations, but the sequence continues with a function-three operation which aims to control the accuracy of the meaning being constructed. There are two such sequence in the beginning of the mid-section (operations 9 to 11 and 12 to 15). By operation number 16, the pattern changes as some of the steps in the sequence, mainly function-one operations, are sometimes dropped in favor of a sequence in which only function-two and function-three operations play a major role. The third section (operation 23 to 26)
consists of one function-one operation followed by three function-two operations. Of the total number of 26 operations, the largest number (13) consists of function-two operations (the creation of meaning), followed by function-one operations (8) and, then, function-three operations (5).

Table 22 is a chart of the functions of the operations conducted by Janet, informant number 7. The first of two salient features of this chart is the fairly even distribution of function-one and function-two operations over the entire duration of the informant-made video. The second is the prominence of two function-three operations at the ends of the first and last thirds of the chart. Once again, these features suggest that the operations can be grouped into two sections according to their sequence. The first section (operation 1 to 8) consists of a pattern in which an operation used in order to perceive the work of art is followed by two or three other operations. These, in turn, are employed in order to construct meaning based on the information collected during the previous operations. This pattern is repeated twice before the section culminates in a function-three operation in which the informant evaluates her growing understanding of the work of art against the available evidence. The second section is very similar in structure to the first one. However, on two occasions (operations 16 and 17 and operations 19 and 20) two function-one operations precede the function-two operations. Furthermore, only one function-two operation follows operations 16 and 17, contrary to
the pattern repeated in the other sequences, where two and sometimes three function-two operations follow the function-one operations. Like section one, this section ends in a function-three operation which is intended to control the accuracy of the informant's understanding of the work of art. Unlike section one which is fairly short, section two is much longer: it's duration is over two-thirds of the entire duration of the informant's viewing experience. Of the total of 26 operations the vast majority (15) are function-two operations. Function-one operations account for 9 operations, and function-three for 2 operations.

Of the total of 35 operations used by Julien (informant number four; Table 23) an astonishing 25 are used directly in the construction of meaning about the work of art. Of the remaining ten, 5 are function-one and 5 are function-three operations. Because of their
vast number, function-two operations are evenly distributed throughout the chart. Surprisingly, three out of the five function-one operations and all five of the function-three operations occurs within the first section of the chart (operations number 1 to 18). The section begins with a function-two operation. Functions-three and functions-one operations are then used throughout the first section to sustain and further a rapid succession of meaning-creating (function-two) operations. In the second section of the informant’s experience (operations 19 to 35), it is as if the growth of understanding, initiated by the thought process used in the first section, has become self-sustaining. Only 2 function-one operations (number 19 and number 30) are interspersed among the sustained barrage of function-two operations used by the informant in the second section of his viewing experience.
Table 24 presents the chart of the functions for each operation used in the video by informant number six, Mona. Of the total of 41 operations, 17 were function-two operations and 15 were function-one operations. Of the remaining nine operations, 7 were function-three and 2 were function-four operations. This chart reveals that a pattern established during the first third of the informant-made video is repeated, albeit with some variations, in the second third. The final third of the event differs from the other two sections in that it contains only one function-three and no function-four operations. The preceding two sections are regularly punctuated by function-three operations and each section culminates in a function-four operation.

**TABLE 24**

<table>
<thead>
<tr>
<th>Sequence of Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant no. 6 - Mona</td>
</tr>
</tbody>
</table>

A closer look at the first section (operations number 1 to 16) reveals that a pattern, consisting of a function-two (meaning creation) operation, followed by one or more function-one (perception) operations and ending with a function-three (accuracy control)
operation, is repeated a number of times before the section culminates in a function-four operation in order to perfect the meaning constructed in the previous sequences. A similar pattern is repeated in section two of the chart (operations 17 to 29). However, the pattern is less regular and the repetitions contain different variations on the "basic" pattern established in the first section. With the exception of operation number 39, the last section of the chart contains only function-two operations interspersed with function-one operations. The section ends as it begins, with two meaning-constructing operations.

The next table, Table 25, provides information pertaining to informant number eight, Paul. This is a complex chart containing the representation of a total of 44 operations of which the vast majority are function-one (17) and function-two operations (14). The remaining 13 operations consist of 11 function-three operations and 2

**TABLE 25**

Sequence of Functions
Informant no. 8 - Paul

![Bar Chart](chart.png)
function-four operations. This chart seems to make the most sense when examined in three different sections. The first section (operations 1 to 6) is relatively short. It consists of an alternation between function-one and function-two operations with the exception of operation number 5. It consists of a function-four operation which is intended to perfect the meaning constructed in the early stages of the viewing experience. The second section of the chart (operations 7 to 29) consists of an alternation between function-one (perception) and function-three (accuracy control) operations. Near the end of the section, two meaning-construction operations (numbers 22 and 27) interrupt the rhythm of the previous sequences. These two operations seem to foreshadow the major meaning-construcing activity to come in the last section of the informant’s experience. Section two ends with a function-four operation, an attempt to perfect the meaning constructed in previous operations. The final section of the chart (operations 30 to 44) represents, as already indicated, a major effort at understanding the work of art in order to bring the experience to some kind of closure. The section consists of an alternation of perception operations and meaning-construction operations except near the end where, beginning with operation 40, a series of three function-two operations is launched and then ended with accuracy controlling operations (numbers 40 and 44). In keeping with the undertaking at hand -- the construction of meaning -- the entire third section contains a majority (9/15) of function-two operations.

Table 261 presents the chart for informant number nine, Albert. Of the total of 34 operations depicted, the vast majority are
meaning-constructing (function-two) operations (21). Ten are perception (function-one) operations, and 3 are accuracy controlling operations (function-three). The chart has two distinct sections. The first one is

**TABLE 26**

Sequence of Functions
Informant no. 9 - Albert

![Chart Image]

characterized, in part, by the repetition of a pattern in the sequencing of some operations. The first section begins with operation 1 and ends with operation 23. It contains three repetitions of a basic pattern made up of one or more function-one operations, followed by one or more function-two operations, and culminating in a function-three operation. This represents a pattern in which perception precedes the creation of meaning which, in turn is followed by an attempt to control for accuracy. The three repetitions of this pattern are identified by the following operation numbers: numbers 1 to 6, 7 to 15, and 16 to 23. The second section of the chart (operations 24
to 34) is characterized by a major effort to construct meaning in the last few minutes of the viewing event. Of the 11 operations in this segment, 9 have meaning-construction as their function. Two function-one operations (numbers 26 and 31) are interspersed among the large number of function-two operations in this section.

Finally, Table 27 presents the sequence of functions for the operations used by the last informant, Diane. Diane's video was the one that contained the least number of operations. Of the total of 18 operations used, the vast majority (9) were used to perceive the work of art and to become acquainted with it. Four operations were used to construct meaning from what was perceived, and five operations were used by the informant to control the accuracy of her understanding of the work of art.

**TABLE 27**

Sequence of Functions
Informant no. 10 - Diane

Three of the four meaning-creating operations are concentrated in the mid-section of the chart. This fact separate the chart into three distinct sections. The first section (operations 1
to 5) consists of an alternation of function-one (perception) and function three (accuracy controlling) operations. In this section, the informant appears to be verifying the accuracy of what she sees in the work of art. In the second, section she begins to construct meaning about the work by alternating one or more perception-oriented (function-one) operations with meaning-making (function-two) operations. In the third section (operations 14 to 18), the informant verifies, once again, the veracity of the meaning she has constructed about this work of art by alternating accuracy controlling (function-three) operations with two perception oriented operations. The section ends with one last attempt (operation 18) at formulating meaning about the work of art.

Summary

The sequential analysis of the functions used by the informants reveals that the overall sequences of operations, for each informant, can be broken down into two or three smaller segments. Each of these segments contains a number of operations that are grouped together according to a common purpose. Although the function of each operation within a segment may differ, each segment does appear to have its own overarching objective. For example, although the sequential arrangement of a segment might alternate between function-one and function-two operations, the overall objective of such a segment could be to perceive the work of art in order to construct meaning. Likewise, a segment might alternate between function-one and function-three operations, but the overall purpose of the segment might be to have a closer look at the work of art in order to control the
accuracy of the meaning constructed so far. Many of the segments of the informants' charts appear to be organized in the fashion described here. For example, the objective of the first part (operations 1 to 10) and the third part (operations 23 to 26) in Rex's chart\textsuperscript{52} is to construct meaning, whereas the purpose of the middle part in the sequence (operations 11 to 22) is predominantly to control the accuracy of the meaning being constructed. In a second example, Paul's chart\textsuperscript{53}, the objective of the first segment (operations 1 to 6) is meaning construction; the purpose of the second segment (operations 7 to 28) is to control the accuracy of what is being perceived; and the intention of the third and last segment is to construct additional meaning while, at the same time, controlling its accuracy.

\textsuperscript{52} See Table 21.  
\textsuperscript{53} See Table 25.
Appendix 6
INFORMANT'S BIOGRAPHICAL DATA

Although your real identity will be kept confidential in the text of my dissertation, I will require some information on your life experience in order to present an accurate picture of you as a research subject. The following information is therefore requested.

Name: __________________________ Age: ________

Post-Secondary Education:

<table>
<thead>
<tr>
<th>College or University</th>
<th>Discipline</th>
<th>Degree</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Work Experience:

Describe your occupation: __________________________

Who is your present employer? __________________________

What are your main duties? __________________________

________________________________________________________________________

________________________________________________________________________

How many years at this job? __________________________

Museum Experience:

When did you last visit an art museum? __________________________

How many times have you visited an art museum in
a) the last year? __________________________

b) the two years before that? __________________________
What kinds of exhibitions do you normally see during these visits?
   a) Special temporary exhibitions __________________________
   b) Permanent collections ________________________________
   c) Other (please specify) ________________________________

Have you ever participated in any of the following educational programs as offered by an art museum?
   - guided tours of the galleries ____________________________
   - lectures ____________________________________________
   - films ________________________________________________
   - workshops __________________________________________
   - other activities (specify) ______________________________

ART TRAINING

Did you take art courses in high school? ____________________
In which grades? ________________________________________

Have you taken art courses since then? If so, describe below.

<table>
<thead>
<tr>
<th>School</th>
<th>Type of course</th>
<th>Duration</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What was your objective in undertaking the above courses?
________________________________________________________________________

VIDEO EXPERIENCE

Have you ever used a video camera before? ______ If so, please describe the circumstances. __________________________
________________________________________________________________________

What kind of equipment did you use? (VHS?, V-8?, Beta?)
________________________________________________________________________
Have you ever undertaken training in using a video camera? ___
If so, please describe _______________________________________

Type of equipment: _______________________________________

If applicable,

How would you qualify the extent of your video training?
  Introductory level training ________________________________
  Intermediate level training ______________________________
  Extensive or advanced level training ________________________

How would you qualify the extent of your video-making experience?
  Just a little experience _________________________________
  Enough experience to feel comfortable ___________________
  Extensive experience _________________________________

Additional Comments
____________________________________________________
____________________________________________________
____________________________________________________
____________________________________________________