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SOPHISTICATION: A PILOT STUDY.

The Ohio State University, Ph.D., 1974
Mass Communications

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THE RECOGNITION OF FILM TECHNIQUES RELATED TO SELECTED CHARACTERISTICS OF FILM SOPHISTICATION: A PILOT STUDY

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
Steve Staszak Ryan, B.A., M.F.A.

* * * * *

The Ohio State University
1974

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ACKNOWLEDGEMENTS

The author is especially grateful to Ms. Carol Teague and the Data Processing Center of Eastern Kentucky University for help in preparing the statistics used in this dissertation, to the many students at The Ohio State University who volunteered their time to take the dissertation test instrument, to the author's Ph.D. dissertation committee composed of Drs. Robert W. Wagner, Ali Elgabri, and Keith Tyler for their counseling and approval of the dissertation, to Dr. Robert W. Wagner for his role of major adviser and his help in correcting the style and presentation of the dissertation material, to Dr. Earl Moretz, former Dean of the Graduate School at Eastern Kentucky University, for his help in monitoring and approval of the statistical procedures used in this dissertation, to Anthony J. La Greca, Assistant Professor of Sociology at the University of Florida, to Patricia Ann James, the author's fiancée, to the many other colleagues, friends, and spiritual brothers and sisters of the author who provided the help needed to complete this dissertation, and most particularly to God's love which the author has felt ever more keenly in his life.
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PUBLICATIONS

Maréchal Pétain: Masters Motion Picture Script, University of California at Los Angeles, California

Ohio State University Basketball Highlights 1972-1973: Film Produced at The Ohio State Dept. of Photography and Cinema, Columbus, Ohio

A View of Eastern: Film Produced at Eastern Kentucky University, Richmond, Kentucky

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Studies in Electronics. Ervin Institute, Cincinnati, Ohio and Los Angeles Trade Technical College, Los Angeles, California

Studies in the Sociology of Mass Communications, The Ohio State Department of Sociology, Columbus, Ohio
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CHAPTER I

INTRODUCTION

Our Visual Culture

The average young person in America today spends a great deal of time viewing the moving image on television and in motion picture theatres.

Today the average student comes to school having already viewed about eight thousand hours of moving images in the form of television good and bad, and...by the time this student finishes high school he will have viewed about fifteen thousand hours of television, not to mention a great number of films seen in local theatres. By contrast this student will have experienced only about eleven thousand hours of conventional classroom experience.1

John Culkin states that the average American student when he graduates from high school has seen more than five hundred films.2 The typical American student spends


approximately eleven thousand hours in school and sixteen thousand hours, nearly half again as much time, in front of a television or movie screen. If influence can be measured in terms of momentary time spent attending to media, the visual communications media have taken over first place from the schools as mentors of our youth.

Eighty-four point six million television sets are owned by nearly ninety-four per cent of Americans. Each week forty-five million Americans attend one of the one hundred and fifty movies produced annually.\(^3\) \textit{Time} magazine estimates that in 1972, "...forty-two million Americans, or about one in five, are photographers of one sort or another. Amateurs snap away at an astonishing rate, taking more than five million pictures annually, or about one hundred and fifty-eight each second, night and day, all year long."\(^4\) Our culture is becoming increasingly preoccupied and influenced by film, television, and the photograph. As John Culkin notes, "We live in a total information culture, which is being increasingly dominated by the image both moving and static."\(^5\)


\(^5\)Culkin, "Teen-Age Movie Teacher", p. 83.
Our culture has indeed undergone something of a revolution. Communication as we understand it today has moved from an emphasis primarily on the verbal form to an emphasis on the visual or more properly the "audio-visual." As Marshall McLuhan states, "The rational man in our Western culture is the visual man." Western man certainly spends more time on the "audio-visual" than on the purely verbal or print medium than he did in former years. The ever increasing number of magazines on our news stands has become increasingly pictorial. The visual image has taken on a greatly increased importance in Western man's culture. McLuhan calls this change in the nature of Communications "...the step from the age of typographic man to the age of graphic man..."  

In giving an historical perspective of this change in Western man's communication processes, Gilbert Seldes states, "We are coming out of the era of print into that of electronics, and this is largely an era concerned with the projection of images." Silvester Weaver adds, "Tele-

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vision (because of its ability to transmit both live and recorded performances of all kinds)...is a more important development for man than print..." Bela Balazs states, "Film is perhaps the greatest intellectual and spiritual influence of our age...is potentially the greatest instrument of mass influence ever devised in the whole course of human culture history." William Arrowsmith makes more explicit the importance of the projected image in Western man's culture: "What the novel was to the Eighteenth Century, the film might be to the Twentieth..." Though the projected image is usually accompanied by some form of verbal language, Marshall McLuhan goes so far as to say of our new electric technology that it extends our senses and nerves in a global embrace and has large implications for the future of language. "Electric technology does not need words any more than the digital computer needs numbers. Electricity points the way to an extension of the process of consciousness itself on a world scale,

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10 Bela Balazs, *Film* (New York: Dover Publications, 1970), p. 19. Though it must be noted that Balazs' original article was written before the advent of television.

and without any verbalization whatever.\textsuperscript{12} Robert W. Wagner calls our generation "an image generation."\textsuperscript{13}

Modern man is indeed in a new era, an era that he is making for himself. Modern man no longer communicates primarily through print but also through visual images. Visual images become a new language, a new element of Western man's compositional fabric; and our language can be said to influence not only the way we communicate but also the way we think.

Our schools know how to train students in print literacy, but how do they train their pupils in visual awareness? What are the dimensions of visual awareness? Are there "visual illiterates"? What are the characteristics of visual awareness? How can we recognize and identify a "visual illiterate"? These are only a few of the challenges of our modern culture. This study is an attempt to throw light on one small area of the multifaceted phenomenon of modern mass communication.

\textbf{The Need for Visual Awareness}

Many authors today point out the need for increased visual awareness. Whereas other ages were influenced

\begin{itemize}
  \item [\textsuperscript{12}] McLuhan, \textit{Understanding Media}, p. 83.
  \item [\textsuperscript{13}] Wagner, "Protean People", p. 16.
\end{itemize}
primarily by a verbal culture, we may well be an "image generation." Marshall McLuhan points out in Hot and Cool that if increased emphasis on the image and its transmission should, in the future, "corrupt" previous levels of verbal culture, this is not the fault of the development of the visual media. Rather it is because we will have failed to educate ourselves about these media. Alvin Toffler in his chapter on "The Experience Makers" in Future Shock asks:

And what then happens when an economy...seriously begins to enter into the production of experiences for their own sakes...experiences that blur the distinction between the simulated and the real. If we formerly defined sanity itself as the ability to tell 'real from unreal,' do we now need a new definition?

There may indeed be a serious need for study and education about the visual media. Edgar Dale cites Paul Reed, editor of Education Screen and Audio Visual Guide, who once described wide screen films as "more real than reality." According to Dale, "The perceptive cameraman's...highly sensitized perception of reality enables him not only to reproduce reality but to augment and refine

---


The motion picture heightens reality." Pauline Kael describes a great film as, "...a film in which we experience a new vision of human experience." Yet, there may well be a danger in this power of the moving image. Boorstin in The Image states, "The American Citizen thus lives in a world where fantasy is more real than reality, where the image has more dignity than its original." The realistic effect of the moving image may be very compelling. Twenty-three different studies made by the Surgeon General's Committee on Television and Social Behavior showed eighty-five per cent of American television viewers believed that many police series, soap operas, etc. such as Ironside and Adam 12 show "life as it really is" and that they are being "realistic and "instructive." Mark Slade speaks of the "image in motion" as the "language of change.....it shapes the youngsters' reality


before he can walk or talk."  

Joan and Louis Forsdale suggest that since the image or photograph is so widely used and is so "real looking", man has adopted it as a "norm for the appearance of everything." There may well be, then, a definite need to study the moving image since for many it has become part of everyday experience, part of "reality." We may need to understand the moving image and how it is perceived in order, as Toffler hints, to keep our culture sane.

Erik Erikson in his book *Identity, Youth and Crisis* talks about "...the escape of many gifted if unstable individuals into a private utopia." The moving image in today's world may well be one of these private utopias. According to Hugo Mauерhofer, "...a voluntary escape from everyday reality is an essential feature of the Cinema situation." The spectator "...now steps into the different reality of the film" where the sense of time, the sense of space are changed, and where the "desire for intensified action" occurs. Mauерhofer adds that

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21 Joan R. Forsdale and Louis Forsdale, "Film Literacy" in *Teachers College Record* (May, 1966), p. 610.

22 op. cit.

there is a psychological affinity between the Cinema situation and the state of sleep. Quoting Ilya Ehrenburg who calls film a "factory of dreams" he says, "...while asleep we ourselves produce our dreams: in the Cinema they are presented to us ready made...The position of the Cinema is therefore that of an unreal reality, half way between everyday reality and the purely personal dream."  

Susanne Langer concurs with Mauerhofer: "Cinema is like a dream in the mode of imitation; it creates the ritual present in order of direct apparition. That is a mode of dream. Film 'seems' one's own creation, direct visionary experience, a dream's reality."  

R. E. Jones states that motion pictures are our thoughts made visible and audible:

They flow in a succession of images, precisely as our thoughts do, and their speed, with the flashbacks - like sudden uprushes of memory - and their abrupt transition from one subject to another, approximates very closely the speed of our thinking. They have the rhythm of the thought stream and the same uncanny ability to move forward or backward in space or time... they project pure thought, pure dream, pure inner life.

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25 Ibid., p. 108.
Wolfenstein and Leites state that they:

have looked at contemporary American film to see what recurrent daydreams entered into the consciousness of millions of movie goers... These ready-made daydreams come to occupy a larger place in the conscious experience of most individuals than their more fugitive, private, homemade daydreams.28

The moving image in today's world may not only shape our ideas of reality. It may well also represent for many Americans, as the above authors seem to suggest, a voluntary escape from reality.

Marshall McLuhan states, "...the photographic and visual worlds are secure forms of anesthesia." The public is so used to pictures in any form that it never questions what it sees. "The conscious depth-messages of ads are never attacked by the literate, because of their incapacity to notice or discuss a non-verbal form of arrangement and meaning. They have not the art to argue with pictures."29

A. D. Trottenburg generated a good deal of educational furor when several years ago he charged that colleges graduate visual illiterates. He stated among other points that students who are graduated from High School today have not had their visual senses sufficiently trained to discriminate among the many fabric patterns offered for sale,

never have been trained to understand three-dimensional depth in a two-dimensional format such as television, never have learned that photographs can be made to bend the truth, never have been exposed to good design in architecture. They need to be given the visual training to handle the decisions they need to make which are based on visual information.\(^{30}\)

One wonders how well American culture uses the visual sense when one considers the poor quality of television commercials tolerated in many areas, the often encountered inability to see symbolic meaning in a film, or when one looks at the many examples of urban blight, of congested signs and roadway distractions, the look-alike apartment complexes and homes that cover huge areas of cities—so many visual aspects of modern life which American culture seems to accept without much question. We may well be becoming blind victims of our new technological society and visual culture rather than "seeking to understand it for what it is and what it does to us and what we can do with it."\(^{31}\)

Joan Wilentz argues that of all man's senses, the visual dominates his experience.\(^{32}\) Stephen Baker notes


that eighty per cent of all impressions are received through
the eyes.\(^{33}\) Kurt Rowland states:

> It is my firm belief that everyone would think at least
> partly in visual forms if our education did not stifle
> this faculty from the very outset. We are taught
> very early in our education that words are the essence
> of truth, pictures are mostly for ornament... but of
> late our capacity for visual thinking can be released
> and educated by the visual equivalence of vocabulary,
> grammar, and syntax.\(^{34}\)

Susanne Langer echoes Rowland, "A language bound theory
of mind, therefore, rules (visual forms) out of the domain
of understanding and the sphere of knowledge."\(^{35}\) There
are obviously differences in comparing visual education
with verbal education; but one can ask whether, beyond
training in simple identification, what kind of training
does modern man receive in the art of seeing? Are the
majority of humans still object-minded and not relation-
minded? As Walter H. Waters observes, "The most visible
can often be the most difficult to see."\(^{36}\) Just because
children have grown up with the mass visual media, does

\(^{33}\) Stephen Baker, *Visual Persuasion* (New York:
McGraw Hill, 1961), Ch. I.

\(^{34}\) Kurt Rowland, *Educating the Senses* (New York:

\(^{35}\) Susanne K. Langer, *Philosophy in a New Key*

\(^{36}\) Walter H. Waters, "Why, Where, What, and Again"
that necessarily mean that they are automatically "literate" in the special visual reading abilities necessary to obtain meaning from the visual media? Because one likes something, does that necessarily mean that one understands or is capable of analysing it? The United Nations' Seminar on Children' Rights stressed the need of visual education:

To protect the modern child against the barrage of visual impressions to which he is being subjected increasingly, the only possible alternative to further censorship or control is the awakening and development of the critical sense. In other words, screen education.37

visual awareness and understanding could become one of the most significant characteristics of modern man. On the other hand, if modern man does not reach out to his visual environment to study it, to understand and educate himself about it, we may well become, as Toffler and Mauerhofer hint, a culture that will more and more confuse the real with the unreal, that unwittingly may come to use the moving image as a type of narcotic, an "escape from reality," and that, as Trottenberg warns, may well corrupt its visual environment beyond repair because of a lack of visual training.

Statement of the Problem

Hoban and van Ormer wrote in 1950:

...very little is known about the special abilities involved in learning from films which for want of a better term we designate as film literacy...These abilities may relate to sustained observation,

to the interpretation of such film techniques as dissolves, close-ups, intercuts, montages, etc. There is however some evidence that film literacy though not precisely defined, i. exists, 2. is related to practice in viewing film and practice in learning from films and, 3. influences learning from films. 3

More than twenty years later Hoban and van Ormer's uncertainties about the special abilities involved in learning from films still remain undefined. What is visual awareness with regards to film and TV (moving image awareness)? How are film techniques observed and interpreted? What special abilities or training are involved?

Before the matter can be posed of how film techniques such as low angle shots, close-ups, intercuts, montages, etc. are interpreted or what meaning or effect they have for a particular subject or audience, it must first be asked whether these film techniques are in fact observed? Is the "average" film viewer aware that, for example, a low angle shot occurs in a particular section of a film or that in another film the camera moves instead of remaining stationary?

The term "literacy" in print media, for example, ordinarily is used to signify that a certain set of letters has a certain meaning for someone who can read a particular language. "Literacy" in this case does not normally refer to the reader's knowledge of the process of printing. However, in film a person may well extract meaning not

only from the content of a film but also from the relationship of such content to the technical processes or variables in the film such as dissolves, camera movement, etc. But again, before it can be determined whether the technical processes in film have or convey a meaning, it must first be determined whether they are perceived or not. It must then be determined how their perception or non-perception or varying degrees of perceptual awareness on the part of the specific viewer affect meaning.

**Definition of Terms**

"Film sophistication": is a condition of film consciousness which is presumed to be developed through one or more of the following: 1. the number of film courses taken; 2. the average number of films seen in motion picture theatres per month; 3. the average number of books on film read within a six month period; 4. the average number of film reviews read per month; 5. the average amount of time spent per month on film or television production; 6. the average amount of time spent per month in discussing film; 7. the score obtained in a matching response test on film terms; 8. the subject's response to the question, "How knowledgeable do you consider yourself in film?"

**Statement of Hypotheses**

1. **Subjects with a greater degree of "Film Sophistication" as measured in terms of a one to five scale will**
TEND TO RECOGNIZE AND RECALL FILM TECHNIQUES WITH GREATER FREQUENCY THAN SUBJECTS WITH A LESSER DEGREE OF "FILM SOPHISTICATION."

The author hypothesized that specific subjects who score higher on the traits identified as representing film sophistication will tend to recognize and recall the film techniques used in the three film excerpts more reliably than subjects with a lesser degree of film sophistication. The author hypothesized that subjects who have had more courses in film appreciation, history, and production, or who have seen more films, or who have read more books and reviews about film, or who have spent more time in producing films and television shows, or in discussing film, or who scored higher on a test designed to measure their knowledge of film terms, or who stated that they consider themselves more knowledgeable in film would tend to recognize and recall more film techniques than subjects who reported these qualities to a lesser degree.

2. "FILM SOPHISTICATION" MAY BE INDICATED QUANTITATIVELY IN TERMS OF THE FOLLOWING CHARACTERISTICS: 1. THE NUMBER OF FILM COURSES TAKEN; 2. THE AVERAGE NUMBER OF FILMS SEEN IN MOTION PICTURE THEATRES PER MONTH; 3. THE AVERAGE NUMBER OF FILM BOOKS READ WITHIN A SIX MONTH PERIOD; 4. THE AVERAGE NUMBER OF FILM REVIEWS READ PER MONTH; 5. THE AVERAGE TIME SPENT PER MONTH ON FILM OR
TELEVISION PRODUCTION: 6. THE AVERAGE TIME PER MONTH SPENT DISCUSSING FILM; 7. THE SCORE OBTAINED IN THE MATCHING RESPONSE TEST ON FILM TERMS; 8. THE SUBJECT'S RESPONSE TO THE QUESTION, "HOW KNOWLEDGEABLE DO YOU CONSIDER YOURSELF IN FILM?"

This hypothesis does not postulate that the above traits are the only qualities of "film sophistication." They are hypothesized only as indicators of film sophistication. The author hypothesizes also that these eight characteristics will correlate significantly with each other.

Purpose of the Study

The purpose of this study is to determine, by the use of excerpts from feature films that are both critically acclaimed and of popular appeal and by the use of carefully designed questions relating to the perception of specific film techniques, whether different audiences of varying degrees of "film sophistication" or "moving image awareness" do indeed recognize and recall specific film techniques. This study will also attempt to define in quantitative terms some of the various characteristics and degrees of "film sophistication."

This study is an exploratory investigation of the areas of the perception of film techniques and the qualities of film sophistication. The author intended this study
to serve as an indication of fruitful lines of new research in film. This study was undertaken to begin to trace out a path in what is hopefully an important direction for future film research.

This study is limited to the use of film clips from a small sample of the works of three film authors: Alfred Hitchcock, Elia Kazan, and George Stevens. Ten elements of film technique found in the above film clips were used as objects of investigation in the recognition and recall of specific film techniques. Although the investigator designed his study to be as representative a sampling of film techniques as possible, ten film techniques represent only a part of the extensive repertory of film techniques which include varieties of composition, editing, sound, optical effects, and film stock, among others. Under each of these headings there are numerous subdivisions of techniques which a film director has at his or her disposal.

Under the composition variable may be included variations in shooting image size or angle or camera movement such as: the long shot, the medium shot, the close-up, the extreme close-up, the three-quarter close-up, the profile shot, the high angle, the low angle, the dolly shot, the crane shot, the zoom shot, the pan shot, the tilt shot, etc. Lighting variations can also be included under composition.
Under the heading of editing one can distinguish between slow cutting, fast cutting, cutting on action, jump cutting, Eisenstein's "shock" cutting, relational editing, Pudovkin's "structural" or building blocks editing, etc.

Under the sound variable may be included variables of music, sound effects, synchronized sound, etc.

Under the heading of optical effects one may distinguish between fades, dissolves, double exposures, wipes, iris, etc.

The author recognizes that in this study he has not attempted in depth to discover the meaning of a specific film technique for a specific audience. Once a specific film technique is recognized or recalled, what specific meaning does it have for an audience? Can this meaning be separated from the particular content of a film? Do film techniques, though not recognized and consciously recalled, still have a subconscious or subliminal meaning or effect on a specific audience or viewer? The author has not attempted to answer in depth such questions as these. This study attempted to lay some of the basic foundations of research necessary to begin the investigation of such questions.

The author did not attempt in this study to make an inclusive list of the traits of film sophisticates. The author realizes that he has somewhat subjectively set
up the criteria for a "film sophisticate." There may well
be many other qualities that more correctly define the
film sophisticate. A more thorough method of defining the
qualities of the film sophisticate would be to examine
noted teachers and practitioners of film and ascertain
what qualities they have in common. This present study,
however, is concerned primarily with the recognition and
recall of specific film techniques by specific audiences
and only secondarily with how specific audience character-
istics relate to such recognition and recall.

The Need For and Significance of This Study

In 1972 3,943 films were actually released through-
out the world.\textsuperscript{39} These features vary in cost in the
United States from a high budget picture such as \textit{The
Godfather} which was produced for $6,300,000\textsuperscript{40} to low
budget features produced for three to six hundred thousand
dollars. If one multiplies these cost figures by the number of
film producing countries in the world, it becomes readily
apparent that a great deal of money, time, and effort
is put into producing feature films. The high cost of
producing a film comes mostly from the cost of salaries,
equipment, studio rental, on-location filming and other
"above-the-line" costs. However, the use of the wide

\textsuperscript{39}\textit{Variety} (May 3, 1972), p. 32.

\textsuperscript{40}\textit{Ibid.} p. 254.
variety of film techniques available frequently entails considerable time and expense for a producer and director. For example, in Alfred Hitchcock's film *North by Northwest*, the camera dollies along with Cary Grant as he runs away from a plane that is trying to crash into him. Instead of requiring a dolly mechanism and operators and the large crew necessary to bring about the co-ordinated efforts of the plane, the camera crew, and Cary Grant, it might have been much cheaper simply to set the camera far away from Cary Grant and film this whole scene in long shot. Whatever reasons film producers and directors have for including film techniques in their feature films, it is certain that a great deal of money, time, and effort is spent in developing and including in feature films the more sophisticated techniques of film expression.

The question a serious film researcher must ask is whether these film techniques serve any useful purpose. Are they recognized and recalled by a specific audience or viewer, or are they perceived only in some subconscious or subliminal manner, or are they simply not perceived at all? If, for example, research would show that there is no specific audience that perceives film techniques in any way, then it might be necessary to fully reconsider
the structure and current modes of feature film expression. This study is of importance to the film industry in order to begin to prove whether or not film techniques are perceived by specific audiences. If specific audiences do indeed recognize and recall specific film techniques, then a considerable amount of the time, energy, and finances that go into the producing of a feature film may be indeed in some way justified. Further research would be needed, however, to show what particular effect a specific film technique has on a specific audience. However, if film techniques are in fact not perceived in any way by any specific audience, then a great deal of material, technical, and creative resources of the film producer and director may well be used in vain.

As noted above by Wagner and Culkin, young people spend considerably more time viewing the moving image than they do in conventional classroom experience. It has perhaps been assumed that an "average person" spending so much time viewing film and TV would be or soon become "visually aware." But, if in spite of their many hours of viewing the moving image, subjects without general training or courses in film still do not recognize or recall specific

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41 See Mercer's and McIntyre's conclusions that optical effects in films are not readily observed in Mark A May, Enhancements and Simplifications of Motivational and Stimulus Variables In Audio-Visual Instructional Materials (Hamden: Conn. ERIC Report EDO03-109, 1965), p. 67.
film techniques; then it might possibly be assumed that these subjects without film training are not using their full potential of perception or receiving from film and TV viewing the maximum benefit or the full range of expression and meaning that was initially incorporated into these film and television programs.\textsuperscript{42} This study is a step in the direction of asking whether the creative, artistic, and educational factors in the usage of film variables in the feature film may in fact be partially or totally lost on a considerable number of people.

This study may well also be a small step towards defining the perimeters and degrees of "visual awareness" or "film sophistication." Are there specific audiences who perceive more in a given moving image than other specific audiences who are confronted with the same moving image stimulus? Aside from perhaps primitive peoples who have never seen a photograph or a moving image, are there people in our own culture who can be categorized as "visually illiterate." If so, on what basis may they be so defined? What is the ideal of "visual literacy" against which we can measure the performances of different subjects? This study it is hoped will serve to form perhaps a beginning

\textsuperscript{42} It is recognized by the author that these specific film techniques may well be perceived in other ways than "recognition" and "recall" not studied in this experiment.
step in defining some of the boundaries of "visual awareness" or "film sophistication."

It is also to be hoped that this study will yield a greater understanding of human perception. If there are indeed differences in the recognition and recall of specific film techniques, to what can they be attributed? This study makes a preliminary attempt at trying to answer such questions.

This study may serve as a basis for a consideration of the training necessary for adequate "film sophistication." If there are, indeed, differences in human perception among people of the same culture; if specific audiences do not recognize and recall specific film techniques while others do; if considerable amounts of financial, technical, and creative resources of the film and television media are wasted in so far as they are not perceived by specific audiences; then, short of simplifying and limiting the use of film techniques in feature films, additional training in visual awareness with regards to the moving image may well be warranted. This study may serve as a basis for developing specific training in the recognition and recall of film and television techniques, particularly for students in our culture who spend considerable amounts of time in film and television viewing and who receive a good deal of their informal and even formal education through film and television.

Though not a direct purpose of this study, this close examination of selected film excerpts from the works
of Alfred Hitchcock, Elia Kazan, and George Stevens will also serve as an aid to a more detailed analysis of these directors' style or mode of film making. It is all too seldom that we can analyze the work of a film director, because we do not readily have the advantage of repeatedly being able to look at a work or segment of a work of a particular film author.

Though this study tested only for the recognition and recall of ten specific film techniques, it may also serve as a basis and as a model for a much more intensive research into the number of film techniques available to a film director, into how these techniques are used, and thus lead to a more precise delineation of film vocabulary.

The author hopes that the experimental method of photographing the last frame of each "edit" together with the first frame of the next "edit" as is described in the Appendix will serve as a useful technique for future researchers in film to enable them to examine, discuss, and explain more analytically the work of a particular film author, or use of a particular element of film vocabulary. This technique will hopefully serve to make the film researcher's work much easier in so far as the film researcher can now examine closely how a particular scene was built in editing and how particular film tech-
niques were used in the sequence. He can also convey his own findings more readily by using this technique of last and first frame duplication to illustrate to his readers the point he is making about a particular film director's style or how a particular film technique is used in a film.

Hoban in his *State of the Art of Instructional Films* says:

...research (in film) is advancing at a snail's pace... that the boundaries of knowledge and performance capabilities of instructional films are extending outward, but largely in directions that are somewhat neglected in the professional literature.

Educators in particular must necessarily be concerned by the amount of instruction their students now receive through film and television, as well as by the long hours their students spend in front of the television set and in watching films. If, in spite of their considerable viewing hours, students in this study reveal that they do not generally recognize or recall specific film techniques, data from this experiment might indicate that researchers and educators should perhaps turn their attention and efforts to giving students from their earliest years training in visual and film perception which would enable

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them to utilize to full advantage the many hours they spend viewing the moving image on film and on television.
CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

Optical Effects

Optical effects such as dissolves, fades, and wipes are frequently used in films to indicate transitions or, as George Stevens used the dissolve in Shane, to indicate artistic effects or meaning. A dissolve, for example, is frequently used in television advertising to give the appearance of smooth continuity from one scene to another. "These optical effects are, in fact, embellishments inserted by film editors." In a study reported by May:

Mercer (1952) sent a questionnaire to several producers of instructional films asking for the extent to which these devices were employed and why they were used. The replies indicated that they are used to smooth out a film and to avoid an appearance of "jerkiness" produced by cuts. It was assumed that learners would of course understand why they are used. But, do they?

Mercer tested this assumption on twenty-four Air Force trainees, using a film which contained one hundred and seventy-three cuts and sixty-two optical transitions. A program analyser was used. Subjects were instructed to hold down a key until a cut appeared and then release it, and to press another key if some interpolated optical appeared between scenes. In the

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45 May, Enhancements and Simplifications, p. 67.
first quarter of the film about forty per cent of the opticals were recognized, but this figure rose to sixty-three per cent in the last quarter. When questioned later about the purposes of transitional opticals the subjects gave a wide variety of answers, indicating that their functions were not very well understood.

The next question was: Do such opticals add, detract, or have no effect on learning from a film? Mercer (1952) selected two films which had many opticals in the original versions. He prepared two modified versions of each. One had no opticals, only cuts. The other had an optical between each sequence. Two groups of military trainees were used. One group was given previous instruction in "film literacy" including the meaning and use of opticals. The other group was split into three sections and assigned to each of the three versions of each film. The un instructed group was also split and assigned to each of the versions. On an informational test there were no reliable differences in mean scores either between film versions or between instructed and un instructed groups. The instructed group did score higher on a special "film literacy" test. Mercer concluded that it was the cues given in the narration plus the cuts in the picture that were the determining factors in recognizing a transition.45

May also discusses in relation to the use of opticals a study by McIntyre:

McIntyre (1954) substituted printed titles for transitional optical effects in one modified version of a film and in another version blank spaces were left. Matched groups of four hundred and twenty-eight Army trainees were assigned to the original and to each of the two modified versions. Amounts learned were measured with an information post test. The mean score of the group that saw the "titled" version was significantly higher than that of the group that saw the original with opticals, and also higher than that of the group seeing the version with blanks. But there was no reliable difference between "titles" and "blanks". This result suggests that opticals tend to confuse

45 J. Mercer. The Relationship of Optical Effects and Film Literacy to Learning From Instructional Films (Penn. State Univ. Instruct. Film Res. Program, U. S. Naval Train. Device Cent., ONR. Tech Rept. No. SDC 209-7-34, Port Washing-\n
rather than clarify the points in the film where transitions occur.47

May concludes, "These experiments further illustrate the point that irrelevant visuals employed in the interest of smoothness in film artistry may serve to inhibit rather than facilitate learning."48

The research as reported by Mercer, McIntyre, and May indicates that optical effects are not readily observed without training and that they do not contribute to informational knowledge. They did not extend their experiments to include testing on whether the optical effects versions were more aesthetically pleasing of affectively meaningful than the other versions nor do they compare the meaning or effect of the different film versions.

Camera Angle

With regards to camera angle Hoban states, "Every film has a dominant camera angle, although a variety of camera angles is possible."49 Hoban adds:

The condition that apparently determines the perception and retention of specific scenes in the film by an audience is not the action itself but the importance or meaning of the action; not the close-ups themselves but the significance of the object in the close-ups...

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48 May, p. 70.

49 Hoban, Instructional Film Research, ch. 8, p. 2.
what an audience sees in a film depends on the answer in the film to the individual's question, "What does this mean for me?" 50

Chu and Schramm cite Cobin and McIntyre (1961) who found that students at the college level preferred simple production techniques rather than a variety of shots. Chu and Schramm state, "Because television can make use of various film techniques, the question can be raised as to whether some of these techniques might make for more efficient learning." 51

Chu and Schramm also refer to a French study:

An earlier experiment by Mialaret and Méliès (1954) using French school children as subjects compared three versions of the same film, varying only in the complexity of film techniques. The film was about the story of a little girl waking up in the night, going up to the attic to dance, and finally being put to bed by her mother. It was found that when many film techniques were used, the children found it almost impossible to locate the elements of the stage set. 52

Chu and Schramm also discuss the work of Ellery (1959) who designed an experiment to answer the question of whether film techniques make for more efficient learning.

He (Ellery) prepared different pairs of eight minute television films, each pair being identical except for one production technique. In one pair he compared a technique called dollying, that is continuously moving up the camera from a long shot to a close-up,

50 Ibid., ch. 9, p. 6.


52 Idem, p. 49.
with a technique called cutting, that is cutting up the two different shots. In another pair he compared a version having no production error with a version having production errors...the subject matter taught was speech. The televised lectures were watched by high school students. In none of the comparisons were there any significant differences found, either in immediate post tests or in delayed post tests.53

There does not seem to have been in these experiments any detailed attempt in trying to measure whether a specific film angle or technique was indeed recognized and recalled or what aesthetic or emotional effect or meaning it had. It must, however, be emphasized as Hoban states, "One of the differences between entertainment and instructional films is that the former are designed to please, whereas the latter are designed to instruct."54 Different techniques may not influence factual learning but may be important in other domains of perception.

**Film Music**

Hoban states, "There is little experimental evidence to suggest that musical background has any marked effect on learning from instructional films."55

Nuckols and Abramson (1949) conducted an experiment where they measured whether the subjects seeing a

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54 Hoban, p. 50.
54 Hoban, *Instructional Film Research*, ch. 9, p. 7.
55 Idem, ch. 8, p. 33.
film recognized that music was used in the scenes.

Forty-five per cent of the subjects did not recognize that music was used at all in the film. Another thirty-eight per cent did not recognize that there was music in other parts of the film besides the beginning and the end.56

May states in reference to the use of music in films:

Only one experiment on the effects of a musical background on a film has been reported. Tannenbaum (1956 AVCR IV-2) presented a one-act play in three ways. It was viewed live on the stage, filmed when presented on the stage, and presented on a studio television version. Each presentation was prepared with and without a musical background. Six groups of college undergraduates were subjects. For each of the three types of presentation there were two groups of which only one heard the musical background. Each group was asked to rate the play on a series of Osgood-type semantic differential scales containing items that measured activity, potency, and worth (evaluative). The results show that musical background versions were rated as more active on each of the three types of presentations. The versions with musical backgrounds were also rated as more powerful or stronger than the non-musical versions. But the effect of music on the evaluative scales was negligible...

Apparently musical background had no effect on how the play was liked, but did have a marked effect on whether it was considered lively and powerful. This experiment illustrates the importance of discriminating between the various types of effects that a presentation may have.57

It was not stated whether any of the groups consciously recognized and recalled the use of music in the one-act play.

56 R. C. Nuckols and R. Abramson (1949) in Hoban, Instructional Film Research, ch. 8, p. 29.

57 May, Enhancements and Simplifications, p. 18.
May also cites Zuckerman who in 1947:

...made an analysis of the rather extensive literature dealing with the effects of music on audiences. Three types of effects were identified: 1) establishing an atmosphere or mood, 2) pointing up dramatic highlights, 3) enhancing the emotional tone of incidents. Members of audiences who identified the music derived satisfaction from being able to do so. Zuckerman concluded that the effects of music are so diverse and intangible that it is extremely difficult to isolate and measure its variable effects.\(^{58}\)

It seems from the literature that many subjects do not recognize or recall the use of music; but that on the other hand music may have subliminal meaning for the subjects even though the specific use of music may not be recognized and recalled, and that "...members of audiences who identify music derive satisfaction from doing so."\(^{59}\) This pleasure may come from increased meaning or from aesthetic or emotional pleasure involved in the music.

The Subjective Camera Angle

May reports that in 1961 Roshal:

...designed an experiment to test the effectiveness of the camera angle variable in combination with three other variables: motion versus still picture, showing the hands of the demonstrator versus no hands, and audience participation versus no participation. Eight versions of a film demonstration of the tying of three knots—the bowline, the sheet bend, and

\(^{58}\)Ibid., p. 19.

\(^{59}\)Idem.
the Spanish towline---were prepared. In each version the four factors of camera angles, motion, hands, and participation were systematically varied. The experimental population was three thousand three hundred and fourteen Naval trainees. After the tying of each of the three knots had been demonstrated in the film, the subjects were tested to see if they could successfully tie each knot within a two-minute time limit. Each performance was scored right or wrong. The effectiveness of each version of the film was measured by the proportion of subjects who tied the knot correctly within the time limit.

The results showed that: 1) the subjective camera angle proved superior to the one hundred and eighty degree angle in all versions where this comparison was made... 4) of the four versions that did not include the participation variable, the one that used the subjective camera angle, plus motion, plus hands yielded the highest overall score for all three knots.

In an earlier experiment Gibson (1947) compared a film on teaching Position Firing to aviation trainees with an illustrated lecture and an illustrated manual. The superiority of the film was attributed to the fact that in the training situation the trainees viewed the significant aspects from the same point of view that they would in actual combat.

Hoban adds concerning Gibson's study that Gibson and his colleagues,

...felt that much of the superiority of the film was due to the fact that nearly one-third of it was shot from the 'subjective camera angle,' that is, from the learner's point of view. Thus, the learner vicariously experienced the process of sighting a fifty-caliber machine gun.

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61 Hoban, Instructional Film Research, ch. 6, p. 17.

62 Ibid., ch. 6, p. 19.
Chu and Schramm postulate, "Where learning of perceptual-motor skills is required, a subjective-angle presentation on television will tend to be more effective than an objective-angle presentation." Chu and Schramm qualify this statement by saying,

It seems that where the learning involves only perceptual-motor skills, the subjective angle is apt to be more effective, as Rosenthal and Gibson have found. If the subject matter is more complex than perceptual-motor skills,...then the advantage of the subjective angle appears lost.

Whether or not the subjects in these experiments recognized or recalled the use of the subjective angle was not an expressed object of inquiry. However, there were some experimental indications that the subjective angle may have a different meaning than an objective or one hundred and eighty degree angle, and may also have a different effect on specific subjects.

Cutting Rate and Rate of Development

Jaspen (1948) studied the effectiveness of several variables in a series of experimental films designed to teach the assembly of the breech block of the forty-millimeter anti-aircraft gun. In Jaspen's study seventeen different versions of the film on assembly of the breech

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62 Chu and Schramm, p. 48.
63 Ibid., p. 49.
block were produced, providing various combinations of the six variables under study. The experimental population consisted of two thousand three hundred and seventy-seven apprentice seamen at the Great Lakes Naval Training Station. Results were tested by actual assembly of breech blocks. Jaspen found that a slow rate of development in a film is superior to a rapid rate of development.  

Hoban reports concerning a second study by Jaspen:

In his second study Jaspen (1950) studied the effectiveness of a "succinct treatment" consisting of a rapid three-minute presentation of the disassembly and assembly of the breech block taken from an existing film. While this extremely succinct treatment was reliably better than no film at all, it was the least effective of all the fourteen versions used in the experiment.  

Hoban in another study (1942) reported, "One of the frequent criticisms of instructional films used in elementary and high schools is that they move too quickly." Hoban also cites the study of Vincent, Ash, and Greenhill:

Four versions of an introductory film The Weather were made up from five films on aerology produced by the Walt Disney Studio for the United States Navy.

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64 Hoban, Instructional Film Research, ch. 8, p. 30.
65 Idem.
66 Ibid., ch. 8, p. 31.
In these four versions fact, density, and length of time of presentation were varied. The long versions ran thirty minutes. The short versions ran fifteen minutes. The heavy versions included twice the number of facts as did the light versions. The four versions were: 1) long-heavy, 2) long-light, 3) short-heavy, 4) short-light. The commentaries of all four versions were of equal verbal difficulty on the Dale-Chall formula of readability. The experimental population consisted of three hundred and twenty-four college students, four hundred and thirty-four high school students, and five hundred and three Air Force trainees.

From the analysis of results it was tentatively concluded that within certain limits the more information included in a film, the greater the amount of information learned. But the investigators state that, 'The data suggests that as more and more information is presented, interferences are set up that result in less efficient learning of any particular part...Finally, it seems clear that packing more and more information into a film yields only very slight increments in total measured learning.' In other words, increasing the absolute amount of film content tends to decrease the proportional amount of learning of film content.67

Hoban adds:

The lack of clear-cut results is due, presumably, to a fatigue or boredom factor in the audience caused by taking a long and difficult test and perhaps to the fact that the audiences had little background or interest in the subject of the films.

The various studies of rate or speed of development in films indicate that when a film containing a large amount of information presents that information to the audience at a rapid rate, the audience learns relatively little from the film.68

However, fast cutting and complexity of presentation may serve other purposes. Dember, Earl and Paradise

67 Idem.
68 Idem.
indicate that rats choose the complex rather than the simple paths in a maze. These authors also indicate in another study that humans give more attention to physical arrangements that have more rather than fewer elements arranged in a complex form. Roger Penn states in his study, "...frequent changes are likely to sustain a high level of interest. And that the film stimulus may be made more interesting by the complexity of fast cutting."

The above studies suggest that, while fast cutting or rapid rate of development may not aid factual learning, they may increase specific subjects' interest in the film presentation and may have a different aesthetic or psychological effect on subjects than a slow rate of development or cutting.

Summary of Related Literature

Though the film techniques used in this study have been investigated in depth by several researchers, the basic point of inquiry of these studies has been whether


71 Roger Penn, "Effects of Motion and Cutting Rate in Motion Pictures" in AV Communications Review Vol 19, #1 (Spring, 1971), p. 42.
film techniques influence learning. The use of film techniques in entertainment feature films, however, may serve other purposes. Few of the above studies tried to examine, for example, whether a particular film technique had an aesthetic or emotional effect or conveyed a particular meaning to a specific audience.

However, in terms of this present study, several of the above authors in their research investigated to some degree whether specific film techniques were recognized and recalled. Mercer, McIntyre, and May indicated that optical effects were not readily observed without training. With regard to camera angle, Hoban seemed to imply that camera angles themselves were not as important in determining "...the perception and retention of specific scenes" as "...the significance of the object" shown by the camera angle.72 Concerning the use of music, Nuckols and Abramson found that a large percentage of subjects did not recognize or recall that music was used in a film. In the studies reported by Roshal and Gibson concerning the use of the subjective angle, though it was not expressly investigated whether subjects recognized and recalled the use of the subjective angle, there were experimental indications that the use of the subjective

72 Hoban, *Instructional Film Research*, ch. 8, p. 29.
angle had a different meaning, effect, and interest value than an objective or one hundred and eighty degree angle for specific subjects. With regard to the recognition and recall of cutting rate and rate of development, Roger Penn indicated that a higher level of interest may be sustained by "...the complexity of fast cutting." 73

There are, then, some experimental though inconclusive indications in related literature that film techniques, though sometimes of important interest value for certain subjects, are not readily and consistently recognized and recalled.

73 Penn, "Effect of Motion and Cutting Rate", p. 42.
Design of the Study

The design of this study evolved over a considerable time, and in its final form incorporated many different elements. A sampling of (volunteer) students at the Ohio State University was administered an instrument designed to measure their recognition and recall of specific film techniques in film excerpts they were shown.

The students were first given a three page set of directions and questions entitled "Survey of Motion Pictures." This set of twelve questions was designed to reveal the individual subject's general biographical background and particular background in film. The first paragraph contained the following description:

Listed below are multiple choice questions relating primarily to your personal behavior and attitudes towards feature film pictures. We would like to know how much film viewing, reading books about film, etc. is a part of your life.

The subjects were instructed to record their answers to the multiple choice questions on an IBM answer sheet that accompanied this three page survey. On the top of each
IBM sheet was a number ranging from one to one hundred. The subjects were given #2 lead pencils to fill in answers to the multiple choice questions and were asked to transfer the number written on the top of their IBM answer sheet to their copy of the three-page survey on motion pictures. Before each copy of the survey and of the following parts of the test were handed back, the administrator of the test checked each copy to make sure that each student had written his or her IBM number on the top of the sheet.

After the survey was administered, a five-minute excerpt from George Steven’s feature film *Shane* was shown to each group of subjects. Immediately after seeing this excerpt, the subjects were given another three-page set of multiple choice questions and asked to record their answers to the questions on the accompanying IBM answer sheet. They were again asked to transfer the number from their IBM answer sheet onto the first page of the three-page set of questions. After completing the three-page set of questions, each student handed back the three-page set of questions to the administrator.

There were twelve questions in this three-page set of multiple choice questions relating to the excerpt from *Shane*. Four of the questions related to specific film techniques used in the film excerpt from *Shane*. Two of the other questions related to film techniques; but these
were either not actually used in the film excerpt from _Shane_ or were very common in many different scenes and were designed as distractor questions. The other six questions related to: 1) liking of the excerpt, 2) theme of the excerpt, 3) interest in seeing the rest of the film from which the excerpt was taken, 4) liking of the Western film genre, 5) and 6) whether the film or film excerpt was seen before and how recently.

An excerpt from Elia Kazan's feature film _On the Waterfront_ was then shown to the subjects. Immediately after the showing of the film, another three-page set of multiple choice questions was given to each subject. They were again asked to record their IBM number on the top of these sheets and were checked to see if they had done so. In this set of questions only two questions relating to film techniques were considered; the recognition and recall of music and the use of the high-angle shot. In the pretest given before the final version of this instrument was established there were two other questions that the administrator desired to test. Upon consideration, these two questions were dropped from the final tabulation because of considered ambiguities in the wording of the questions. There were, then, in this set of questions four distractor questions about film techniques. There were also six other questions relating to: 1) liking for
the excerpt, 2) theme of the excerpt, 3) whether the film or the excerpt from it was seen within the last six months, 4) interest in seeing the rest of the film, 5) liking for the "gangster" film genre, and 6) number of times the film On The Waterfront or the excerpt from it were seen previously.

Immediately after the written test was collected, a third excerpt was shown from Alfred Hitchcock's film North by Northwest. After the showing of this excerpt, a four-page set of questions was given to each subject. Four of the questions related to the recognition and recall of specific film techniques used in the excerpt from North by Northwest. Two other questions relating to the recognition and recall of film techniques were designed as distractor questions. There were also questions relating to: 1) liking for the excerpt, 2) theme of the excerpt, 3) whether the film or the excerpt from it was seen within the last six months, 4) interest in seeing the rest of the film, 5) interest in knowing more about how films are made, 6) how many times the film North by Northwest or the excerpt from it were seen previously, and 7) liking for the "suspen selects" film genre.

The fourth page of this set of questions was called "Matching Test On Film Terms." It included the directions:

The purpose of this matching test is to determine how many film terms you can correctly identify by
matching the appropriate definition in the right-hand column with the corresponding film term in the left-hand column.

Thirteen film terms were included in the left-hand column, while there were twenty-six different definitions of film terms in the right-hand column. Subjects were instructed:

In the space provided after the film term, please write in the number of the definition you think corresponds to that film term. Please do not guess! If you are not sure, leave the space blank. Please write in the number of only one definition after each film term.

These thirteen film terms and definitions were selected from the results of a pre-test which included fifty different definitions given to a group of fourteen film students. An item analysis was then performed on the pre-test definitions removing the items that did not seem to discriminate between knowledge and lack of knowledge of film terms. The film terms and definitions that seemed to discriminate most accurately were then selected for the final instrument.

Film Excerpts Used in the Test Instrument

Excerpts from feature films were used in the test instrument in order to approximate as closely as possible in a testing situation the subjects' normal experience of watching feature entertainment films. An excerpt from the feature film rather than the complete film itself was chosen in order to fit the film instrument into the time slot allotted for a normal Ohio State class period and in order to keep the administration of the test instrument down to a reasonable length of time and attention
span of the subjects. The author at one time considered designing his own films which would have included the specific film techniques he desired to test for recognition and recall. However, it was finally considered more appropriate to use film excerpts from films and from film directors that had received general critical and popular acclaim and acceptance. It is to be noted that these same film excerpts were part of a film produced by the American Film Institute called *The American Film* in which the work of the above directors, among others, is discussed and commented on by Charlton Heston and in which the above film excerpts were shown.

Ten different film techniques used in these film excerpts were chosen as objects of the recognition and recall testing. These ten techniques were: 1) the dissolve, 2) the low-angle shot, 3) the editing together of different angles of one continuous action, and 4) the use of special sound effects, all from the film excerpt from *Shane*; 5) the use of music, 6) the high-angle shot, both in *On the Waterfront*; 7) the tracking shot, 8) the change in editing tempo, 9) the subjective angle, and 10) the hearing of the sound of gunfire, all in the film excerpt from *North by Northwest*.

Appendix A includes a shot by shot breakdown with the accompanying text of each of the three film excerpts. The last frame of one scene was photographed together with the first following frame of the next
scene or "edit." A brief description of the action within
the scene and of the text, music, and sound effects is
included. Each scene used in the testing situation such
as the dissolve is identified in parentheses. Except for
the techniques of the subjective angle and the tracking
shot, there was only one clear example of each specific
film technique to be recognized and recalled in a partic-
ular film excerpt.

The excerpt from _Shane_ was shown first. It was
five minutes and twenty-five seconds long. The excerpt
from _On the Waterfront_ was shown second. It was five
minutes and seventeen seconds long. The excerpt from
_North by Northwest_ was shown third. It was three minutes
and fifty-eight seconds long. The order of each screening
was not varied.

The film excerpt from _Shane_ begins at the very
end of the complete film where Alan Ladd as Shane is
standing at a bar facing Jack Palance who plays Jack
Wilson, the gunslinger hired by the ranchers to drive off
the homesteaders. Shane has identified himself with the
homesteaders and taken up their cause. Shane calls Wilson
a "low-down Yankee liar." At this point the director,
George Stevens, shows Shane from a very low angle as he
stands facing Jack Wilson. The camera is practically
resting directly on the floor as it looks up at Shane.
Shane and Wilson draw. Shane shoots first and Wilson
falls backward, crumbling into a pile of empty beer barrels. An older rancher sitting at a desk in the back of the tavern tries to draw on Shane. Shane wheels and shoots him also. Watching all this action is Joey, the young boy Shane has befriended, and Joey's dog. Together they watch from underneath the saloon's swinging doors. Shane stares at the bartender who stands petrified with fear and dares not draw on him. Shane moves underneath a balcony in order to look at the body of the dead rancher. He then does a gunman's fancy twirl to return his gun to his holster. Joey is in awe at this action. Shane turns and walks away.

During this time another rancher with a rifle has stepped out from a doorway of the balcony. As Shane moves away his back towards the rancher, the rancher draws a bead on him. Joey yells a warning. Shane turns. Then a shot rings out before Shane can shoot. He is hit, but still manages to shoot the rancher who falls crashing through the balcony and onto the floor. George Stevens shows us this action from three different angles. The last shot of the body falling onto the ground is less than a second long and was considered by the author as very difficult to see. The sounds from the gunfire of the shooting were incredibly loud. George Stevens in an
talk given at Ohio State said that he used the sound effects from a howitzer cannon combined with the sound of a rifle to produce the voluminous gunshot sounds recorded on the sound track for this action sequence.

After this shooting scene Shane walks out to get on his horse and sees Joey. They have a long dialogue scene in which Shane explains how fast Jack Wilson was and why he cannot return to Joey's family. There are strong hints, which Joey does not understand, that Shane is in love with Joey's mother. Shane finally rides off and Joey runs after him. Joey stops at the edge of town and calls after Shane. Shane is shown riding into the Grand Teton mountains. As Shane rides off into the mountains we hear Joey's voice echoing after him and we see Joey's face dissolve into Shane riding away. The dissolve lasts for eleven seconds and could almost be called a double exposure because of its length.

The film excerpt from On the Waterfront began when Marlon Brando as Terry and Rod Steiger as his brother, Charlie, are seated in a cab driving through the city streets. Charlie tries to talk Terry out of testifying before the grand jury about waterfront crime in which he also is mixed up. Terry is unsure of himself, but does not give in to Charlie's wishes. Finally, Charlie draws

April 9, 1973).
a gun and threatens Terry. It is at this point that we first hear music in the sound track. Terry simply pushes the gun away and says, "No, Charlie." Charlie pauses, then stutters and starts talking about how good a boxer Terry was. Terry explains that it was Charlie's fault that he never became a good boxer because Charlie forced him to take dives. Charlie recognizes this fact and tells Terry that he will tell his labor racketeer boss that he could not find Terry. He tells the cab driver to pull over and we see in long-shot from a very high angle Terry getting out of the cab and the cab driving away.

The third film excerpt from North by Northwest started with Cary Grant as Thornhill standing on a lone Midwestern highway with nothing but barren fields surrounding him. We hear on the sound track the noise of a plane that seems to be coming closer. Cary Grant looks into the sky and sees a dot coming toward him. The plane's noise grows louder. Finally the plane sweeps over his head as he falls to the ground. The plane tries again to run him down and also someone shoots at him from the plane. As Grant runs from the plane the camera tracks with him. We frequently see subjective angles of what he sees and experiences as the plane approaches him. The sounds of gunfire are distinctly heard above the sound of the plane's engine, and we see puffs of smoke as the shots hit the ground.
around Grant who finally manages to run into a corn field to hide from the plane. The plane then sprays the corn field with insecticide forcing him to run from the field. He runs out onto the road and stands in front of an oncoming gasoline truck trying to wave it down. The truck screeches on its brakes as the plane is shown making a turn to again attack Grant. The gasoline truck barely manages to stop before running him over. In fact, the truck bumps him knocking him down before coming to a complete stop. The plane crashes into the rear gasoline tank of the truck and explodes. The editing tempo in this sequence becomes much faster with each succeeding shot. The number of frames in each shot is cut shorter and shorter until the final crash. Grant runs away from the burning plane and truck as they explode behind him. A group of people have pulled up in their cars alongside the road and stand watching the plane and truck burn. They move in closer. Grant moves around them, jumps into one of the cars, and drives away. The owner, a farmer, chases him down the road. This scene ends the sequence which is in the middle of the complete film.

Each of the selected excerpts was complete in itself. Each seemed to have a beginning, middle, and end that seemed to justify it being shown as an intelligible excerpt.

_Questionnaire Used in the Test Instrument_

All questions in the test instrument were written
in a multiple choice format of five different choices in order to simplify the subject's task. Each question on the recognition and recall of film techniques, however, was followed by a second question that read: "Please describe this scene briefly on the lines below, if you remember it." Three blank lines were then provided for the subjects to describe the film technique or scene they had recalled.

The questions in the written test instrument were developed through the author's personal study, consultation with advisors, and through information gathered from experimental versions pre-tested on small groups of subjects.

The ten questions concerning the recognition and recall of film techniques were selected because they seemed to representatively sample across some principal subdivisions of film technique: composition, editing, sound, and optical effects. The author also tried to select the questions on recognition and recall of film techniques so that they would not all be of equal difficulty, i.e. the author presumed that a film technique such as the subjective angle which was used very frequently in North by Northwest would be more readily recognized and recalled than the film technique of accelerated editing tempo used in the same film.

The first set of thirteen questions the subjects were given related to the general biographical and film background of the subjects. The film background questions,
though not intended to comprise an exhaustive list of characteristics of "film sophistication," were considered to relate to possible important aspects of "film sophistication."

In the first question concerning general biographical background the subjects were asked to indicate their sex. The next four general biographical questions were as follows:

Are you a:

1) Sophomore,
2) Junior,
3) Senior,
4) Masters Candidate (subjects in extension courses who already had their B.A. were asked to list themselves as Masters Candidates)
5) Ph.D. Candidate.

What is your age?:

1) 19 or under,
2) 20-25,
3) 26-30,
4) 31-35,
5) 36 or over.

What is your current Grade Point Average?: (Please be as accurate as possible. No names will be associated with any part of this study.)

1) 1.50-1.99,
2) 2.00-2.49,
3) 2.50-2.99,
4) 3.00-3.49,
5) 3.50-4.00.

What is the combined annual income of your father and mother?:

1) Under $7,000,
2) $7,000-$12,000,
3) $12,000-$17,000,
4) $17,000-$22,000,
5) $22,000 and over.

The next eight questions related to the individual subject's specific background in film. They were as follows:
How knowledgeable do you consider yourself in film?:
1) Very knowledgeable,
2) More knowledgeable than most,
3) Moderately knowledgeable,
4) Beginning to know about film,
5) Not very knowledgeable at all.

On the average how many films in motion picture theatres do you see per month?:
1) none,
2) 1-3,
3) 4-6,
4) 7-9,
5) 10 or more.

On the average how many feature films produced originally for theatrical viewing do you see on TV per week?:
1) none,
2) 1-2,
3) 3-4,
4) 5-6,
5) 7 or more.

How many books on film did you read in the last six months?:
1) none,
2) 1-3,
3) 4-6,
4) 7-9,
5) 10 or more.

On the average how many film reviews do you read per month?:
1) none,
2) 1-5,
3) 6-10,
4) 11-15,
5) 16 or more.

On the average how much time do you spend a month discussing films?:
1) none,
2) less than two hours,
3) 2-4 hours,
4) 4-6 hours,
5) 6 hours or more.

How many courses in film have you taken?:
1) none,
2) 1-2,
3) 3-4,
4) 5-6,
5) 7 or more.
How much time do you spend a month working on the making of films or TV shows?:

1) none,
2) less than six hours,
3) 6-12 hours,
4) 13-18 hours,
5) 18 hours or less.

At the end of the last section of questions each subject was given a test relating to matching thirteen film terms to twenty-six definitions of film terms. When the tests were scored, each person was rated on a one-to-five scale according to how well he or she did matching the film terms. The subject's rating on a one-to-five scale on matching film terms was also used as part of the particular film background for a particular subject.

Each of the subjects was encouraged to be as honest as possible about his or her personal and film background, and was told that his or her name would never become associated with any of the final results.

After the first set of multiple choice questions were answered, the subjects were shown the film excerpt from _Shane_ and given another set of multiple choice questions to answer. For example, the question concerning the dissolve read:

Did you see any parts of the film excerpt where one scene seemed to disappear while at the same time a second scene seemed to appear over this first scene (called a dissolve):

1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.
Only the response "definitely yes" was considered for scoring purposes to be a useful answer for purposes of this study. The subject would have had to be definitely sure of having recognized and recalled a specific film technique in order to be able to write "definitely yes." The complete text of the test is included in Appendix E.

There was, moreover, a possibility that a subject could answer "definitely yes" and yet be mistaken about the scene he or she thought had the particular film technique. After each question about the recognition and recall of a particular film technique such as the question concerning the dissolve, an additional question was asked:

Please describe the scene briefly on the lines below, if you remember it.

The written responses for the highest scorers were checked to see if there was any discrepancy between the answer "definitely yes" and the film technique they thought they saw.

The test questions relating to the recognition and recall of ten specific film techniques were as follows:

Did you see any parts of the film excerpt where one scene seemed to disappear while at the same time a second scene seemed to appear over this first scene (called a dissolve)? (in Shane)

1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.

Other questions not included in the final analysis were asked. They were intended as distractor questions.
Did you see any scenes in this excerpt where the camera seemed to be looking up at someone from a low position (from an angle of more than 45° below eye level---called a low angle shot)?: (in Shane)

1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.

Did you notice any parts of the gunfight scene where one action such as drawing a gun from a holster or someone being shot was shown from three or more different angles and edited together to form one continuous action?: (in Shane)

1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.

Did you hear any sounds in the excerpt which seemed to sound differently from the way you would normally hear them in real life?: (in Shane)

1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.

Did you hear any music in this excerpt?: (in On The Waterfront)

1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.

Did you see any scene where the camera seemed to be looking down at a subject or object from a position well above him or it (called a high angle shot)?: (in On The Waterfront)

1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.
Did you see any shots in the film where the camera seemed to move along with an actor or object as they moved (called a tracking shot): (in North by Northwest)

1) Definitely yes,
2) I think so.
3) Not sure,
4) I don't think so,
5) Definitely not.

Did you see any parts of the film where the edited scenes seemed to become shorter and shorter, where the tempo of the editing became much faster than before?: (in North by Northwest)

1) Definitely yes,
2) I think so.
3) Not sure,
4) I don't think so,
5) Definitely not.

Did you see any scene or part of the film where the camera seemed to take the position of the actor and see what he was looking at (called a subjective angle shot)?: (in North by Northwest)

1) Definitely yes,
2) I think so.
3) Not sure,
4) I don't think so,
5) Definitely not.

Did you hear any sounds of gunfire in this excerpt?: (in North by Northwest)

1) Definitely yes,
2) I think so.
3) Not sure,
4) I don't think so,
5) Definitely not.

Selection and Description of the Subjects

The test instrument was administered to a stratified sampling of one hundred students at the Ohio State University. The author tried to select approximately thirty-three students who had had several courses in film production and/or history or who had had a good deal of previous background in film. A second group of thirty-three students were selected who were considered to be in the first stages of learning about
film, as for instance students enrolled in beginning film production or beginning film history courses. A third group of approximately thirty-three were selected who were considered to have little or no training in film. These students were enrolled in a beginning course in Still Photography. However, all these students were enrolled in courses being held in the Department of Photography and Cinema at The Ohio State University. They all, therefore, had at least some interest in the study of the photographic image. Included in this study were also subjects from an area other than Photography and Cinema. However, due to technical difficulties, only one of the excerpts was able to be shown to this group. This group was therefore not included in the final study.

This instrument was developed during the Summer, 1973 Quarter at The Ohio State University, a quarter in which many advanced film courses are generally not offered. There were thus very few advanced film students registered at Ohio State during that summer quarter. The author found that he had to go through old class lists to find the names of students who had previously taken advanced film courses. He then telephoned these students and asked them to volunteer their time to take this instrument. To the author's surprise almost all of the advanced students contacted in this manner volunteered their time.

Of the one hundred subjects who took the test
thirty-one subjects reported that they had not taken any previous courses in film. Another thirty-one subjects reported that they had taken one to two courses in film. Thirty-seven subjects reported that they had taken three or more courses in film.

Administration of the Test

The test instrument was administered in exactly the same manner to each subject or group of subjects. The author confined himself to simply reading the set of directions written on each sheet to the individual or group taking the instrument. However, in first contacting the volunteers, he did explain in very general terms that he was looking for volunteers to take a test concerning films they would see as part of the test.

In several cases the author was able to go into a class being taught at The Ohio State Department of Photography and Cinema and administer the test to groups of students. The test instrument was given in this manner to a group of eight students taking Advanced Film Production, to approximately thirty students taking Beginning Film Production, and to a group of approximately twenty-five students taking Beginning Still Photography. The rest of the student subjects were obtained by individual calls on the telephone. These subjects volunteered either to come in to Ohio State during the day and be given the instrument, or they volunteered to come to the author's apartment during the evening.
and be given the instrument, sometimes on an individual basis. Each of the subjects was given the complete instrument without any interruptions.

Scoring of the Instrument

Each subject recorded all his or her answers on an accompanying IBM answer sheet. Each subject was given a #2 lead pencil and was asked to fill in the blank of the multiple choice question that corresponded to the answer. These IBM answer sheets were then scored by the scoring system in use at The Ohio State University. All of the ensuing data analysis was then performed in the data processing center at Eastern Kentucky University.
CHAPTER IV

ANALYSIS AND DISCUSSION OF THE DATA

To facilitate the reader's understanding of the narrative of this chapter, a general network of data analysis appears in Figure 1.72

Raw Scores Analysis

After the data from the administration of the test instrument for one hundred subjects was put on key punch cards, a Honeywell 2050 computer running under the operating system OS/2000 at Eastern Kentucky University's Division of Data Processing was used to process the test results.

The summary raw score statistics for the 100 subjects who took the test instrument for the recognition and recall of 10 specific film techniques are shown in Table I.

72. The author is indebted to Raleigh Pegram's, Ph.D. dissertation The Use of a Semantic Differential with Students of Nursing to Search for Significant Relationships Among Affective & Cognitive Variables, (Columbus; Ohio State University, 1967). p. 62 for his model of a "General Network of Data Analysis."
GENERAL NETWORK OF DATA ANALYSIS

FIGURE 1
TABLE 1

THE MEAN, STANDARD DEVIATION, VARIANCE, MAXIMUM
VALUE, MINIMUM VALUE AND RANGE OF THE ONE HUNDRED
SUBJECTS SCORES ON THE TEN QUESTIONS CONCERNING
THE DEPENDENT VARIABLE THE RECOGNITION AND RECALL
OF SPECIFIC FILM TECHNIQUES

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6.65</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.96</td>
</tr>
<tr>
<td>Variance</td>
<td>3.60</td>
</tr>
<tr>
<td>Maximum Value</td>
<td>10</td>
</tr>
<tr>
<td>Minimum Value</td>
<td>1</td>
</tr>
<tr>
<td>Range</td>
<td>9</td>
</tr>
</tbody>
</table>

The ten questions relating to the recognition and recall
of specific film techniques were intended to be of varying de-
grees of difficulty in order more easily to measure a broad
sampling of the ability to recognize and recall specific film
techniques. A difficulty index was determined for each question
from the scores of the one hundred subjects by the
formula:

\[ \text{Difficulty Index} = \frac{\text{No. correct in top 27\%} + \text{No. correct in bottom 27\%}}{\text{No. of students in 54\% of the class}} \]

A discrimination Index was determined by the formula:

\[ \text{Discrimination Index} = \frac{\text{No. correct in top 27\%} - \text{No. correct in bottom 27\%}}{\text{No. of students in 27\% of the class}} \]
The ten questions on the recognition and recall of specific film techniques are listed in order of difficulty in Table 2.

The questions that most discriminated between the high and the low scores were related to editing (question number twenty-two concerning the recognition and recall of a continuous action filmed from different angles and edited together from Shane, and question number forty-three concerning the recognition and recall of an accelerated editing tempo in North by Northwest). These two questions were also among the most difficult.

It may possibly be interpreted from the data in Table II that there was an improvement in the recognition and recall of specific film techniques from the showing of the first film excerpt from Shane to the showing of the third film excerpt from North by Northwest. This improvement may possibly be attributed to the development of recognition and recall skills on the part of the subjects from the showing of the first excerpt to the showing of the third excerpt, or to the different degrees of facility in recognition and recall of the specific film techniques used in the first and third excerpts.
### TABLE 2
THE TEN QUESTIONS FOR THE RECOGNITION AND RECALL
OF SPECIFIC FILM TECHNIQUES LISTED IN ORDER OF
MOST DIFFICULT TO LEAST DIFFICULT

<table>
<thead>
<tr>
<th>Questions</th>
<th>Number of Correct Responses</th>
<th>Difficulty Index</th>
<th>Discrimination Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>$#22$ The recognition &amp; recall of a continuous action filmed from different angles &amp; edited together from <em>Shane</em></td>
<td>35</td>
<td>.3735</td>
<td>.5542</td>
</tr>
<tr>
<td>$#17$ The recognition &amp; recall of the dissolve in <em>Shane</em></td>
<td>45</td>
<td>.4578</td>
<td>.2410</td>
</tr>
<tr>
<td>$#43$ The recognition &amp; recall of accelerated editing tempo in <em>North by Northwest</em></td>
<td>49</td>
<td>.4690</td>
<td>.4578</td>
</tr>
<tr>
<td>$#24$ The recognition &amp; recall of unrealistic sound effects in <em>Shane</em></td>
<td>56</td>
<td>.5422</td>
<td>.2651</td>
</tr>
<tr>
<td>$#49$ The recognition &amp; recall of gunfire in <em>North by Northwest</em></td>
<td>64</td>
<td>.6506</td>
<td>.2410</td>
</tr>
<tr>
<td>$#36$ The recognition &amp; recall of the high angle shot in <em>On the Waterfront</em></td>
<td>75</td>
<td>.7229</td>
<td>.1446</td>
</tr>
<tr>
<td>$#33$ The recognition &amp; recall of the use of music in <em>On the Waterfront</em></td>
<td>80</td>
<td>.7831</td>
<td>.0723</td>
</tr>
<tr>
<td>$#20$ The recognition &amp; recall of the low angle shot in <em>Shane</em></td>
<td>80</td>
<td>.7831</td>
<td>.0723</td>
</tr>
<tr>
<td>$#41$ The recognition &amp; recall of the tracking shot in <em>North by Northwest</em></td>
<td>86</td>
<td>.8434</td>
<td>.0482</td>
</tr>
<tr>
<td>$#47$ The recognition &amp; recall of the subjective angle shot in <em>North by Northwest</em></td>
<td>95</td>
<td>.9518</td>
<td>-.2169</td>
</tr>
</tbody>
</table>
Reliability

Since it could not be assumed from the data in Table II on item difficulty that all the recognition and recall test items were of equal difficulty or that the recognition and recall test items were homogeneous, i.e., measuring only one factor or ability, a test-retest form of testing for reliability was adopted. Nineteen students taking film courses in the Dept. of Photography and Cinema at Ohio State, but not participants in the testing of one hundred subjects described above, were given the same test instrument described in Chapter II at two different times. A thirty day interval separated the administrations of the two test instruments. The Spearman-Rho rank difference correlation formula was used to determine the rank order correlation between the scores on the test and retest. An of .549 was found which for N = 19 is significant at the .01 level of confidence. Though the scores on the second were a good deal higher, the first and second administration of

73. Different abilities may be involved in recognizing and recalling different film techniques such as attention span, hearing ability, perceptual alertness, etc.
the same test instrument, then, yielded much the same rank order of individuals within the .01 level of confidence. The null hypothesis that there is no significant correlation between the rank-order of individual scores on the test and retest must be rejected.

Validity

Kerling er describes content validity in these terms:

A professor "...wanting to know something of (his test's) validity, critically examines each of the test's items for their relevance to understanding principles of human development (the subject matter of his objective-type test). He also asks two colleagues to evaluate the content of the test... He has investigated the content validity of the test.

"Content (face) validity is the representativeness or sampling adequacy of the content--the substance, the matter, the topics--of a measuring instrument. Content validation is guided by the question: Is the substance or content of this measure representative of the content or the universe of content of the property being measured?...Content validation consists essentially in judgement. Alone or with others, one judges the representativeness of the items...This means that each item must be judged for its presumed relevance to the property being measured." 74

Drs. Robert W. Wagner, Keith Tyler and Ali Elgabri of Ohio State University and the author judged the written test instrument on the recognition and recall of specific film

techniques and the film excerpts used as part of the test instrument to be representative of the content of film techniques.

With regards to empirical validity as defined by Kerlinger, "...a test is valid if it efficiently distinguishes individuals high and low in a trait...". The test instrument seemed to efficiently distinguish individuals high and low in a trait as seen on page seventy-one below.

High and Low Scorers: Comparison of Means

The highest twenty per cent scorers were separated into one group labeled number three. There were twenty subjects who scored ten or nine correct out of a possible ten correct answers. These twenty subjects made up the top twenty per cent scorers labeled group number three.

The distribution of the lowest scorers, however, did not lend itself as easily to an exact twenty per cent grouping. There were thirteen subjects who scored four or less correct answers. There were, however, fifteen subjects who scored five correct answers.

The author took the thirteen subjects who scored four or less correct answers, in order to make up a twenty per cent grouping of the lowest scorers which he labeled group number one. The seven subjects choosen from the fifteen who scored

75. Ibid, p. 449.
five correct answers were selected because they most closely matched in general biographical characteristics the subjects who scored in the top twenty per cent. Table 3 shows how each low scoring subject was paired according to general biographical characteristics with a subject from the high scoring group. Only twelve of the twenty pairs were matched with regards to sex because the high scorers were mostly male (fifteen)\(^7\) or did not mark on the Ohio State I.B.M. test form their sex (three); whereas the low scorers were evenly divided into ten males and ten females.

Since the high and low scoring groups were constituted according to their high and low scores on the recognition and recall of film techniques, it could reasonably be assumed that the difference between the means of the two groups on the recognition and recall of film techniques would be statistically significant. A "t" test between the means of the two groups yielded a "t" ratio of 3.0737 which is significant at the .01 level of confidence. The difference between the means of the two groups is a difference that would not ordinarily occur by chance, as could well be expected.

\(^7\) The author does not wish to imply that males score higher on tests for the recognition and recall of specific film techniques. In this specific test males perhaps scored higher through sampling error or in part because advanced film course classes, particularly film production course classes, are predominantly male at the Ohio State University.
TABLE 3
PAIRS OF HIGH AND LOW SCORERS MATCHED WITH REGARD TO SEX, YEAR IN SCHOOL, AGE, GRADE POINT AVERAGE AND FAMILY INCOME

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<td>Journalism Major</td>
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A "t" ratio for the means of the low and high scoring groups was then computed with regard to the mean score of each group on the independent variable including general biographic traits and specific film background traits that the author considered might affect the dependent variable the recognition and recall of specific film techniques. Table 4 contains a listing of the seventeen independent variables included in the test instrument and the comparison of the means of the high and low scorers with regard to each variable. (See Appendix D.)

The null hypothesis that there is no significant difference between the means of the low scorers and the means of the high scorers is not rejected with regard to the following independent variables:

1) Year in College
2) Age
3) Grade Point Average
4) Theatrical films seen on T.V.
5) Film reviews read
6) Time spent in film or T.V. production
7) Interest in seeing the rest of the feature films from which these three excerpts were made
8) Number of times the film or excerpt was seen before.

The null hypothesis that there is no significant difference between the means of the low scorers and the means of the high scorers must be rejected with regards to the independent variables listed in Table 5. The differences between the
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Mean score of 100 subjects</th>
<th>Mean high 20% scorers</th>
<th>Mean low 20% scorers</th>
<th>&quot;t&quot; for means of high &amp; low scorers</th>
<th>Significance</th>
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<tr>
<td></td>
<td>3.2551 (Senior)</td>
<td>3.2000 (Senior)</td>
<td>2.9474 (Junior +)</td>
<td>.6404 NS</td>
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<td>2) Age</td>
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<tr>
<td>3) Grade Point Average</td>
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<td>3.8700 (2.50-2.99)</td>
<td>3.7500 (2.50-2.99)</td>
<td>3.8500 (2.50-2.99)</td>
<td>-.3235 NS</td>
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<td>4) Income of Family</td>
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<td>3.2784 ($12-17,000)</td>
<td>3.8947 ($12-17,000+)</td>
<td>3.1000 ($12-17,000-)</td>
<td>2.3399 .05</td>
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<td>5) Answer to the question: &quot;How knowledgeable do you consider yourself in film?&quot;</td>
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<td>3.0800 (Moderately knowledgeable -)</td>
<td>3.7000 (Moderately knowledgeable +)</td>
<td>2.5000 (Beginning to know about film)</td>
<td>3.7362 .01</td>
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<td>6) Films seen in theatres per month</td>
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<td>2.2400 (1-3)</td>
<td>2.6000 (1-3)</td>
<td>1.9000 (None)</td>
<td>2.6458 .05</td>
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<td>7) Theatrical films seen on TV per week</td>
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<td>2.1500 (1-2 - )</td>
<td>2.1000 (1-2 - )</td>
<td>2.4000 (1-2)</td>
<td>1.0572 NS</td>
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<td>8) Books read on film within six months</td>
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<td>2.3100 (1-3)</td>
<td>3.1000 (4-6)</td>
<td>1.4500 (None)</td>
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<td>Independent Variables</td>
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<td>Mean high 20% scorers</td>
<td>Mean low 20% scorers</td>
<td>&quot;t&quot; for means of high &amp; low scorers</td>
<td>Significance</td>
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<td>9) Film reviews read per month</td>
<td>2.5800 (1-5)</td>
<td>2.6000 (1-5)</td>
<td>2.4500 (1-5)</td>
<td>.4421</td>
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<td>10) Discussion of films per month</td>
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<td>3.3000 (2-4 hours)</td>
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<td>11) Courses in film</td>
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<td>3.2000 (3-4)</td>
<td>1.8000 (None)</td>
<td>3.0436</td>
<td>.01</td>
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<td>12) Time spent in film or TV production per month</td>
<td>2.1100 (less than six hours)</td>
<td>2.8500 (less than six hours)</td>
<td>1.8500 (None)</td>
<td>1.9783</td>
<td>NS</td>
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<td>13) Score on matching film terms test</td>
<td>2.9255 (7-9 correct+)</td>
<td>3.5263 (9-11 correct)</td>
<td>2.0556 (7 or less correct)</td>
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<tr>
<td>14) Liking of the three excerpts</td>
<td>5.5900 (Liked very much)</td>
<td>5.3000 (Liked almost)</td>
<td>6.8000 (Moderately liked)</td>
<td>2.1710</td>
<td>.05</td>
</tr>
<tr>
<td>15) Interest in seeing the rest of the feature films from which the three excerpts were taken</td>
<td>6.6400 (I think so)</td>
<td>6.5500 (I think so)</td>
<td>7.9000 (I think so)</td>
<td>1.4092</td>
<td>NS</td>
</tr>
</tbody>
</table>
**TABLE 4**
(continued)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Mean score of 100 subjects</th>
<th>Mean high 20% scorers</th>
<th>Mean low 20% scorers</th>
<th>&quot;t&quot; for means of high &amp; low scorers</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liking of the &quot;genre&quot;, i.e., &quot;Western&quot;, &quot;Gangster&quot;, &quot;Suspense&quot; of the three excerpts</td>
<td>6.2000</td>
<td>5.2000 (Liked very much)</td>
<td>6.9000 (Moderately liked)</td>
<td>2.7908</td>
<td>.01</td>
</tr>
<tr>
<td>Number of times the three films or film excerpts were seen before</td>
<td>6.000</td>
<td>6.6500 (Once)</td>
<td>5.1500 (None +)</td>
<td>1.9070</td>
<td>NS</td>
</tr>
<tr>
<td>Interest in knowing more about how films are made</td>
<td>1.2000 (Definitely Yes +)</td>
<td>1.0000 (Definitely Yes +)</td>
<td>1.5500 (Definitely Yes)</td>
<td>2.4629</td>
<td>.05</td>
</tr>
</tbody>
</table>

* With 38 degrees of freedom significance at the .05 level is 2.08186, at the .01 level is 2.712.
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>&quot;t&quot; for means of high and scorers</th>
<th>High Scorers</th>
<th>Low Scorers</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Books read on film/six months</td>
<td>4.2697</td>
<td>(4-6)</td>
<td>(None)</td>
<td>.01</td>
</tr>
<tr>
<td>2) Score on matching film terms test</td>
<td>3.9295</td>
<td>(9-11 correct)</td>
<td>(7 or less correct)</td>
<td>.01</td>
</tr>
<tr>
<td>3) Answer to the question, &quot;How knowledgeable do you consider yourself in film?&quot;</td>
<td>3.7362</td>
<td>&quot;Moderately knowledgeable&quot;</td>
<td>&quot;Beginning&quot;</td>
<td>.01</td>
</tr>
<tr>
<td>4) Courses in film</td>
<td>3.0436</td>
<td>(3-4)</td>
<td>(None)</td>
<td>.01</td>
</tr>
<tr>
<td>5) Discussion of films/month</td>
<td>2.7267</td>
<td>(4-6 hours)</td>
<td>(2-4 hours -)</td>
<td>.01</td>
</tr>
<tr>
<td>6) Films seen in theatres/month</td>
<td>2.6458</td>
<td>(1-3)</td>
<td>(None +)</td>
<td>.05</td>
</tr>
<tr>
<td>7) Income of family</td>
<td>2.3396</td>
<td>($12-17,000 +)</td>
<td>($12-17,000 -)</td>
<td>.05</td>
</tr>
<tr>
<td>A) Liking of the &quot;genre&quot;, i.e., &quot;Western&quot;, &quot;Suspense&quot;, &quot;Gangster&quot; of the three excerpts</td>
<td>2.7908</td>
<td>&quot;Liked very much&quot;</td>
<td>&quot;Moderately liked&quot;</td>
<td>.01</td>
</tr>
<tr>
<td>B) Liking of the excerpts</td>
<td>2.1710</td>
<td>&quot;Liked very much&quot;</td>
<td>&quot;Moderately liked&quot;</td>
<td>.05</td>
</tr>
</tbody>
</table>
means of the two groups with regard to these independent variables are differences that would not ordinarily occur by chance. The independent variables in Table 5 are listed in order of most significance.

Chi Square Analysis

A chi square frequency distribution using group one (low scorers-twenty per cent), group two (medium scorers-sixty per cent), and group three (high scorers-twenty per cent) was then computed in order to analyze the differences not only between the low and high scorers but between the medium range scorers as well. The low, medium, and high scorers were grouped into three categories or cells. The same subjects were also divided into five categories or cells depending on which answer out of five possible answers they marked on a particular question.

With eight degrees of freedom the most significant deviation from the null hypothesis occurred on question number eight -- books read on film (chi square 27.272 significant at the .001 level). Forty per cent of the high scorers indicated they had read seven or more books on film within the last six months as compared to only fifteen per cent of the medium scorers and only five per cent of the low scorers.
The second most significant deviation occurred in question fifty which was a separate part of the exam where the subjects were asked to match thirteen film terms with the correct definitions selected from twenty-six different definitions they could choose from. The highest scorers were given the rating of 1, the lowest scorers were given a rating of 5 (chi square was 23.590 which is significant at the .01 level). Thirty per cent of the high scorers obtained a perfect score as contrasted to fifteen per cent of the medium scorers and zero per cent of the low scorers.

The third most significant deviation occurred at question forty-four, the subjects' interest in seeing the complete film of North by Northwest (chi square 18.764 which is significant at the .05 level), where eighty per cent of the high scorers stated they definitely would like to see the rest of the film whereas only sixty-three per cent of the middle scorers and fifty-five per cent of the low scorers stated that they would definitely like to see the complete film.

The fourth most significant deviation occurred in question thirty-seven, the liking of the excerpt from North by Northwest (chi square 18.610 which is significant at the .05 level), where seventy-five per cent of the high scorers stated they definitely liked the film as contrasted with sixty-one per cent of the medium scorers and only thirty-five per cent of the low scorers.

The fifth most significant question was eleven, the number of courses taken in film (chi square 17.533 which is significant at the .05 level), where forty-five per cent of the high scorers...
of the high scorers stated that they had taken five or more courses in film as contrasted with only twenty-one per cent of the medium scorers and only fifteen per cent of the low scorers.

The sixth most significant deviation occurred at question thirteen, the liking of the excerpt from Shane (chi square 16,844 which is significant at the .05 level) where sixty-five per cent of the high scorers stated that they definitely liked the excerpt from Shane as compared to seventy-four and one-half per cent of the medium scorers and only thirty-five per cent of the low scorers.

The results of the chi square analysis are listed in Table 6 in order of significance.

**TABLE 6**

INDEPENDENT VARIABLES REVEALED SIGNIFICANT IN CHI SQUARE ANALYSIS LISTED IN ORDER OF SIGNIFICANCE

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Chi Square</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Books read on film</td>
<td>27,272</td>
<td>.001</td>
</tr>
<tr>
<td>2) Score on matching film terms test</td>
<td>23,590</td>
<td>.01</td>
</tr>
<tr>
<td>3) Interest in seeing the complete film of North by Northwest</td>
<td>18,764</td>
<td>.05</td>
</tr>
<tr>
<td>4) Liking of the excerpt from North by Northwest</td>
<td>18,610</td>
<td>.05</td>
</tr>
<tr>
<td>5) Courses taken in film</td>
<td>18,533</td>
<td>.05</td>
</tr>
<tr>
<td>6) Liking of the excerpt from Shane</td>
<td>16,844</td>
<td>.05</td>
</tr>
</tbody>
</table>

* With eight degrees of freedom significance at the .05 level is 15.507, at the .01 level is 20.090, at the .001 level is 26.125.*
Partial Correlation

Where the comparison of the means and the chi square analysis showed how the high scoring group differed from both the low and the medium scoring groups, a correlation analysis of a step-wise multiple linear regression using forward steps was computed to deduce whether any of the seventeen independent variables (perhaps of similar importance and weight to both the low and high scoring groups and therefore not revealed in comparison of the means and chi square analysis) correlated significantly with the dependent variable the recognition and recall of specific film techniques. Table 7 includes the results of the Partial Correlation Analysis where with ninety-nine degrees of freedom significance at the .01 level is 2.6266 and at the .05 level is 1.9843. (See also Appendix C.)

The null hypothesis that there is no significant difference in the concomitant variation of the recognition and recall of the specific film techniques with the following independent variables was proved:

- Year in College
- Age
- Grade Point Average
- Theatrical Films Seen on TV
- Film Reviews Read
- Time Spent in Film or TV Production
### TABLE

**PARTIAL CORRELATION ANALYSIS OF THE SEVENTEEN INDEPENDENT VARIABLES WITH THE DEPENDENT VARIABLE THE RECALL OF SPECIFIC FILM TECHNIQUES**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
<th>Correlation Coefficient $r$</th>
<th>&quot;t&quot; Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Year</td>
<td>3.19</td>
<td>1.187</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.128477</td>
<td>1.2825</td>
<td>NS</td>
</tr>
<tr>
<td>2 Age</td>
<td>2.42</td>
<td>0.867</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.136916</td>
<td>-1.3683</td>
<td>NS</td>
</tr>
<tr>
<td>3 GPA</td>
<td>3.87</td>
<td>1.060</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>-0.052942</td>
<td>-0.5248</td>
<td>NS</td>
</tr>
<tr>
<td>4 Income</td>
<td>3.18</td>
<td>1.424</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.236528</td>
<td>2.4099</td>
<td>.05</td>
</tr>
<tr>
<td>5 Self Concept</td>
<td>3.08</td>
<td>1.186</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.308558</td>
<td>3.2113</td>
<td>.01</td>
</tr>
<tr>
<td>6 Films seen</td>
<td>2.24</td>
<td>0.911</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.323434</td>
<td>3.3837</td>
<td>.01</td>
</tr>
<tr>
<td>7 TV Films</td>
<td>2.19</td>
<td>0.940</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>-0.052954</td>
<td>-0.5250</td>
<td>NS</td>
</tr>
<tr>
<td>8 Books</td>
<td>2.31</td>
<td>1.354</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.372862</td>
<td>3.9780</td>
<td>.01</td>
</tr>
<tr>
<td>9 Reviews</td>
<td>2.58</td>
<td>1.121</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.682134</td>
<td>0.8158</td>
<td>NS</td>
</tr>
<tr>
<td>10 Discussion</td>
<td>5.50</td>
<td>1.142</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.235404</td>
<td>2.3978</td>
<td>.01</td>
</tr>
<tr>
<td>11 Courses</td>
<td>2.48</td>
<td>1.487</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.332035</td>
<td>3.4847</td>
<td>.01</td>
</tr>
<tr>
<td>12 Work in Films &amp; TV</td>
<td>2.11</td>
<td>1.483</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.186015</td>
<td>1.8742</td>
<td>NS</td>
</tr>
<tr>
<td>13 Film Terms</td>
<td>2.75</td>
<td>1.459</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.347376</td>
<td>3.6672</td>
<td>.01</td>
</tr>
<tr>
<td>15 Liking</td>
<td>5.59</td>
<td>2.075</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.241968</td>
<td>2.4687</td>
<td>.05</td>
</tr>
<tr>
<td>16 Interest</td>
<td>6.61</td>
<td>2.798</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.217942</td>
<td>2.2107</td>
<td>.05</td>
</tr>
<tr>
<td>17 Liking of Genre</td>
<td>6.20</td>
<td>2.336</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.225840</td>
<td>2.2950</td>
<td>.01</td>
</tr>
<tr>
<td>18 Times Seen Before</td>
<td>6.00</td>
<td>2.503</td>
<td>14</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>0.274291</td>
<td>2.8236</td>
<td>.01</td>
</tr>
</tbody>
</table>
TABLE 8

THE INDEPENDENT VARIABLES CORRELATING WITH THE DEPENDENT VARIABLE, LISTED IN ORDER OF MOST SIGNIFICANCE

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Correlation Coefficient</th>
<th>&quot;t&quot; test for &quot;r&quot;</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Books read on film</td>
<td>.372864</td>
<td>3.9780</td>
<td>.01</td>
</tr>
<tr>
<td>2) Matching film terms</td>
<td>.347376</td>
<td>3.6672</td>
<td>.01</td>
</tr>
<tr>
<td>3) Courses in film</td>
<td>.332035</td>
<td>3.4847</td>
<td>.01</td>
</tr>
<tr>
<td>4) Films seen in theatres</td>
<td>.323434</td>
<td>3.3837</td>
<td>.01</td>
</tr>
<tr>
<td>5) Self concept of knowledgeability</td>
<td>.308558</td>
<td>3.2113</td>
<td>.01</td>
</tr>
<tr>
<td>6) Number of times the excerpts were seen before</td>
<td>.274291</td>
<td>2.8239</td>
<td>.01</td>
</tr>
<tr>
<td>7) Liking of the three excerpts</td>
<td>.241914</td>
<td>2.4687</td>
<td>.05</td>
</tr>
<tr>
<td>8) Income of family</td>
<td>.236528</td>
<td>2.4099</td>
<td>.05</td>
</tr>
<tr>
<td>9) Discussion of films</td>
<td>.235404</td>
<td>2.3978</td>
<td>.05</td>
</tr>
<tr>
<td>10) Liking of the &quot;genre&quot; of the excerpts</td>
<td>.225846</td>
<td>2.2950</td>
<td>.05</td>
</tr>
<tr>
<td>11) Interest in seeing the complete films</td>
<td>.217942</td>
<td>2.2107</td>
<td>.05</td>
</tr>
</tbody>
</table>

In the above Table 8 the null hypothesis that there is no significant difference in the concomitant variation of the recognition and recall of ten specific film techniques with the above independent variables must be rejected. The variation between the dependent and independent variables is a concomitant variation that would not ordinarily occur by chance.
Multiple Correlation and Regression

Whereas the above partial correlation

"...nullifies the effects of a third variable
(or a number of other variables) upon both the
variables being considered...",77 "...a multiple
correlation is related to the intercorrelations
about independent variables as well as to their
correlation with the dependent variable."78

A multiple correlation and regression was then computed by a
modified Doolittle program in order to estimate ("multivariate
prediction")79 the dependent variable from a linear combination
of the seventeen independent variables.

With a multiple cut-off "F" of 2.31 for 5/94 degrees of
freedom only three independent variables achieved statistical
significance at the .05 level. They are listed in Table 9
along with various information associated with this procedure.

77. J. P. Guilford, Fundamental Statistics in Psychology

78. Ibid., p. 394.

79. Gene V. Glass & Julian C. Stanley, Statistical
Methods in Education & Psychology (New Jersey: Prentice-Hall,
### TABLE 9
MULTIPLE CORRELATION AND REGRESSION

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Coefficient</th>
<th>Std. Err. of Coefficient</th>
<th>&quot;t&quot; test for Value of Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Books read on film</td>
<td>.345634</td>
<td>.129258</td>
<td>2.482</td>
</tr>
<tr>
<td>2) Income of family</td>
<td>.320246</td>
<td>.131266</td>
<td>2.440</td>
</tr>
<tr>
<td>3) Score on matching film terms test</td>
<td>.345823</td>
<td>.144199</td>
<td>2.390</td>
</tr>
</tbody>
</table>

Coefficient of multiple correlation "R" = .4784
(proportioned sum of squares reduced)
Coefficient of multiple determination "R^2" = .2288
(proportioned sum of squares remaining)
Coefficient of multiple nondetermination K^2 = .7712

Constant term in regression = 4.68
Total "F" for regression = 9.495 DF 3/96

The following multiple-regression or "multiple prediction" equation was developed using the Beta weights of the above three variables.

\[ X_{14} = B_{14.8} X + B_{14.4} X + B_{14.13} X + C \]
\[ X_{14} = .2461X + .2207X + .2347X + 4.68 \]
Even though the independent variables "Books Read on Film", "Income of Family" and "Score on Matching Film Terms Test" were computed to be significant predictor variables at the .05 level, there remained, however, a large proportion (seventy-seven per cent) of the total variation about the mean $X_{14}$ not explained by the regression. When the regression is carried out to all seventeen independent variables included in the test instrument, only thirty-six per cent of the variation is explained indicating that sixty-four per cent of the total variation is explained by independent variables not identified in the test instrument.

**Factor Analysis**

In order to determine whether there were any essential unities or fundamental properties underlying the film background independent variables, a factor analysis was computed on these nine independent variables. The factor analysis program was an adaptation of the program FACTO in the I.B.M. System/360 Scientific Subroutine Package Version III which performs a principal component solution and the varimax rotation of the factor matrix. The variables loading on the first, second, and third factors from highest to lowest loading are included in Table 10.
TABLE 10

FACTOR ANALYSIS OF NINE INDEPENDENT FILM BACKGROUND VARIABLES

"Practical Knowledge of Film"  "Exposure to Films"

<table>
<thead>
<tr>
<th>First Factor</th>
<th>Second Factor</th>
<th>Third Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Loading</strong></td>
<td><strong>Loading</strong></td>
<td><strong>Loading</strong></td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td><strong>Independent Variables</strong></td>
<td><strong>Independent Variables</strong></td>
</tr>
<tr>
<td>.83242</td>
<td>Score on Matching Film Terms Test*</td>
<td>.82058</td>
</tr>
<tr>
<td>.81017</td>
<td>Courses in Film</td>
<td>.73515</td>
</tr>
<tr>
<td>.76475</td>
<td>Time spent in Film or TV Production*</td>
<td>.59041</td>
</tr>
<tr>
<td>.60990</td>
<td>Books read on Film</td>
<td>.55441</td>
</tr>
<tr>
<td>.52916</td>
<td>Answer to the question: &quot;How knowledgeable do you consider yourself in film?&quot;</td>
<td>.46202</td>
</tr>
<tr>
<td>.39613</td>
<td>Discussion of Film</td>
<td>.34652</td>
</tr>
</tbody>
</table>

* Indicates that a variable loads on only one factor.
In an attempt to develop a construct to explain the underlying
unities or commonalities of the above factors, the author
developed for the first factor the term "Practical Knowledge of
Film" which he recognized as a tentative and subjective construct
used only for the purposes of this study. The key variables
that loaded exclusively on this factor were "Score on Matching
Film Terms Test" and "Time Spent in Film and TV Production"
which are in the author's definition related to "Practical Know-
ledge (or Experience) in Film."

The tentative construct developed for the second factor
the author termed "Exposure to Film." The key variables that
loaded solely on the second factor were "Films Seen in Theatres"
and "Reviews Read on Film" which related in the author's opinion
to going to see and reading about films or "Exposure to Films."

It is interesting to note that the variable "Courses in
Film" was common to both factors, but loaded much more heavily
on "Practical Knowledge of Film," indicating perhaps that
courses in film may be more important in the factor "Practical
Knowledge of Film" than in the factor "Exposure to Film." It
is also interesting to note that the variable "Books Read on
Film" loaded equally heavily on the factor "Practical Knowledge
of Film" as well as on the factor "Exposure to Film," indicating
perhaps that books can be an important source of "Practical
Knowledge of Film" as well as of "Exposure to Film."
The third factor was composed primarily of one variable "Theatrical Films Seen on Television". It is interesting to note that this variable separated itself from the other two factors "Practical Knowledge of Film" and "Exposure to Films". In fact, the variable "Films Seen in Theatres" loaded negatively on this third factor, though not at a significant level (-.21932).

A second factor analysis was then computed adding to the nine film background traits four general biographical variables: Year in College, Age, Grade Point Average and Income of Family. The variables Year in College, Age, and Grade Point Average all loaded onto a separate factor that did not have any loadings of film variables to a significant degree. However, another factor appeared that included as its heaviest loading Income of Family. This factor is described in Table 11.

### Table 11

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Independent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>.71080</td>
<td>Income of Family</td>
</tr>
<tr>
<td>.57325</td>
<td>Films Seen in Theatres</td>
</tr>
<tr>
<td>-.57010</td>
<td>Theatrical Films Seen on TV</td>
</tr>
<tr>
<td>-.51493</td>
<td>Age</td>
</tr>
</tbody>
</table>
It is interesting that in the above factor "Films Seen in Theatres" loaded heavily with "Income of Family" as though the two variables were possibly correlated. As related in the first factor analysis, "Theatrical Films Seen on TV" loaded negatively with the variable "Films Seen in Theatres" as though the two variables were possibly correlated negatively. The variable "Age" also loaded negatively with "Films Seen in Theatres" signifying perhaps that the variable "Films Seen in Theatres" correlated negatively with the variable involving advancing gradient of age.
CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary and Rationale

This study attempted to explore whether subjects with similar educational and socio-economic backgrounds differed significantly in their recognition and recall of specific film techniques. A test instrument was designed and tested for reliability and validity in which one hundred student subjects taking courses in the Department of Photography and Cinema at the Ohio State University were shown three excerpts from different feature films and then, after the showing of each excerpt, answered a written questionnaire in multiple choice format containing questions concerning the recognition and recall of ten film techniques that were used in the five minute excerpts from the feature films Shane, On the Waterfront and North by Northwest.

After the data from the test instrument were scored, the mean score of twenty per cent of the subjects who scored the lowest on the questions concerning the recognition and recall of film techniques was compared with the mean score of the top twenty per cent scorers to see if the difference between the mean scores was a difference that would not ordinarily occur by chance.
The lower twenty per cent scorers were also paired as closely as possible with the higher twenty per cent scorers with regards to matching sex, year in college, age, grade point average and income of family. In this way differences in the subjects' backgrounds with regard to seeing films, reading books on film, etc. would be more readily noticeable. The low and high scorers were then compared with regard to their mean scores on thirteen additional questions:

1) Response to the question: "How knowledgeable do you consider yourself in film?"

2) Average number of films seen in theatres per month.

3) Average number of theatrical films seen on TV per week.

4) Number of books read on film in the last six months.

5) Average number of film reviews read per month.

6) Average time spent discussing film per month.

7) Number of courses taken in film.

8) Average amount of time spent in film or television production.

9) Score on a test for matching film terms.

10) Liking of the three film excerpts.

11) Interest in seeing the rest of the films from which the excerpts were taken.
12) Liking of the "genre" of the three film excerpts: i.e., "Western", "Gangster" and "Suspense".
13) Number of times the three films or the excerpts from them were seen before.

In order to examine more closely not only the twenty per cent high and low scorers but the sixty per cent medium range scorers as well, a chi square analysis was computed on the above seventeen questions using the three categories of low, medium, and high scorers as three cells in one row of the chi square analysis.

Having these seventeen defined and measurable variables, a search for relationships among these variables and the dependent variable the recognition and recall of ten specific film techniques was undertaken. Two types of correlations were used: partial and multiple. A multiple correlation coefficient was computed and a multiple regression or multiple prediction equation was developed to focus on which of the prediction variables were influential on the criterion - the recognition and recall of ten specific film techniques.

Two factor analyses were also computed. The first was performed on the nine independent variable film background traits in order to see if there were any essential unities or fundamental properties (factors) underlying the film background traits. A second factor analysis was then computed adding to the nine factor background variables four general biographical variables: year in college, age, grade point average and income of family.
The basic rationale underlying this study was that film techniques may not be recognized and recalled by specific audiences in spite of the large amounts of time specific audiences have spent watching television and films, and that there may well be specific backgrounds or training that enable specific audiences more readily to recognize and recall specific film techniques. The author does not imply that this study establishes any value judgement regarding the ability to recognize and recall film techniques. It simply examines whether specific audiences with specific film backgrounds vary in their recognition and recall of film techniques.

Findings and Conclusions

Table 12 contains a comparative list of the results of the comparison of means, chi square, partial correlation and multiple correlation.

1) As could well be expected, from the results of the "t" test performed on the mean scores of the high and low scoring groups on the questions concerning the recognition and recall of ten specific film techniques, the subjects in the high and low scoring groups who were of similar educational and socio-economic backgrounds and age levels differed significantly in their recognition and recall of ten specific film techniques.

2) Referring to Table 3, the high scoring group on the questions relating to the recognition and recall of ten film techniques also scored significantly higher on
### TABLE 12

**THE INDEPENDENT VARIABLES LISTED IN ORDER OF MOST SIGNIFICANCE IN THE RECOGNITION AND RECALL OF TEN SPECIFIC FILM TECHNIQUES**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Comparison of Means Significance</th>
<th>Chi Square Significance</th>
<th>Partial Correlation Significance</th>
<th>Multiple Correlation Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Number of film books read within the last six months</td>
<td>.01</td>
<td>.001</td>
<td>.01</td>
<td>.05</td>
</tr>
<tr>
<td>2) Score on matching film terms test</td>
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<td>.01</td>
<td>.05</td>
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<td>3) Number of courses taken in film</td>
<td>.01</td>
<td>.05</td>
<td>.01</td>
<td></td>
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<tr>
<td>4) Response to the question, &quot;How knowledgeable do you consider yourself in film?&quot;</td>
<td>.01</td>
<td></td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>5) Average number of films seen in theatres per month</td>
<td>.05</td>
<td></td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>6) Income of family</td>
<td>.05</td>
<td></td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>A) Liking of the &quot;genre&quot; of the three excerpts, i.e., &quot;Western&quot;, &quot;Gangster&quot; and &quot;Suspense&quot;</td>
<td>.01</td>
<td></td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>B) Liking of the three excerpts</td>
<td>.05</td>
<td></td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Liking of N by NW</td>
<td>.05</td>
<td></td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Liking of Shane</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C) Interest in seeing the rest of the films from which the three excerpts were taken</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest in seeing N by NW</td>
<td>.05</td>
<td></td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>D) Number of times the three films or film excerpts were seen previously</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
</tr>
</tbody>
</table>
the independent variable traits: 1) Number of books read on film within the last six months, 2) Score on a test for matching film terms, 3) Number of courses taken in film, 4) Response to the question: "How knowledgeable do you consider yourself in film?", 5) Average number of films seen in theatres per month, 6) Average time spent discussing film per month. The first hypothesis that subjects with a greater degree of "film sophistication" (defined for the purposes of this study as relating to the above six independent variables) would recognize and recall specific film techniques with a greater significant frequency than subjects with a lesser degree of "film sophistication" is thus proven. The null hypothesis was not rejected with regard to the following independent variables -- the average amount of time spent per month working in film and/or television production and the average number of film reviews read per month.

3) The second hypothesis that "film sophistication" (as defined for the purposes of this study) can be quantitatively measured in terms of the following independent variables: 1) Number of books read on film within the last six months, 2) Score on a test for matching film terms, 3) Number of courses taken in film, 4) Response to the question, "How knowledgeable do you consider yourself in film?", 5) Average number of films seen in theatres per month, 6) Average time spent discussing film per month, is supported by both the comparison of mean
scores with regard to the above variables and by the significant correlations between the above independent variables and the dependent variable -- the recognition and recall of ten specific film techniques (Table 12). The second hypothesis is thus proven. The null hypothesis is not rejected with regard to the following independent variables -- the average amount of time spent per month working in film and/or television production and the average number of film reviews read per month.

The independent variable -- the average amount of time spent per month working in film and/or television production came very close to achieving statistical significance at the .05 level in the comparison of mean scores of the high and low scoring groups (1.9783 with .05 significance at 2.0186). The author hypothesizes that work in film and/or television production did not achieve statistical significance in part because not enough of the subjects worked in film and/or television. However, work in film and/or television may well be proven in other studies to be a significant independent variable influencing the recognition and recall of specific film techniques.

It should be noted with regard to the non-significance of the independent variable -- the average number of film reviews read per month -- that the quality of film reviews available in the environs of Ohio State is not the same as that of larger metropolitan areas such as Los Angeles or New York.
In the author's personal experience, Ohio State students frequently rely on word-of-mouth information in order to decide which films to see.

4) Referring again to Table 12, both the comparison of mean scores between high and low scorers and the partial correlation showed that increased family income is a significant independent variable (at the .05 level) with regard to both significant differences between the high and low scorers and the correlation between income of family and the recognition and recall of specific film techniques.

5) Referring again to Table 12, in this study both the comparison of mean scores between high and low scorers and the partial correlation showed that liking of the film excerpt is a significant variable (at the .05 level) with regards to both significant differences between high and low scores and the correlation between liking of the three excerpts and the recognition and recall of specific film techniques.

A similar result was found with regard to the variable liking of the "genre" of the three film excerpts, i.e., "Western", "Gangster" and "Suspense" (comparison of means significant at the .01 level, correlation at .05 level). The author was somewhat surprised at this result. It is related perhaps to the liking of films in general since for the test subjects the liking of the particular "genre" achieved greater significance than the liking of the particular excerpt.
The variable "interest in seeing the rest of the films from which the three excerpts were taken" correlated significantly at the .05 level with the recognition and recall of specific film techniques. The chi square analysis revealed that the high scorers differed from low and medium scorers at the .05 level of significance in interest in seeing the rest of the film North by Northwest, whereas they did not differ significantly with regard to the other two films.

6) Referring again to Table 12, the variable "Number of times the films or excerpts from them were seen previously" correlated at the .01 level of significance with the recognition and recall of specific film techniques. Since the higher scoring subjects indicated that they see more films in theatres and take more courses in film, we would expect these subjects to have seen more often the films used in the test. However, in the comparison of the means of the high and low scorers with regard to the number of times the films or excerpts from them were seen previously, the difference in means between the high and low scoring groups did not reach the .05 level of confidence, indicating that having seen the films previously did not significantly influence the difference in scores on the recognition and recall of film techniques.

7) Referring to Table 9, certain independent variable background traits were shown in a multiple correlation and regression analysis to be significant predictors of the recognition and recall of specific film techniques at the .05 level
of confidence. These were as follows:

1) Number of books on film read within
   the last six months,
2) Income of family,
3) Score on a test of matching film terms.

In Table 12 the variables "Books read on film" and "Knowledge
of film terms" were the most significant variables in the com­
parison of means of the high and low score, the chi square
analysis and the partial correlation. It is not surprising
that they also emerged as significant predictors of the recog­
nition and recall of specific film techniques. The variable
"Income of family", however, was significant at only the .05
level of confidence. The author assumes that the other film
background independent variables must have intercorrelated to
such an extent with the variables "Books read on film" and
"Knowledge of film terms" that they did not emerge as signifi­
cant predictors; whereas "Income of Family" emerged as a sig­
nificant predictor.

8) Referring to Table 10 and Table 11, two factor analyses
were performed on thirteen independent variables in order to
discern whether there were any essential unities or fundamental
properties underlying these variables. Two factors emerged
which the author, in an attempt to develop constructs to
explain the underlying unities or commonalities, tentatively
termed "Practical Knowledge of Film" and "Exposure to Film".
In a third factor the independent variable "Films seen in theatres" loaded heavily with the independent variable "Income of Family", while the independent variable "Theatrical films seen on TV" loaded negatively with both of the above independent variables.

Recommendations

In view of the exploratory nature and findings of this research, several recommendations are offered:

1) This study might fruitfully be administered in different parts of the country to different groups of subjects such as high school students, blue collar workers, businessmen, housewives, office workers, etc. to see if there are across large segments of population differences in the recognition and recall of specific film techniques, and if these differences are in some way related to the same independent variables as were found in this research.

2) Additional studies might be constructed incorporating different excerpts from feature films and different elements of film techniques in order to examine more closely how different elements of film expression are recognized and recalled.

3) Film techniques might advantageously be examined in terms of the meaning they have for specific audiences, as by
The Semantic Differential scale, in order to determine whether film techniques have a specific meaning in themselves or acquire their meaning from the content of the film itself.

4) Study and research might be expended to determine the essential elements of "film literacy" or "film and television sophistication." Are recognition and recall of film techniques crucial elements of film and television sophistication? Since this study indicated that specific subjects, though of similar age, educational and socio-economic backgrounds and though having been exposed to similar large doses of television and film viewing from their youth, differed significantly in their recognition and recall of specific film techniques, is this recognition and recall important to their understanding of film-TV and to their educational development? Are there stages of development in film and television sophistication? What are the proper methods of instruction to lead students through these stages?

5) A survey may profitably be made of important film makers and film experts in order to see what socio-economic and film characteristics they share in common, and how they differ from a control group of people from various walks of life.

6) Since this study revealed that liking a specific film excerpt is related to recognition and recall, one might investigate whether liking a particular film excerpt is a function of ability to recognize and recall film techniques or whether recognizing and recalling a film technique is a function of liking a particular film excerpt or whether both variables are dependent on a third or various other variables.

7) From the exploratory results of this study, training in recognition and recall of film techniques, practical knowledge of film, and exposure to films might well be studied by educators as possible elements to incorporate into modern curriculum requirements or electives for today's students.

8) Centers of instruction in film may fruitfully examine the constructs that emerged from the factor analyses of this study -- "Practical knowledge of film" and Exposure to films" and the variables that loaded under each construct -- as possible bases for developing systematic training, instruction, and courses in film and television.

9) On the basis of the data relating to the background of subjects in this study, instructors in film and television might be advised to investigate their students' economic and social class backgrounds, their film backgrounds, and how these backgrounds affect their differing needs and abilities when they prepare their film and television courses of instruction.

10) From the exploratory results of this study centers
of instruction in film might devote more attention to the extra-curricular film activities of their students. If seeing, discussing, and reading about films are important in the recognition and recall of film techniques and thereby possibly important in developing "film sophistication," centers of instruction in film might take steps to insure that, in addition to good classroom experiences, their students are furnished suitable extra-curricular film activities.

11) Since the findings of this study, though statistically significant, are somewhat low in correlation and reliability, test instruments similar to this study might be developed incorporating more elements of film techniques, different examples of the same techniques, larger samples of subjects, and test questions designed for greater reliability.

Conclusion

The author was personally most impressed by the finding that reading books about film and knowing film terms plays such an important part in the recognition and recall of film techniques. The understanding of film, as with most other disciplines, possibly depends a great deal on the understanding of the structure of film. The recognition and recall of film techniques may play an important part in this understanding. It is sometimes heard that film and the visual media need not be studied, that to make them a part of a curriculum is to take all the "fun" out of seeing films. The author concludes, rather, by stressing that instruction, discipline, and purposeful efforts at understanding the structure of film are most important in developing "film sophistication."
CHARLEY

You know, the guys know you well enough to know you're not a cheese eater.

(11' 39 fr.) (8½ sec.)

CHARLEY (cont.)

But they think maybe you shouldn't be on the outside so much...a little on the inside, have a few little things working for you down on the docks.

TERRY

A steady job,

(6' 33 fr.) (11 sec.)

TERRY (cont.)

a couple of extra potatoes, that's all I want.
CHARLEY
Sure, that's great when you're a kid. You're gettin' on. You're pushin' thirty, slugger. You know, it's time to think about gettin' a little ambition.

TERRY
Hmm-m. I always figured I'd live a little lo...little longer without it.

CHARLEY
Maybe. There's a...a boss loader slot that's open on the new pier we're openin' up. You see now, it pays six cents on every hundred pounds that goes in and every hundred pounds that goes out and you don't have to lift a finger. That's two-three-four hundred dollars a week, four hundred dollars a week just for the openers.

TERRY
I get all that dough for not doin' nothin'.

CHARLEY
You don't do anything, you don't say anything. You understand?

(30' 15 fr.) (50½ sec.)

TERRY
There's more to this than I thought,
TERRY (cont.)
Charley. I'm tellin' you, there's a lot more.

CHARLEY
You mean that you're thinkin' about testifyin' against some people that we might know.

TERRY
I don't know Charley. I mean I'm tellin' you I don't know, Charley.

(15' 14 fr.) (25½ sec.)

TERRY (cont.)
That's what I want to talk to you a...

CHARLEY (interrupting)
Listen, Terry. You know how much those piers are worth that we control through the local? Alright, you think that Johnny is gonna jeopardise the whole set-up for one rubber-lipped, ex-tanker who's walkin' on his heels? What the ......!

(sound of car horn) (7' 39 fr.) (13 sec.)

TERRY
I could have been better, lo...
CHARLEY
That's not the point.

TERRY
I could have been a lot better, Charley!
(7' 24 fr.) (12' sec.)

CHARLEY
The point is we don't have much time.

TERRY
I'm tellin' ya I haven't made up my mind yet!

CHARLEY
Well, make up your mind before we get to
437 River Street.
(4' 39 fr.) (8 sec.)

TERRY
Before we get to where, Charley? (pause)
Before we get to where, Cha...
(2' 35 fr.) (5 sec.)

Charley pulls out a gun.

CHARLEY (interrupting)
Listen to me, Terry! Take the job!
(2' 7 fr.) (3½ sec.)
CHARLEY

Just take it! No questions. Just take it! (pause) Terry, take this job, please!

TERRY

Aw-w-w.

CHARLEY

Please, take it!

TERRY

Charley.

(9' 14 fr.) (15½ sec.)

TERRY (cont.)

Aw-w, Charley. Wow.

(music is heard—Question 33)

(8' 5 fr.) (13½ sec.)

CHARLEY

Look, kid, I... How much you weigh, slugger? (7' 35 fr.) (13 sec.)
CHARLEY (cont.)

When you weighed one hundred and sixty-eight pounds you were beautiful, another Billy Conn.

(5' 16 fr.) (8½ sec.)

CHARLEY (cont.)

Ah-h, that skunk we got you for a manager, he brought you along too fast.

(6' 1 fr.) (10 sec.)

TERRY

It wasn't him, Charley. It was you!

(3' 16 fr.) (5½ sec.)
You remember that night in the Garden
you came down my dressing room and said,
'Kid, this ain't your night. We're goin' for the price on Wilson.' Ya remember that? 'This ain't your night.' My night! I could have taken Wilson apart!
So, what happens? He gets the title shot outdoors in the ballpark and what do I get? A one-way ticket to palookaville!
You was my brother, Charley. You should have looked out for me a little bit.
You should have taken care of me just a little bit so I wouldn't have had to take them dives for the short end money.
(20' 17 fr.) (33½ sec.)

Well, I had some bets down for you.
(1' 20 fr.) (2½ sec.)
CHARLEY (cont.)

You saw some money.

TERRY

You don't understand! I could have had class! I could have been a contender!

(8' 1 fr.) (13 sec.)

TERRY (cont.)

I could have been somebody instead of a bum which is what I am. Let's face it.

(2' 4 fr.) (3½ sec.)

TERRY (cont.)

It was you, Charley.

(2' 16 fr.) (3½ sec.)
O.K., O.K. I'll...I'll look...I couldn't find ya. Ten to one he won't believe it.
(Charley hands Terry the gun)
Here, take this. You're gonna need it.
(to the cab driver)
You, you pull over!
(19' 26 fr.) (32\(\frac{1}{2}\) sec.)

The cab stops with a screech of its breaks and Terry gets out.
(High Angle Shot—Question 36)
(4' 39 fr.) (8 sec.)
SHANE

So, you're Jack Wilson.

(3' 33 frames)

(6½ sec.)

(1' 34 fr.)

(3 sec.)

(2' 25 fr.)

(4 sec.)

WILSON

What's that mean to you, Shane?

(2' 5 fr.)

(3½ sec.)
SHANE
I've heard about you.
(10' 33 fr.)
(5½ sec.)

WILSON
What have you heard, Shane?
(3' 16 fr.)
(1½ sec.)

SHANE
I've heard that you're a low-down, Yankee liar! (Low Angle)
(3' 2 fr.)(5 sec.) (Question 20)
(1' 17 fr.)
(2½ sec.)

WILSON
Prove it.
(2' 18 fr)
(½ sec.)

(1' 30 fr.)
(3 sec.)

(23 fr.)
(1 sec.)

(15 fr.)
(½ sec.)

(35 fr.)
(1½ sec.)

(17 fr.)
(½ sec.)
JOEY
Shane, look out!
(19 fr.)
(½ sec.)
Shane is hit.

(Continuing action—Question 22)

(1' 11 fr.)
(2 sec.)

(17 fr.)
(½ sec.)

(23 fr.)
(1 sec.)

(26 fr.)
(1 sec.)

(8 fr.)
(1/4 sec.)

music starts
(1' 1 fr.)
(1\frac{1}{2} sec.)

(4' 11 fr.)
(7 sec.)
JOEY

I knew you could, Shane. I knew it just as well as anything. Was that
(1' 30sec.) (3 sec.)

JOEY (cont.)

him? Was that Wilson?
(1' 7 fr.) (2 sec.)

SHANE

That was Wilson. That was Wilson alright. He was fast, fast
(4' 14 fr.) (7 sec.)
SHANE (cont.)

on the draw. Joey, what are you doing here?

(5' 8 fr.) (8½ sec.)

JOEY

I'm sorry, Shane.

(1' 23 fr.) (2½ sec.)

SHANE

You don't have to be. You'd better run back.

(1' 16 fr.) (2 sec.)
JOEY

Can't I ride home behind you?
(3' 3 fr.) (5 sec.)

SHANE

I'm afraid not, Joey.
(2' 38 fr.)

JOEY

Shane, why not?

SHANE

I've got to be going on.
(6' 18 fr.) (10½ sec.)
JOEY

Why, Shane?

(1' 22 fr.) (3 sec.)

SHANE

A man has to be what he is, Joey.
You can't break the mold.

(1' 33 fr.) (3 sec.)

SHANE (cont.)

I tried it. It didn't work for me.

(1' 33 sec.) (3 sec.)
JOEY

We want you, Shane.

(4' 34 fr.) (3 sec.)

SHANE

Joey, there's no living with---
with a killing. There is no
going back for me.

(4' 29 fr.) (8 sec.)

SHANE (cont.)

Right or wrong it's a brand, a
brand that sticks.

(2' 16 fr.) (4 sec.)
SHANE (cont.)

There is no going back. Now you run home to your mother. Tell her---

(2' 30 fr.) (4½ sec.)

SHANE (cont.)

tell her everything is alright. There are no more guns in the valley.

(1' 3 fr.) (1½ sec.)
JOEY (touching his arm)

Shane, it's bloody! You're hurt!

(2' 1 fr.) (3½ sec.)

SHANE

It's alright, Joey. You go home to your mother and your father and grow up to be strong and straight—

(7' 4 fr.) (12 sec.)

SHANE (cont.)

and Joey,---take care of them, both of them.

(1' 17 fr.) (2 sec.)
JOEY
Yes, Shane.

(4' 23 fr.)
(8 sec.)

(2' 9 fr.)
(3½ sec.)

(1' 20 fr.)
(2½ sec.)

(4' 6 fr.)
(7 sec.)
JOEY

He never would have been able to shoot you if you'd have seen him!
(4' 38 fr.) (8 sec.)

SHANE

By, little Joe.
(1' 29 fr.) (3 sec.)

JOEY

He never would have cleared the holster, would he, Shane?
(4' 35 fr.) (8 sec.)
(2' 11 fr.) (3½ sec.)

(1' 34 fr.) (3½ sec.)
JOEY

Pa has things for you to do
(2' 31 fr.) (6 sec.)

and mother wants you, I know
she does!
(6' 31 fr.) (11 sec.)

(3' 9 fr.) (5 sec.)
JOEY
Shane, come back!
Sha-a-ane!
(6' 10 fr.)
(10 sec.)

JOEY
By-y, Shane!
(dissolve)
(question 17)
(3' 14 fr.)
(5 1/2 sec.)
(1' 11 fr.)
(2 sec.)

(1' 4 fr.)
(2 sec.)

(3' 3 fr.)
(5 sec.)

(Question 49)
(Sound of gunfire)

(35 fr.)
(1½ sec.)
(8' 19 fr.)
(13½ sec.)

(Question 41)
(Tracking Shot)

(1' 14 fr.)
(2 sec.)

(2' 35 fr.)
(4 sec.)

(Question 49)
(Sound of gunfire)

(7' 24 fr.)
(12½ sec.)
(Question 41)
(Tracking Shot)

(1' 7 fr.)
(2 sec.)

(38 fr.)
(1 1/2 sec.)

(2' 25 fr.)
(4 1/2 sec.)

(1' 30 fr.)
(3 sec.)
Plane sprays the field with insecticide.

(1' 3½ fr.)
(3 sec.)

(2' 30 fr.)
(4½ sec.)

(4' 3 fr.)
(7 sec.)

(7' 1 fr.)
(11½ sec.)
Noise of horn, screech of breaks.
(22 fr.)
(1 sec.)
(Question 43)
(Faster Editing Tempo)

(24 fr.)
(1 sec.)

(21 fr.)
(1 sec.)

(18 fr.)
(3/4 sec.)
(2' 23 fr.)
(3½ sec.)

(1' 4 fr.)
(2 sec.)

(5' 8 fr.)
(6' 10 fr.)

(8½ sec.)
(10½ sec.)

(3' 25 fr.)
(6 sec.)
Thornhill steals a truck.
### TABLE 12*

CHI SQUARE FREQUENCY DISTRIBUTION USING GROUP ONE (LOW SCORERS), GROUP TWO (MEDIUM SCORERS) AND GROUP THREE (HIGH SCORERS) AS THE VERTICAL AXIS AND RESPONSES TO MULTIPLE CHOICE QUESTIONS AS THE HORIZONTAL AXIS

* With eight degrees of freedom significance at the .05 level of confidence is 15.507, at the .01 level is 20.090, at the .001 level is 26.125.

<table>
<thead>
<tr>
<th>Y vs. Question 1 - Year in College</th>
<th>Graduate or Masters</th>
<th>Ph. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomore</td>
<td>Junior</td>
<td>Senior</td>
</tr>
<tr>
<td>1. Low Scorers (20)</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>2.0%</td>
<td>6.1%</td>
<td>4.1%</td>
</tr>
<tr>
<td>1.7449</td>
<td>2.5204</td>
<td>5.8163</td>
</tr>
<tr>
<td>2. Medium Scorers (60)</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.1%</td>
<td>5.1%</td>
<td>21.4%</td>
</tr>
<tr>
<td>5.4184</td>
<td>7.9265</td>
<td>18.0612</td>
</tr>
<tr>
<td>3. High Scorers (20)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3.1%</td>
<td>2.0%</td>
<td>5.1%</td>
</tr>
<tr>
<td>1.8367</td>
<td>2.6531</td>
<td>6.1224</td>
</tr>
<tr>
<td>9</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>9.2%</td>
<td>13.3%</td>
<td>30.6%</td>
</tr>
</tbody>
</table>

Chi Square = 9.085 - NS
### Table 12 (continued)

#### Y vs. Question 2 - Age

<table>
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<tr>
<th>19 or Under</th>
<th>20-25</th>
<th>26-30</th>
<th>31-35</th>
<th>Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Scorers</td>
<td>0</td>
<td>15</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>(20)</td>
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<td>15.0%</td>
<td>3.0%</td>
<td>.0%</td>
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<tr>
<td>2.0%</td>
<td>.8000</td>
<td>1.2000</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium Scorers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
</tr>
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<td>38</td>
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<td>13</td>
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<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>60</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>High Scorers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>20</td>
</tr>
</tbody>
</table>

| 2.0%        |
| 2.0%        |
| 3.0%        |
| 3.0%        |
| 3.6000      |
| 1.2000      |

Chi Square = 4.708 - NS

#### Y vs. Question 3 - Grade Point Average

<table>
<thead>
<tr>
<th>1.50-1.99</th>
<th>2.00-2.49</th>
<th>2.50-2.99</th>
<th>3.00-3.49</th>
<th>3.50-4.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Scorers</td>
<td>0</td>
<td>2</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>(20)</td>
<td>.0%</td>
<td>2.0%</td>
<td>11.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>20.0%</td>
<td>.2000</td>
<td>2.4000</td>
<td>6.2000</td>
<td>7.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium Scorers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High Scorers</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>20</td>
</tr>
</tbody>
</table>

| 3.0%         |
| 5.0%         |
| 6.0%         |
| 6.0%         |
| 13.0%        |
| 21.0%        |
| 31.0%        |
| 35.0%        |
| 100.0%       |

Chi Square = 8.448 - NS
**APPENDIX B**

**TABLE 12**  
(continued)

<table>
<thead>
<tr>
<th>Y vs. Question 4 - Income of Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $7,000</td>
</tr>
<tr>
<td>1. Low Scorers</td>
</tr>
<tr>
<td>(20)</td>
</tr>
<tr>
<td>2. Medium Scorers</td>
</tr>
<tr>
<td>(60)</td>
</tr>
<tr>
<td>3. High Scorers</td>
</tr>
<tr>
<td>(20)</td>
</tr>
</tbody>
</table>

| 11 | 19 | 22 | 22 | 23 | 97 |
| 11.3% | 19.6% | 22.7% | 22.7% | 23.7% | 100.0% |

Chi Square = 12.806 - NS
## APPENDIX B

### TABLE 12
(continued)

<table>
<thead>
<tr>
<th>Y vs. Question 5 - Answer to the question, &quot;How knowledgeable do you consider yourself in film?&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not very knowledgeable</strong></td>
</tr>
<tr>
<td><strong>at all</strong></td>
</tr>
<tr>
<td><strong>1. Low Scorers</strong></td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>4.0%</td>
</tr>
<tr>
<td>2.2000</td>
</tr>
<tr>
<td><strong>2. Medium Scorers</strong></td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>6.0%</td>
</tr>
<tr>
<td><strong>3. High Scorers</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1.0%</td>
</tr>
<tr>
<td>2.2000</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>11.0%</td>
</tr>
</tbody>
</table>

Chi Square = 13.232 - NS
TABLE 12 (continued)

Y vs. Question 6 - Films seen in Theatres per Month

<table>
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<tr>
<th></th>
<th>None</th>
<th>1 - 2</th>
<th>3 - 4</th>
<th>5 - 6</th>
<th>7 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Low</td>
<td>4</td>
<td>14</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Scorers</td>
<td>4.0%</td>
<td>14.0%</td>
<td>2.0%</td>
<td>.0%</td>
<td>.0%</td>
</tr>
<tr>
<td>2. Medium</td>
<td>11</td>
<td>31</td>
<td>13</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Scorers</td>
<td>11.0%</td>
<td>31.0%</td>
<td>13.0%</td>
<td>3.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>(60)</td>
<td>9.6000</td>
<td>33.6000</td>
<td>12.0000</td>
<td>2.4000</td>
<td>2.4000</td>
</tr>
<tr>
<td>3. High</td>
<td>1</td>
<td>11</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Scorers</td>
<td>1.0%</td>
<td>11.0%</td>
<td>5.0%</td>
<td>1.0%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Chi Square = 7.821 - NS

Y vs. Question 7 - Theatrical Films seen on TV per Week

<table>
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<th>None</th>
<th>1 - 2</th>
<th>3 - 4</th>
<th>5 - 6</th>
<th>7 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Low</td>
<td>3</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Scorers</td>
<td>3.0%</td>
<td>9.0%</td>
<td>6.0%</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>(20)</td>
<td>4.4000</td>
<td>9.4000</td>
<td>5.0000</td>
<td>.4000</td>
<td>.8000</td>
</tr>
<tr>
<td>2. Medium</td>
<td>14</td>
<td>30</td>
<td>12</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Scorers</td>
<td>14.0%</td>
<td>30.0%</td>
<td>12.0%</td>
<td>1.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>3. High</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Scorers</td>
<td>5.0%</td>
<td>8.0%</td>
<td>7.0%</td>
<td>.0%</td>
<td>.0%</td>
</tr>
<tr>
<td>(20)</td>
<td>4.4000</td>
<td>9.4000</td>
<td>5.0000</td>
<td>.4000</td>
<td>.8000</td>
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Chi Square = 4.850 - NS
APPENDIX B

TABLE 12
(continued)

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<tbody>
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<td>None</td>
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<tr>
<td>1. Low Scorers</td>
<td>15</td>
</tr>
<tr>
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<tr>
<td>2. Medium Scorers</td>
<td>16</td>
</tr>
<tr>
<td>(60)</td>
<td>16.0%</td>
</tr>
<tr>
<td>3. High Scorers</td>
<td>2</td>
</tr>
<tr>
<td>(20)</td>
<td>2.0%</td>
</tr>
<tr>
<td></td>
<td>6.6000</td>
</tr>
<tr>
<td></td>
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</tr>
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</table>

Chi Square = 27.272 - Significant at .001 level
APPENDIX B

TABLE 12
(continued)

<table>
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<th>11-15</th>
<th>16 or more</th>
</tr>
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<tbody>
<tr>
<td>1. Low Scorers</td>
<td>1</td>
<td>12</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>(20)</td>
<td>1.0%</td>
<td>12.0%</td>
<td>4.0%</td>
<td>3.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>2.4000</td>
<td>9.2000</td>
<td>4.8000</td>
<td>1.6000</td>
<td>2.0000</td>
</tr>
<tr>
<td>2. Medium Scorers</td>
<td>7</td>
<td>.27</td>
<td>16</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>(60)</td>
<td>7.0%</td>
<td>27.0%</td>
<td>16.0%</td>
<td>2.0%</td>
<td>8.0%</td>
</tr>
<tr>
<td></td>
<td>7.2000</td>
<td>27.6000</td>
<td>14.4000</td>
<td>4.8000</td>
<td>6.0000</td>
</tr>
<tr>
<td>3. High Scorers</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>(20)</td>
<td>4.0%</td>
<td>7.0%</td>
<td>4.0%</td>
<td>3.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td></td>
<td>2.4000</td>
<td>9.2000</td>
<td>4.8000</td>
<td>1.6000</td>
<td>2.0000</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>46</td>
<td>24</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>12.0%</td>
<td>46.0%</td>
<td>24.0%</td>
<td>8.0%</td>
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<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi Square. = 10.475 - NS
APPENDIX B

TABLE 12 (continued)

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<th>2 - 4 Hours</th>
<th>4 - 6 Hours</th>
<th>6 Hours or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Scorers</td>
<td>0%</td>
<td>5.0%</td>
<td>7.0%</td>
<td>5.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>(20)</td>
<td>0.000</td>
<td>4.8000</td>
<td>6.0000</td>
<td>3.6000</td>
<td>5.6000</td>
</tr>
<tr>
<td>Medium</td>
<td>0</td>
<td>17</td>
<td>20</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Scorers</td>
<td>0%</td>
<td>17.0%</td>
<td>20.0%</td>
<td>9.0%</td>
<td>14.0%</td>
</tr>
<tr>
<td>(60)</td>
<td>0.000</td>
<td>14.4000</td>
<td>18.0000</td>
<td>10.8000</td>
<td>16.8000</td>
</tr>
<tr>
<td>High</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Scorers</td>
<td>0%</td>
<td>2.0%</td>
<td>3.0%</td>
<td>4.0%</td>
<td>11.0%</td>
</tr>
<tr>
<td>(20)</td>
<td>0.000</td>
<td>4.8000</td>
<td>6.0000</td>
<td>3.6000</td>
<td>5.6000</td>
</tr>
</tbody>
</table>

Chi Square = 11.770 - NS
### Y vs. Question 11 - Courses in Film

<table>
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<th>1-2</th>
<th>3-4</th>
<th>5-6</th>
<th>More</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Low Scorer</td>
<td>12</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>15%</td>
<td>20.2%</td>
</tr>
<tr>
<td></td>
<td>12.1%</td>
<td>4.0%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.2626</td>
<td>6.2626</td>
<td>2.4242</td>
<td>1.2121</td>
<td>3.8384</td>
<td></td>
</tr>
<tr>
<td>2. Medium Scorer</td>
<td>16</td>
<td>20</td>
<td>10</td>
<td>3</td>
<td>21%</td>
<td>59.6%</td>
</tr>
<tr>
<td></td>
<td>16.2%</td>
<td>20.2%</td>
<td>10.1%</td>
<td>3.0%</td>
<td>10.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18.4747</td>
<td>18.4747</td>
<td>7.1515</td>
<td>3.5758</td>
<td>11.3232</td>
<td></td>
</tr>
<tr>
<td>3. High Scorer</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>8%</td>
<td>20.2%</td>
</tr>
<tr>
<td></td>
<td>3.0%</td>
<td>7.1%</td>
<td>1.0%</td>
<td>1.0%</td>
<td>8.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.2626</td>
<td>6.2626</td>
<td>2.4242</td>
<td>1.2121</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>31</td>
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<tr>
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<td>6.1%</td>
<td>19.2%</td>
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</table>

Chi Square = 18.533 - Significant at the .05 level
APPENDIX B

TABLE 12
(continued)

Y vs. Question 12 - Time Spent in Film or TV Production per Month

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Less than 6 Hours</th>
<th>6 - 12 Hours</th>
<th>12-18 Hours</th>
<th>18 Hours or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Low Scorers (20)</td>
<td>14</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14.0%</td>
<td>2.0%</td>
<td>0.0%</td>
<td>1.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td></td>
<td>11,000</td>
<td>3,000</td>
<td>1,400</td>
<td>2,000</td>
<td>2,600</td>
</tr>
<tr>
<td>2. Medium Scorers (60)</td>
<td>34</td>
<td>11</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>34.0%</td>
<td>11.0%</td>
<td>4.0%</td>
<td>6.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td></td>
<td>33,000</td>
<td>9,000</td>
<td>4,200</td>
<td>6,000</td>
<td>7,800</td>
</tr>
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<td>3. High Scorers (20)</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>7.0%</td>
<td>2.0%</td>
<td>3.0%</td>
<td>3.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td></td>
<td>11,000</td>
<td>3,000</td>
<td>1,400</td>
<td>2,000</td>
<td>2,600</td>
</tr>
</tbody>
</table>

55 | 15 | 7 | 10 | 13 | 100 |
| 55.0% | 15.0% | 7.0% | 10.0% | 13.0% | 100.0% |

Chi Square = 10.934 - NS
### APPENDIX B

#### TABLE 12
(continued)

<table>
<thead>
<tr>
<th>Liked</th>
<th>Moderately Liked</th>
<th>Indifferent</th>
<th>Moderately Disliked</th>
<th>Disliked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Much</td>
<td>35%</td>
<td>5%</td>
<td>2.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Low Scorers (20)</td>
<td>1.0%</td>
<td>6.0%</td>
<td>6.0%</td>
<td>5.0%</td>
</tr>
<tr>
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<td>5.0000</td>
<td>8.0000</td>
<td>2.4000</td>
<td>3.4000</td>
</tr>
<tr>
<td>Medium Scorers (60)</td>
<td>20.0%</td>
<td>25.0%</td>
<td>3.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>High Scorers (20)</td>
<td>4.0%</td>
<td>9.0%</td>
<td>3.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td></td>
<td>5.0000</td>
<td>8.0000</td>
<td>2.4000</td>
<td>3.4000</td>
</tr>
<tr>
<td></td>
<td>25.0%</td>
<td>40.0%</td>
<td>12.0%</td>
<td>17.0%</td>
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<tr>
<td></td>
<td>25.0%</td>
<td>40.0%</td>
<td>12.0%</td>
<td>17.0%</td>
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</tbody>
</table>

Chi Square = 16.844 Significant at the .05 level
<table>
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<tr>
<th>Liked</th>
<th>Moderately</th>
<th>Indifferently</th>
<th>Moderately</th>
<th>Disliked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Much</td>
<td>Liked</td>
<td>Very Much</td>
<td>Disliked</td>
<td></td>
</tr>
<tr>
<td>1. Low Scorers</td>
<td>7</td>
<td>10</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(20)</td>
<td>11.8000</td>
<td>6.6000</td>
<td>.8000</td>
<td>.4000</td>
</tr>
<tr>
<td>2. Medium Scorers</td>
<td>37</td>
<td>20</td>
<td>2</td>
<td>1</td>
</tr>
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<td>(60)</td>
<td>35.4000</td>
<td>19.8000</td>
<td>2.4000</td>
<td>1.2000</td>
</tr>
<tr>
<td>3. High Scorers</td>
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<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(20)</td>
<td>11.8000</td>
<td>6.6000</td>
<td>.8000</td>
<td>.4000</td>
</tr>
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Chi Square = 18.610 - Significant at the .05 level
APPENDIX B

TABLE 12
(continued)

Y vs. Question 44 - Response to the question, "Did the showing of this film excerpt excite your interest in seeing the rest of the film?" - North by Northwest

<table>
<thead>
<tr>
<th></th>
<th>Definitely</th>
<th>Think</th>
<th>Not Sure</th>
<th>I don't Definitely Think</th>
<th>Not</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>So</td>
<td>Sure</td>
<td>So</td>
<td>Not</td>
</tr>
<tr>
<td>1. Low</td>
<td>11</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Scorers</td>
<td>11.0%</td>
<td>5.0%</td>
<td>3.0%</td>
<td>.0%</td>
<td>1.0%</td>
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<tr>
<td></td>
<td>13.0000</td>
<td>3.8000</td>
<td>1.4000</td>
<td>1.0000</td>
<td>.8000</td>
</tr>
<tr>
<td>2. Medium</td>
<td>38</td>
<td>13</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Scorers</td>
<td>38.0%</td>
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<td>4.0%</td>
<td>5.0%</td>
<td>.0%</td>
</tr>
<tr>
<td></td>
<td>39.0000</td>
<td>11.4000</td>
<td>4.2000</td>
<td>3.0000</td>
<td>2.4000</td>
</tr>
<tr>
<td>3. High</td>
<td>16</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Scorers</td>
<td>16.0%</td>
<td>1.0%</td>
<td>.0%</td>
<td>.0%</td>
<td>3.0%</td>
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<td></td>
<td>13.0000</td>
<td>3.8000</td>
<td>1.4000</td>
<td>1.0000</td>
<td>.8000</td>
</tr>
</tbody>
</table>

|        | 65         | 19    | 7        | 5                        | 4   |
|        | 65.0%      | 19.0% | 7.0%     | 5.0%                     | 4.0%|

Chi Square = 18.764 - Significant at the .05 level
### APPENDIX B

**TABLE 12**

(continued)

<table>
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<tr>
<th></th>
<th>6 or Less</th>
<th>7 - 9 Correct</th>
<th>9 - 11 Correct</th>
<th>12 Correct</th>
<th>13 Correct</th>
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<tr>
<td>1. Low Scorers</td>
<td>8.5%</td>
<td>2.1%</td>
<td>7.4%</td>
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<td>0.0%</td>
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<tr>
<td>(20)</td>
<td>3.2553</td>
<td>3.6383</td>
<td>5.1702</td>
<td>3.0638</td>
<td>2.8723</td>
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<tr>
<td>2. Medium Scorers</td>
<td>8.5%</td>
<td>16.0%</td>
<td>12.8%</td>
<td>13.8%</td>
<td>9.6%</td>
</tr>
<tr>
<td>3. High Scorers</td>
<td>1.1%</td>
<td>2.1%</td>
<td>8.5%</td>
<td>2.1%</td>
<td>6.4%</td>
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<tr>
<td>(20)</td>
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<td>3.8404</td>
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<td>3.2340</td>
<td>3.0319</td>
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Chi Square = 23.590 - Significant at the .01 level
APPENDIX C

TABLE 13*

PARTIAL CORRELATION ANALYSIS OF INDIVIDUAL TEST QUESTIONS
WITH THE DEPENDENT VARIABLE THE RECOGNITION AND RECALL OF SPECIFIC FILM TECHNIQUES

* With 99 degrees of freedom significance at the .01 level is 2.6255 and at the .05 level is 1.9843.

<table>
<thead>
<tr>
<th>X Variable Question</th>
<th>Mean</th>
<th>(X's) Standard Deviation</th>
<th>Y Variable</th>
<th>Mean</th>
<th>(Y's) Standard Deviation</th>
<th>N</th>
<th>Correlation Coefficient (r)</th>
<th>T Test for r</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liking of Shane</td>
<td>2.39</td>
<td>1.205</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.173739</td>
<td>+1.7465</td>
<td>NS</td>
</tr>
<tr>
<td>Dissolve</td>
<td>2.56</td>
<td>1.585</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.273311</td>
<td>+2.8127</td>
<td>.01</td>
</tr>
<tr>
<td>Interest in seeing Shane</td>
<td>3.08</td>
<td>1.529</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.185176</td>
<td>+1.8654</td>
<td>NS</td>
</tr>
<tr>
<td>Low angle</td>
<td>1.25</td>
<td>.626</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.274291</td>
<td>+2.8236</td>
<td>.01</td>
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<td>1.169</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.127214</td>
<td>+1.2697</td>
<td>NS</td>
</tr>
<tr>
<td>Editing</td>
<td>2.24</td>
<td>1.147</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.443510</td>
<td>+4.8987</td>
<td>.01</td>
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<tr>
<td>Seen before</td>
<td>1.85</td>
<td>.857</td>
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<td>1.898</td>
<td>100</td>
<td>+.097765</td>
<td>+.9725</td>
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</tr>
<tr>
<td>Different Sounds</td>
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<td>1.898</td>
<td>100</td>
<td>+.403681</td>
<td>+4.3679</td>
<td>.01</td>
</tr>
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<td>Liking of On The Waterfront</td>
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<td>.821</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.221949</td>
<td>+2.2534</td>
<td>.05</td>
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<td>1.898</td>
<td>100</td>
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<td>+2.2333</td>
<td>.05</td>
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<td>Mean</td>
<td>(X's) Standard Deviation</td>
<td>Y Variable</td>
<td>Mean</td>
<td>(Y's) Standard Deviation</td>
<td>N</td>
<td>Correlation Coefficient (r)</td>
<td>T Test Significance for r</td>
<td>Significance</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>------</td>
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<td>-----------------------------</td>
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<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.228339</td>
<td>+2.3218 .05</td>
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<tr>
<td>Music</td>
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<td>.945</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.384690</td>
<td>+4.1257 .01</td>
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<td>1.898</td>
<td>100</td>
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<tr>
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<td>1.368</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
<td>100</td>
<td>+.337711</td>
<td>+3.5518 .01</td>
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<td>100</td>
<td>+.132495</td>
<td>+1.3233 NS</td>
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<td>1.898</td>
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<td>+1.2196 NS</td>
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<td>6.65</td>
<td>1.898</td>
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<td>+.501642</td>
<td>+5.7405 .01</td>
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<td>1.898</td>
<td>100</td>
<td>+.042451</td>
<td>+ .4206 NS</td>
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<tr>
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<td>51</td>
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<td>1.898</td>
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<td>+.269592</td>
<td>+2.7714 .0</td>
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<td>Y Variable</td>
<td>Y Mean</td>
<td>(Y's) Standard Deviation</td>
<td>N</td>
<td>Correlation Coefficient (r)</td>
<td>T Test Significance</td>
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<td>--------</td>
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<td>-------</td>
<td>----------------------------</td>
<td>---------------------</td>
<td></td>
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<tr>
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<td>.219</td>
<td>51</td>
<td>6.65</td>
<td>1.898</td>
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<td>+.176120</td>
<td>+1.7712 NS</td>
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<td>6.65</td>
<td>1.898</td>
<td>100</td>
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<td>2.4625 .05</td>
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<tr>
<td>Sounds of gunfire</td>
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<td>51</td>
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<td>+.370790</td>
<td>+3.9524 .01</td>
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</table>
### APPENDIX D

**INDEPENDENT VARIABLES IN COMPARISON OF MEANS OF HIGH AND LOW SCORERS**

<table>
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<th>Variable</th>
<th>Group 1</th>
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<th>Group 2</th>
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<th>Significance</th>
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<td></td>
<td>N</td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>N</td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>t (Pool)</td>
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<td>2.3500</td>
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<tr>
<td>17. Dissolve</td>
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<td>1.7500</td>
<td>1.4464</td>
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<td>1.4179</td>
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<td>3.1500</td>
<td>1.5313</td>
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<td>1.6842</td>
<td>.8852</td>
<td>20</td>
<td>1.1500</td>
<td>.6708</td>
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<td>21. Liking of Western genre</td>
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<td>2.3400</td>
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<td>1.2500</td>
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<td>33. Music</td>
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<td>1.0500</td>
<td>.2236</td>
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<td>1.3563</td>
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### APPENDIX D
(continued)

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<th>Group 2</th>
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<th>Significance</th>
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<td>43. Increased editing tempo</td>
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<td>44. Interest in seeing North by Northwest</td>
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<td></td>
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<td>45. Rack focus shot (no such shot in film)</td>
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<td></td>
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</tr>
<tr>
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<tr>
<td>49. Sounds of gunfire</td>
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<th>Variable</th>
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<tr>
<td>36. High angle</td>
<td>N: 20</td>
<td>Mean: 1.0000</td>
<td>Std. Dev.: .0000</td>
<td>t (Pool): 3.8072</td>
<td>t (Sep): 3.0782</td>
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<td>.01</td>
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<td>37. Liking of North by Northwest</td>
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<td>41. Tracking shot</td>
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<tr>
<td>42. Liking of Suspense genre</td>
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<td>43. Increased editing tempo</td>
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<td>44. Interest in seeing North by Northwest</td>
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<td>45. Rack focus shot (no such shot in film)</td>
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<td>46. Interest in knowing more about how films are made</td>
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<td>47. Subjective angle</td>
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<td>48. Times seen before</td>
<td></td>
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<tr>
<td>49. Sounds of gunfire</td>
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SURVEY ON MOTION PICTURES

LISTED BELOW ARE MULTIPLE CHOICE QUESTIONS RELATING PRIMARILY TO YOUR PERSONAL BEHAVIOR AND ATTITUDES TOWARD FEATURE MOTION PICTURES. WE WOULD LIKE TO KNOW HOW MUCH FILM VIEWING, READING BOOKS ABOUT FILM, ETC. IS A PART OF YOUR LIFE.

INSTRUCTIONS

YOU WILL RECEIVE AN IBM ANSWER SHEET ON WHICH YOU WILL RECORD YOUR ANSWERS TO MULTIPLE CHOICE QUESTIONS. PLEASE MAKE SURE THAT THE NUMBER ON THE TOP LEFT HAND CORNER OF YOUR IBM ANSWER SHEET IS THE SAME AS THE NUMBER ON THE TOP OF THIS SHEET.

PLEASE USE ONLY THE NUMBER 2 LEAD PENCILS THAT ARE PROVIDED TO FILL IN THE ANSWER BLOCKS.

ON THE LOWER RIGHT HAND CORNER OF YOUR IBM ANSWER SHEET FILL OUT THE BOXES MARKED "Sex" AND "Date." DO NOT FILL OUT THE BOXES ASKING FOR YOUR NAME AND STUDENT NUMBER.

ON THE LOWER RIGHT HAND CORNER OF YOUR IBM ANSWER SHEET ON THE LINE BEGINNING WITH "Course" PLEASE WRITE "Film Study." ON THE LINE BEGINNING WITH "Instructor" PLEASE WRITE "Ryan." ON THE LINE BEGINNING WITH "College" PLEASE WRITE YOUR MAJOR FIELD. THANK YOU.
PLEASE READ THE MULTIPLE CHOICE QUESTIONS CAREFULLY AND ANSWER THEM ON THE ACCOMPANYING IBM ANSWER SHEET. THE NUMBER OF EACH QUESTION CORRESPONDS TO THE SAME NUMBER ON YOUR IBM ANSWER SHEET. FOR EXAMPLE, IN QUESTION #1 IF YOU ARE A JUNIOR, ON YOUR IBM ANSWER SHEET UNDER QUESTION #1 YOU WOULD FILL IN BLOCK [2].

IN ANSWERING EACH QUESTION PLEASE BE CAREFUL TO FILL IN COMPLETELY WITH THE NUMBER 2 LEAD PENCIL THE NUMBERED BLOCK THAT CORRESPONDS TO YOUR ANSWER.

1. Are you a:
   1) Sophomore,
   2) Junior,
   3) Senior,
   4) Masters (or Post-Graduate) Candidate,
   5) Ph.D. Candidate.

2. What is your age?:
   1) 19 or under,
   2) 20-25,
   3) 26-30,
   4) 31-35,
   5) 36 or over.

3. What is your current Grade Point Average?: (Please be as accurate as possible. No names will be associated with any part of this study.)
   1) 1.50-1.99,
   2) 2.00-2.49,
   3) 2.50-2.99,
   4) 3.00-3.49,
   5) 3.50-4.00.

4. What is the combined annual income of your father and mother?:
   1) Under $7,000,
   2) $7,000-$12,000,
   3) $12,000-$17,000,
   4) $17,000-$22,000,
   5) $22,000 and over.
5. How knowledgeable do you consider yourself in film?:
   1) Very knowledgeable,
   2) More knowledgeable than most,
   3) Moderately knowledgeable,
   4) Beginning to know about film,
   5) Not very knowledgeable at all.

6. On the average how many films in motion picture theatres do you see per month?:
   1) none,
   2) 1-3,
   3) 4-6,
   4) 7-9,
   5) 10 or more.

7. On the average how many feature films produced originally for theatrical viewing do you see on TV per week?:
   1) none,
   2) 1-2,
   3) 3-4,
   4) 5-6,
   5) 7 or more.

8. How many books about film did you read in the last six months?:
   1) none,
   2) 1-3,
   3) 4-6,
   4) 7-9,
   5) 10 or more.

9. On the average how many film reviews do you read per month?:
   1) none,
   2) 1-5,
   3) 6-10,
   4) 11-15,
   5) 16 or more.

10. On the average how much time do you spend a month discussing films?:
    1) none,
    2) less than two hours,
    3) 2-4 hours,
    4) 4-6 hours,
    5) 6 hours or more.

11. How many courses in film have you taken?:
    1) none,
    2) 1-2,
    3) 3-4,
    4) 5-6,
    5) 7 or more.
12. How much time do you spend a month working on the making of films or TV shows?
   1) none,  
   2) less than six hours,  
   3) 6-12 hours,  
   4) 12-18 hours,  
   5) 18 hours or more.

WHEN YOU ARE FINISHED YOUR QUESTION SHEET WILL BE COLLECTED. BUT, PLEASE DO NOT HAND IN YOUR IBM ANSWER SHEET AT THIS TIME. YOU WILL BE ASKED FURTHER QUESTIONS.

YOU WILL NOW BE SHOWN A SHORT EXCERPT FROM A FEATURE FILM. WE WOULD LIKE TO KNOW YOUR PERSONAL REACTIONS TO THIS FILM.
174

PLEASE MAKE SURE THAT THE NUMBER ON THE TOP LEFTHAND CORNER OF YOUR IBM ANSWER SHEET IS THE SAME AS THE NUMBER ON THE TOP OF THIS SHEET.

ON THIS QUESTION SHEET CONCERNING THE FILM EXCERPT YOU HAVE JUST SEEN THERE ARE BOTH MULTIPLE CHOICE QUESTIONS AND QUESTIONS THAT ASK FOR A REPLY IN ONE OR TWO SENTENCES.

PLEASE ANSWER THE MULTIPLE CHOICE QUESTIONS ON YOUR IBM ANSWER SHEET.

PLEASE ANSWER THE SENTENCE REPLY QUESTIONS IN THE SPACE PROVIDED BELOW THE QUESTION ON THIS QUESTION SHEET.

THANK YOU.

13. Did you like this excerpt?:
   1) Liked very much,
   2) Moderately liked,
   3) Indifferent,
   4) Moderately disliked,
   5) Disliked very much.

14. Which of the five themes below seems to you to relate most closely to the essential meaning of the film excerpt?:
   1) The tragic hero against a hostile, unsympathetic world,
   2) The plight of the loner or rebel-hero,
   3) The taming and civilization of the American West,
   4) The dangers and destructive effects of violence,
   5) The American cowboy as a heroic figure.

15. Did you see any sections or places in the film where the actor's or actress' face seemed to fill the screen (called a close-up shot)?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

15a. Please describe this scene briefly on the lines below if you remember it:

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16. Have you seen this film or the excerpt from it within the last six months?:
   1) Yes,
   2) No.

17. Did you see any parts of the film excerpt where one scene seemed to disappear while at the same time a second scene seemed to appear over this first scene (called a dissolve)?:
   1) definitely yes,
   2) I think so,
   3) Not sure,
   4) I don’t think so,
   5) Definitely not.

17a. Please describe the scene briefly on the lines below if you remember it:

18. Did you see any part of the film where a scene seemed to disappear into blackness (called a fade-out)?:
   1) definitely yes,
   2) I think so,
   3) Not sure,
   4) I don’t think so,
   5) Definitely not.

18a. Please describe briefly on the lines below if you remember it:

19. Did the showing of this film excerpt excite your interest in seeing the rest of this film?:
   1) definitely yes,
   2) I think so,
   3) Not sure,
   4) I don’t think so,
   5) Definitely not.

20. Did you see any scenes in this excerpt where the camera seemed to be looking up at someone from a low position (from an angle of more than 45° below eye level—called a low angle shot)?:
   1) definitely yes,
   2) I think so,
   3) Not sure,
   4) I don’t think so,
   5) Definitely not.
20a. Please describe the scene briefly on the lines below if you remember it:

21. Do you like the "Western" film?:
   1) Like very much,
   2) Moderately like,
   3) Indifferent,
   4) Moderately dislike,
   5) Dislike very much.

22. Did you notice any parts of the gunfight scene where one action such as drawing a gun from a holster or someone being shot was shown from three or more different angles and edited together to form one continuous action?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

22a. Please describe the scene briefly in the lines below if you remember it:

23. How many times have you seen the film Shane before?:
   1) None,
   2) Once,
   3) Twice,
   4) Four times,
   5) Five or more times.

24. Did you hear any sounds in the excerpt which seemed to sound differently from the way you would normally hear them in real life?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.
24a. Please describe the different sound on the lines below if you remember it:


WHEN YOU ARE FINISHED YOUR QUESTION SHEET WILL BE COLLECTED. DO NOT HAND IN YOUR IBM ANSWER SHEET AT THIS TIME. YOU WILL BE SHOWN TWO MORE FILM EXCERPTS AND ASKED ADDITIONAL QUESTIONS. THANK YOU.
25. Did you like this excerpt?:
1) Liked very much,
2) Moderately liked,
3) Indifferent,
4) Moderately disliked,
5) Disliked very much.

26. Which of the five themes below seems to you to relate most closely to the essential meaning of the film excerpt?:
1) Personal integrity is worth more than money or a good job,
2) Family relationships have a powerful influence on some individuals' actions,
3) Graft, corruption, and crime can wreck a person's life,
4) It is dangerous to be mixed up with or know too much about racketeers,
5) A man must do what he feels is right in spite of pressures from other people to do otherwise.

27. Did you see any scenes where the camera actually filmed from or from within a moving object like a car or plane?:
1) Definitely yes,
2) I think so,
3) Not sure,
4) I don't think so,
5) Definitely not.
27a. Please describe the scene briefly in the lines below if you remember it:


28. Have you seen this film or the excerpt from it within the last six months?:
   1) Yes,
   2) No.

29. Did any of the people in this excerpt move faster than you see people normally move in real life (called a fast motion shot)?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

29a. Please describe the scene briefly on the lines below if you remember it:


30. Did the showing of this film excerpt excite your interest in seeing the rest of the film?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

31. Did you see any scenes in the film excerpt where one person seemed to be filmed from several different angles?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

31a. Please describe the scene briefly on the lines below if you remember it:


32. Do you like "gangster" films?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.
33. Did you hear any music in this excerpt?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

33a. Could you describe briefly on the lines below the scene where you heard the music if you can remember it?:

34. How many times have you seen the film On The Waterfront or this excerpt from it before?:
   1) None,
   2) Once,
   3) Twice,
   4) Three times,
   5) Four or more times.

35. Did you see any scenes where the camera tilted up to look at something above it?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

35a. Please describe the scene briefly on the lines below if you remember it:

36. Did you see any scene where the camera seemed to be looking down at a subject or object from a position well above him or it (called a high angle shot)?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

36a. Please describe the scene briefly on the lines below if you remember it:
WHEN YOU ARE FINISHED YOUR QUESTION SHEET WILL BE COLLECTED. DO NOT HAND IN YOUR IBM ANSWER SHEET AT THIS TIME. YOU WILL BE SHOWN ONE MORE FILM EXCERPT AND ASKED ADDITIONAL QUESTIONS. THANK YOU.
PLEASE MAKE SURE THAT THE NUMBER ON THE TOP LEFT
HAND CORNER OF YOUR IBM ANSWER SHEET IS THE SAME AS THE
NUMBER ON THE TOP OF THIS SHEET.

ON THIS QUESTION SHEET CONCERNING THE FILM EXCERPT
YOU HAVE JUST SEEN THERE ARE BOTH MULTIPLE CHOICE QUESTIONS
THAT ASK FOR A REPLY IN ONE OR TWO SENTENCES.

PLEASE ANSWER THE MULTIPLE CHOICE QUESTIONS ON YOUR
IBM ANSWER SHEET.

PLEASE ANSWER THE SENTENCE REPLY QUESTIONS
IN THE SPACE PROVIDED BELOW THE QUESTION. THANK YOU.

37. Did you like this excerpt?:
   1) Liked very much,
   2) Moderately liked,
   3) Indifferent,
   4) Moderately disliked,
   5) Disliked very much.

38. Which of the five themes below seems to you to relate
most closely to the essential meaning of this film excerpt?:
   1) Danger can lie behind the ordinary events of
everyday life,
   2) Heroic actions and quick thinking can overcome
extraordinary obstacles,
   3) Getting out of trouble is sometimes a question of
dumb luck and/or fate,
   4) Extraordinary circumstances can call up great
degrees of heroism,
   5) Man is a loner against a hostile universe.

39. Did you see any parts of the film excerpt where the camera
seemed to rise up to a height while filming a scene (called
a crane or boom shot)?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.
39a. Please describe the scene briefly on the lines below if you remember it:

40. Have you seen this film or the excerpt from it within the last six months?:
   1) Yes,
   2) No.

41. Did you see any shots in the film where the camera seemed to move along with an actor or object as they moved (called a tracking shot)?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

41a. Please describe the scene briefly on the lines below if you remember it:

42. Do you like "suspense" films?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

43. Did you see any parts of the film where the edited scenes seemed to become shorter and shorter, where the tempo of the editing became much faster than before?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

43a. Please describe the scene briefly on the lines below if you remember it:
44. Did the showing of this film excerpt excite your interest in seeing the rest of the film?
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

45. Did you notice any part where in the same scene one object or person goes out of focus while another comes into focus (called a rack focus shot)?
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

45a. Please describe the scene briefly in the lines below if you remember it:

________________________________________________________________________

________________________________________________________________________

46. Would you like to know more about how films are made?
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

47. Did you see any scene or part of the film where the camera seemed to take the position of the actor and see what he was looking at (called a subjective angle shot)?
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

47a. Please describe the scene briefly on the lines below if you remember it:

________________________________________________________________________

________________________________________________________________________

48. How many times have you seen the film North by Northwest before?
   1) none,
   2) once,
   3) twice,
   4) three times,
   5) four or more times.
49. Did you hear any sounds of gunfire in this excerpt?:
   1) Definitely yes,
   2) I think so,
   3) Not sure,
   4) I don't think so,
   5) Definitely not.

49 a. Please describe briefly on the lines below where you heard the sound of gunfire:

________________________________________________________________________
________________________________________________________________________

WHEN YOU ARE FINISHED BOTH YOUR QUESTION SHEET AND YOUR IBM ANSWER SHEET WILL BE COLLECTED. PLEASE BE SURE THAT THE NUMBER ON YOUR IBM ANSWER SHEET IS THE SAME AS THE NUMBER ON YOUR QUESTION SHEETS, THANK YOU.
MATCHING TEST ON FILM TERMS

THE PURPOSE OF THIS MATCHING TEST IS TO DETERMINE HOW MANY FILM TERMS YOU CAN CORRECTLY IDENTIFY BY MATCHING THE APPROPRIATE DEFINITION IN THE RIGHT HAND COLUMN WITH THE CORRESPONDING FILM TERM IN THE LEFT COLUMN.

INSTRUCTIONS

IN THE SPACE PROVIDED AFTER THE FILM TERM PLEASE WRITE IN THE NUMBER OF THE DEFINITION YOU THINK CORRESPONDS TO THAT FILM TERM. PLEASE DO NOT GUESS! IF YOU ARE NOT SURE, LEAVE THE SPACE BLANK. PLEASE WRITE IN THE NUMBER OF ONLY ONE DEFINITION AFTER EACH FILM TERM.

PLEASE MAKE SURE THAT THE NUMBER IN THE TOP RIGHT HAND CORNER OF THIS TEST IS THE SAME YOU HAD ON YOUR IBM ANSWER SHEET. THANK YOU.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>STORY BOARD</td>
<td>1) The motion of film through the camera faster than at the standard rate.</td>
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<td>2) A shield on the side of the camera to protect it from unwanted abrasions.</td>
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<tr>
<td>COLOR TEMPERATURE</td>
<td>3) A short focal length lens.</td>
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<td>4) A film size which is mainly used for non-theatrical screenings.</td>
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<tr>
<td>PERSISTENCE OF VISION</td>
<td>5) A person who writes the written version of a film.</td>
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<tr>
<td>SPLICE</td>
<td>6) A measurement of how hot different colors become when put under harsh studio lights.</td>
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<td>16mm FILM</td>
<td>7) A compact wheeled mount for a camera.</td>
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<td>8) 24 frames a second.</td>
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<tr>
<td>TREATMENT</td>
<td>9) A device that presses on the back of the film to keep it in the focal plane of the lens.</td>
</tr>
<tr>
<td>TILT</td>
<td>10) The hue of a particular light source.</td>
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<td>11) A phenomenon which causes an image on the retina to be mentally retained for a short period.</td>
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<td>SLOW MOTION</td>
<td>12) The joining together of two pieces of film, end to end.</td>
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<tr>
<td>SCRIPT GIRL</td>
<td>13) A directory of standard plots for film stories that writers use.</td>
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<td>14) A more or less detailed version of a film story.</td>
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<td>DOLLY</td>
<td>15) An attribute of a cameraman which enables him to concentrate on a shot while he is looking through a viewfinder.</td>
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<tr>
<td>TELEPHOTO</td>
<td>17) The preparation of a film emulsion before it is put into the camera.</td>
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<tr>
<td>PRESSURE PLATE</td>
<td>18) A film size that is ordinarily used in motion picture theatres.</td>
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<tr>
<td>SILENT SPEED</td>
<td>19) Pivotal movement of the camera either up or down.</td>
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<td>20) The person responsible for keeping a record of all the scenes and takes shot.</td>
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<td>21) Sketches of key incidents in a film.</td>
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<td>22) Motion of film through the camera slower than the standard rate.</td>
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<td>23) A film term for an actor who is afraid to do stunt work.</td>
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<td>24) 16 frames a second.</td>
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<td>25) A lens of a greater than normal focal length.</td>
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<td></td>
<td>26) To turn the camera slightly on its side so that the filmed scene is tilted.</td>
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</table>
BIBLIOGRAPHY


Penn, Roger, "Effects of Motion and Cutting Rate in Motion Pictures," in AV Communications Review, Vol. 19, #1 (Spring, 1971).


