

PERCEPTION, AESTHETICS AND CULTURE IN NEW MEDIA

by

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ABSTRACT

The goal of this research is to determine if viewers (mass audience and media professionals) perceive differences between film-originated and video-originated television programming. A secondary goal is to produce a video clip in what is traditionally considered film style, paying the same attention to detail that is normally reserved for a film production. The "Kraus and..." dance company was selected to provide appropriate material for the research. A parallel film-based and video-based dance performance was produced and then shown on side-by-side screens to 250 subjects. Fifty of those viewers (selected to achieve an "expert" and a "mass audience" sample) were also asked to view a series of film and video clips and participate in a depth interview. "Dance in Parallel", the film and video program, is submitted as part of this thesis.

These studies demonstrate that viewers can see a difference between the film-originated and video-originated materials when viewed side by side, but are sometimes unsure which is which. There are consistent patterns that have more to do with cultural fashions than with direct observation and hence the interaction of content and format is much more subtle than we had imagined.

Although there is much that remains to be done in this area of research, the results from these first studies should be taken into account when considering a new television standard, i.e. high definition television.

Thesis Supervisor: Richard Leacock
Title: Professor of Cinema

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Immeasurable thanks are in order as the scale of production in this thesis project demanded a sizable crew. The nature of the media requires collaboration- I could never have done this without the support from all of the people in the "Parallel Shoot" and "Form Follows Format" crews. Rather than have a chapter of acknowledgements, I have included a "Form Follows Format" program beginning on page 31, listing everyone who contributed to the parallel shoot and performance.

Significant contributions to the project came from several sources. I wish to give abundant thanks to Nicholas Negroponete, Russ Neuman, Movies of the Future Project. Also I want to thank Tod Machover for his encouragement and support.

To Dorothy Shamonsky, my friend and collaborator, "when do we start the next one?" The performance would not have happened without her.

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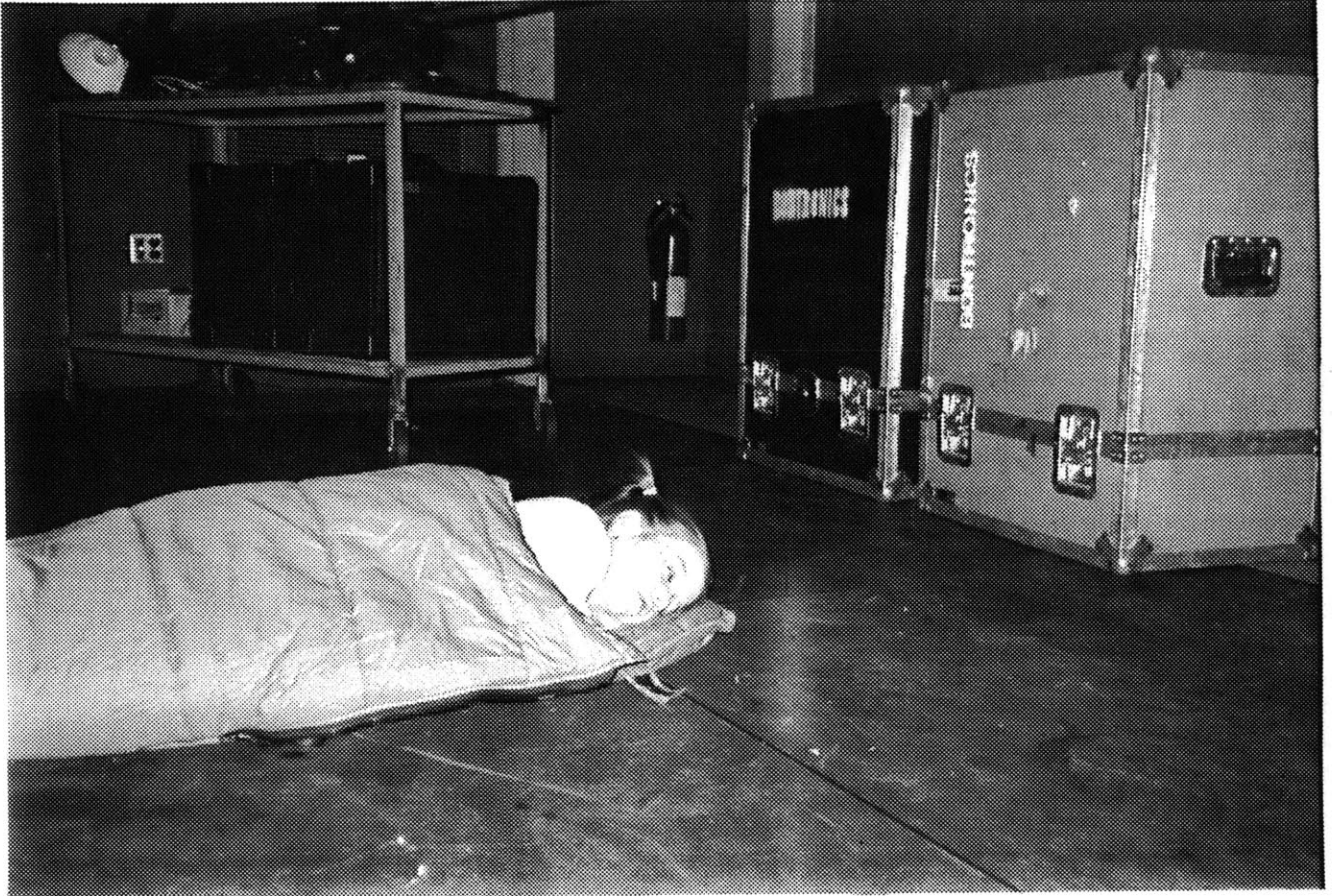


Plate 1

Coding Scheme for Appendix B

<i>Individual I.D.</i>	<i>Status</i>	<i>Identification of Film and Video</i>	<i>Preference for Film or Video</i>
1 to 57	P Production E Engineer * Others M Mass	Δ Correct X Incorrect	F Film V Video N No Preference

Appendix B consists of selected transcripts from the Study II interviews. Excerpts from these are used throughout the thesis. To make the reading flow more smoothly, I have devised a coding scheme so that the quotes can be referenced in the appendix. In the body of the thesis, interview quotes appear with a subscript number. That number is the I.D. number of an individual interview appearing in Appendix B.

"What the audience wants is not logic, but emotion."

- Billy Wilder

INTRODUCTION

The project presented herein had several goals. The first was to see if viewers could tell the difference between film-originated and video-originated programming. Another was to see if they had aesthetic preferences for film or video. The last goal was to find out if video, when shot "film style", had greater aesthetic appeal than usual. To answer these questions, I first produced a dance program, shooting 35mm film and high quality video in a traditional film style approach, and then conducted two studies with the edited material. The results clarify differences in viewer response to film and video. Thus, they have direct bearing on any endeavor where aesthetics is a consideration, especially upon the impending selection of a new television standard.

A new form of television is imminent, and the decision to adopt this new standard will be based primarily on economics. In light of this, the results from these studies are put forth so that we do not lose sight of the other issues involved, issues related to production, transmission, aesthetics and the impact on consumers. This essay focuses primarily on the aesthetics issue raised by the possible transition to exclusively video-based production. In two pioneering studies, viewers were first asked to distinguish film from video while viewing parallel content. They were then asked which image they preferred.

These studies set out to better understand the viewing public's perceptions of the "film look" and the "video look". To accomplish this, a parallel shoot was produced to obtain identical programming originated on both 35mm film and professional quality video. Study One took place within the context of a multi-media art performance. The participants were unaware that they were going to be part of a study. Study II was set up to simulate the home television viewing experience and was conducted in a small viewing room at M.I.T.'s Media Laboratory.

There are two motivations for this research. The first has to do with my own curiosity about people's perceptions of media. In 1983, I was producing work in both film and video. In several experiments I mixed film-to-tape transferred footage with video generated footage. The significant difference between the look of the film-

originated and the video-originated materials intrigued me. To better articulate what the visual differences were, I produced a series of multi-format shoots and intercut the two sources. This generated some discussion but my questions remained unanswered.

The other motivation has to do with more global issues. Given that the next television standard will be determined primarily by economics, I as a media-maker am concerned that the aesthetics issue not be swept under the rug. Many decisions will be made that affect the consumer and little is known about whether viewers can differentiate between high and low resolution, or to what degree they care about the quality of the image that stares out at them from the little box in their living room.

My hypothesis was that when shown side-by-side identical content originated in film and video, viewers may not be able to tell which is which but would be drawn to the film for aesthetic reasons.

For this study it was necessary to produce the stimuli. Identical content was needed to eliminate content based biases. A parallel shoot was arranged to obtain identical programming. In Study I, viewers watched the parallel program side-by-side on two large video projection screens and were asked to complete a questionnaire asking which screen was film and which was video. They were also asked which screen they liked best, if either. Study II consisted of two parts. First subjects viewed a series of program clips and were asked to write down whether each clip was film or video originated. Then they were shown the same parallel program that was seen by the viewers in Study I, but this time it was seen side-by-side on television monitors. Subjects participated one or two at a time and completed the same questionnaire as in Study I with the addition of a page pertaining to the series of clips.

Chapter One places the studies within the broader context of current media developments. Chapter Two describes the production processes for the parallel shoot and the performance. In Chapter Three, the studies and the results are described in detail. Chapter Four concludes with a summary of the research and suggestions for future studies.

CHAPTER I: NEW WAVE TV

"It has been said that television holds the promise of being the medium that can bring the peoples of far places emotionally face to face with one another's manners, customs and problems, and thereby make them understand that they are all essentially human."¹

¹"Historical Sketch of Television's Progress", L.R. Lankes, SMPTE, 51 (1948), excerpted from A Technological History of Motion Pictures and Television, edited by R. Fielding (U.of CA Press, 1967)

CHAPTER I: NEW WAVE TV

This chapter looks at the current movement of technological growth in media: the choices we have, the race for a new standard and the importance of new media on the media-makers themselves. There is a big commotion about a new kind of TV. But in the chaos there are issues that should be closely examined before a new standard is selected. Viewers' needs, the quality that is attainable and technological status are all aspects that need to be considered. Will a new standard render obsolete the existing production, transmission and reception devices? It has been hypothesized that the next television standard may be good enough and look good enough to wipe film off the face of the planet. These issues *should* be considered, but as usual, economics will be the prime determinant.

There are presently at least fourteen proposals for improved resolution television that have been submitted to the FCC for approval. At the most basic level these systems fall into two categories, those that are compatible and those that aren't, (compatible means that you don't have to go out and buy a new TV set to continue receiving the same quality image that you get now). To break it down a bit further, there are systems that are 1) incompatible with NTSC, 2) compatible with NTSC but requiring more than one 6-MHz channel, and 3) compatible with NTSC and using just one 6-MHz channel.¹

The most widely known and only system that has actually made it to production is the Japan Broadcasting Corporation's (NHK) High-definition Television (HDTV), which began development around 1970. Although not originally intended as a production medium, it has achieved that status in Japan and the US. NHK's HDTV production standard has 1125 scanning lines per frame, 60 fields per second, 2:1 interlaced scanning and a 16:9 aspect ratio. This 1125-line HDTV, though incompatible with existing systems, is essentially an upgraded version of the present National Television Standards Committee (NTSC) broadcasting system.

¹"High-definition television update", R.K. Jurgens, IEEE Spectrum, (April, 1988)

Characteristics of major proposed advanced television systems

System name (source)	Channel bandwidth (RF), MHz	Scanning lines per frame/ frames per second/ fields per second	Vertical resolution, lines*	Horizontal resolution, lines*	Aspect ratio	Comments
STUDIO SYSTEM						
NHK studio (NHK, Japan)	50	1125/30/60	750	750	16:9	Widely demonstrated. High-quality pictures. Equipment is commercially available.
SINGLE-CHANNEL SYSTEMS						
ACTV (NBC, RCA, Sarnoff)	6	1050/30/60 525/30/60	480	410	5:3	Basic signal is transmitted at 525 lines, 2:1, but additional information is carried by compressed video in the overscan region on a Fukinuki sub-carrier and by the temporal line-difference signal in quadrature with the RF carrier.
Bandwidth-efficient (MIT)	6	1200/60/60	720**	1275**	4:3	Uses double-sideband quadrature modulation. Receiver needs frame store and signal processing. Some data transmission. Digital stereo.
Fukinuki (Takahiko Fukinuki, Hitachi)	6	1050/60/60	400	450	4:3	Second subcarrier permits about 1.2 MHz of additional signal. Three-dimensional filtering with frame stores needed in transmitter and receiver.
HD-NTSC (Richard J. Iredale, Del Rey Group)	6	1125/60/60 1050/60/60	450-700†	450-700†	5:3 14:9	Each picture element is divided into three sub-pixels, each of which is transmitted in turn in each successive frame. Digital stereo. (Tri-scan)
Receiver-compatible (MIT)	6	1050/60/60	600	660	16:9	Part of height of NTSC frame used for enhancement signals for vertical and horizontal resolutions. Digital stereo.
SuperNTSC (Yves Faroudja, Faroudja Labs)	6	525/30/60 1050/30/60	330 (500)‡	400 (600)‡	4:3	Uses 30-Hz progressive scan at the origination, 30-60-Hz converter, detail preprocessing for apparent increased resolution, and 2-H (H is line duration, or 63.5 μs) precombining of chrominance and luminance prior to encoding. Standard receiver displays NTSC. Special receiver with comb filters and frame stores displays 1050 lines with a 15-MHz equivalent bandwidth.
Yasumoto (Yoshio Yasumoto, Matsushita)	6	525/30/60	330	420	4:3	Second carrier added in quadrature with main carrier to permit increase in horizontal resolution.
DUAL-CHANNEL SYSTEMS						
AT&T Bell Laboratories (Theodore S. Rzeszewski)	6 + 6	1050/30/60	480	600	5:3	NTSC on first channel; high-frequency luminance and color difference information on second. NTSC receiver recovers first channel; HDTV receiver recovers both, combines them with frame store, and converts them to 1050 lines.
Glenn (William E. Glenn, N.Y. Institute of Technology)	6 + 3	1125/30/60	800	800	16:9	First channel has standard NTSC, 525-line picture. Second channel has additional information for 1125-line picture. HDTV receiver needs frame store.
HDTV signal (North American Philips)	6 + 6	1050/60/60	480	495	16:9	NTSC on first channel; augmentation signal on second. Progressive scan. Receiver needs frame store. Digital stereo.
WIDE-BANDWIDTH SYSTEMS						
HDB-MAC (Scientific Atlanta)	10.7	1050/30/60	450	450	4:3	Uses a line difference signal to increase vertical definition of luminance and chrominance components of signal.
HDMAC-60 signal (North American Philips)	9.5	1050/60/60	480	495	16:9	Four-field sequence. Every fourth line has full luminance bandwidth. Every second line is a line difference signal band-limited to 28% full luminance bandwidth. All other lines are band limited to 56% full bandwidth.
Hi-Vision with MUSE encoding (NHK, Japan)	10	1125/30/60	750	580	16:9	Luminance and color difference signals are band-limited and then sampled. Receiver needs MUSE (multiple sub-Nyquist encoding) decoder, frame store, and motion detector. Digital stereo.

*Resolution of system as measured on a test chart.

**Based on square picture elements.

†System resolution can be varied from 450 to 700 lines/picture height.

‡The resolution figure without parentheses is the objective measured value; the figure inside the parentheses is subjective picture impact due to nonlinear detail processing. Note: Where 60 fields per second are shown, the real figure is 59.94 fields per second, except for the NHK studio and Hi-Vision systems.

TABLE 1¹

¹"High-definition television update", R.K. Jurgen, IEEE Spectrum, (April 1988)

Why the hurry to select a new standard? Most consumers are not knocking down walls to have ATV. Many of them haven't even heard of it yet. The answer is economics. "The first receiver to market will set the de facto standard." (W.F. Scheiber, M.I.T.)¹ At its start, high-definition television (HDTV) was presented as the quantum leap to theatre quality video. However, on the road to theatre quality video, HDTV has hit a number of roadblocks. NHK had hoped to see their 1125-line system set a worldwide standard. But this will not happen. The Europeans voted against the incompatible system and have been developing their own version of ATV. It is probable that 35mm film will remain the only worldwide standard. Brenda Fox of the National Cable Television Association (NCTA) states, "We're beyond the point of having a universal (television) standard. It's been dismissed."² As for the United States, HDTV met with mixed reactions. Objections were based partly on fear of an economic monopoly by the Japanese - If the Sony 1125 HDTV does succeed, it could take over the American market causing major upheaval to the U.S. industry. Some fear that 1125-line system will take over first in the VCR and videodisc domain, and that consumers will be so enthralled by the quality of the image they will stop watching network television and the broadcasters will be out of work. Additionally, should NHK's 1125 HDTV become the new standard it would put all current equipment into obsolescence.

There are a few production houses worldwide that produce high-definition programs. At present this is a very expensive and unwieldy production method necessitating a down-conversion (transfer) to the 525-line NTSC standard for transmission.

A lot of money is being spent in this race to make high quality television. NHK's HDTV, even with its pitfalls, is touted by many as the answer to our dreams in terms of picture quality. Some claim that it has much higher resolution than projected 35mm motion picture film, especially by the time the picture reaches our neighborhood theatre.³ But then maybe it's not a technical question of resolution but rather a question of aesthetics.

¹M.I.T. Communications Forum, "The Politics of HDTV", April 21, 1988

²M.I.T. Communications Forum, "The Politics of HDTV", April 21, 1988

³"Resolution requirements for HDTV: based upon the performance of 35mm motion picture films," A. Kaiser, H.W. Mahler and R.H. McMann, p ,Television:Journal of the Royal Television Society, (April 1985)

Should a new television standard be adopted, what will it mean to the media community? "In view of the large number of parties involved, and the overwhelmingly economic nature of their interests, it is clear that decisions about Advanced TV Systems (ATV) are mainly about jobs and money, and only marginally about beautiful pictures."¹ It is time to look at the importance of aesthetics. Film director George Lucas was quoted by *Variety* as saying, "We're going in for a period of high quality theaters. There's going to be a bigger interest in good presentation. The whole issue of high resolution video and the whole video process and how a film is linked to them- I think eventually we will move into that realm. Video technology has really advanced over film technology in all areas except resolution."² There is much talk of high definition video replacing film since, with all of the significant technological advances in video, film in comparison appears to be standing still. But perhaps the question isn't about whether one medium advances and one stands still. Perhaps the question is, "What kind of artistic and aesthetic forms will be created from these new developments in video?" Brenda Fox of the National Cable Television Association (NCTA) said that in Washington, DC, a reverse trend is taking place. Big screen theatres are being built again because the public doesn't like the small screens.³ This indicates that aesthetics are indeed important to the viewing public.

Guiseppe Rotunno, ASC, was cinematographer on the first full length feature to originate in HDTV, *Julia and Julia*. He said he wanted to try something new. Ironically, or maybe not, he says he prefers the the transfer to film (which is how the film is being distributed for theatres) and not the tape.⁴ Harry Mathias, cinematographer of twenty years, reports that he is not an enemy of high definition but of short sighted solutions to it.⁵ Many people within the media industry are concerned that much is being sacrificed for short term goals. As one ABC engineer put it, "We figure that NTSC is an experiment and it hasn't finished yet." Consensus seems to be that HDTV will be great for special effects in the film industry. The effects are said to

¹"Advanced Television Systems for the United States: Getting There from Here", W.F. Shreiber, April 1988

²"HDTV: The Sharper Image," Christine Bunish, In Motion.

³M.I.T. Communications Forum, "The Politics of HDTV", April 21, 1988

⁴"HDTV: The Artists Speak", N. Lee, p85, American Cinematographer, (September, 1987)

⁵"Interview From Hollywood", HDTV Newsletter, 2, #4, p22 (Advanced Television Publishing, 1987)

be of better quality than film, especially in multi-layer compositing, and to take less time, which in post production, equals money. Hollywood is not yet shaking in its boots for fear of being replaced by a new video technology. Speaking for the production community at large, veteran cinematographer Harry Mathias said, "I don't think that the marketplace is asking for HDTV right now...Everybody has an open mind *at best*.."1

¹"Interview From Hollywood", HDTV Newsletter, 2, #4, p22 (Advanced Television Publishing, 1987)

CHAPTER TWO: PRODUCTION
A Parallel Shoot and "Form Follows Format"

"My own thoughts about the two mediums are that film has a past tense feel to it, that we are watching something that has occurred. Video on the other hand has a present feel to it. Curiously, the only tense I was concerned with was the future and not having enough of it to accomplish this task in a few short weeks."

- Henry Ferrini, Director

CHAPTER TWO: PRODUCTION

Video has a reputation for getting short-changed when it comes to production values. But if video is shot film-style, thereby enhancing its quality, will it have increased appeal to the production and viewing communities? A goal for the parallel shoot was to give video the same attention to detail that is normally reserved for film.

- How closely can video and film resemble each other when shot under optimal parallel conditions?
- To what degree does lighting create the "film look" and the "video look"?

From the interviews that were conducted it is apparent that despite what would seem to be technically obvious answers, production people and engineers alike have opposing opinions on the preceding questions.

These two questions have elicited highly opinionated answers but lack the visual evidence to prove a point. There are many factors that come into play that can cause video to look more filmic or film to have a more video look. The nature of a parallel shoot can allow for controlled experimentation of these variables. From this we can learn more about the capabilities and limitations of each media, in addition to the aesthetic opinions of the viewing public.

HISTORY of the whole project or how it came to be:

In any production there are a series of phases that need to occur in order to reach project completion. There is first the seed of an idea, and if one goes the giant step beyond, there is pre-production. This is usually the most time consuming phase if the project is to come off well. Pre-production consists of all of the organization that will either make or break the success of the project such as budgeting, crew recruitment, project design, space and equipment needs and plenty of other necessary details. If that reaches maturation then there is the actual production. Finally there is the post-production. Oh, one more thing; if you want the results of your labors to be shown anywhere then you have to deal with distribution.

The seed was planted long ago. I have had an interest in multi-media production for a number of years and have always been thrilled by live performance. Throughout the past six years I have shot a lot of dance. In autumn of 1987, the manager of a Boston based dance company approached The Film/Video Section at M.I.T.'s Media Laboratory. She dropped off a videotaped performance and some brochures about the company. KRAUS and... was interested in a video/dance collaboration. I talked with my friend and collaborator (Dorothy Shamonsky) about the project's possibilities. We had a history of being able to work well together under the stresses that accumulate during any production.

Meanwhile, I was also thinking about my thesis and the form it would take. In my position as a research assistant, I was learning about high definition television (HDTV). Having heard of HDTV a few years before I had from the first had an interest in this medium of the future, this new supposed vastly improved television. Now we were using Sony's 1125-line HDTV in a study that we conducted at The Audience Research Facility (ARF). We went to 1125 Productions (a high definition production house) in New York City to edit together a tape for our study and ran a highly successful "Study A" at ARF during December.¹

A video/dance collaboration and HDTV: What do the two have in common? Some of my early work in multi-format production used dance as subject. It occurred to me that a parallel shoot in three media would be an exciting thesis project and using a professional dance company would be fun.

The performance part of the picture began in my mind as more of an "icing on the cake" venture and naively, oh so naive, I thought that it wouldn't require a tremendous time commitment on my part. The performance was going to consist of a combination of dance and media. The first piece on the program would show the parallel video and film footage, side-by-side, on two large video projection screens. The dancers would dance the same piece live and would be in sync with the projected imagery for part of the time. The audience would be given a questionnaire and asked to write down which screen was film and which was video. This would become Study I.

¹"The Mass Audience Looks At HDTV: An Experimental Study of Subjective Responses to NTSC and HDTV Technologies, W.R. Neuman, S. O'Donnell, S.M. Schneider, and L. McKnight, March 22, 1988

The Parallel Shoot

What exactly is a parallel shoot? A parallel shoot is taking two or more cameras and aligning them as nearly as possible, then shooting simultaneously with the goal of attaining virtually identical framing. The resultant parallel footage permits examination of any number of variables that exist between the two or more media. This arrangement can exhibit minor variances depending on the intent of the production but remain relatively the same. To date, parallel shoots have been used primarily for psychophysical testing of film and video resolution.

The idea of doing a parallel shoot first occurred to me in 1983. I had a curiosity about the "film look" and the "video look" and at the time produced several small-scale multi-format shoots. The opportunity arose this year to do a more in-depth study and to conduct audience response testing through M.I.T.'s Audience Research Facility (ARF).

When I began to talk about the idea I met with an array of response ranging from people who didn't know there was a difference between film and video to heated debate about which was better or why bother-it's perfectly clear that a viewing audience won't even notice a gross costume change from one scene to the next. With all of the energy going into the development of a new television standard, I thought it would be interesting to see if the general viewing public could tell the difference between film and video generated programming or if they demonstrated a preference for one or the other.

The only existing parallel footage that I knew of was test patterns that I was certain the viewing public would be rather unexcited about so I decided to create my own. Fortune on my side, I found quite a large pool of interested people. Unlike other artistic endeavors, the process of making media is a highly collaborative venture without which a project cannot come into being.

My goal was to produce a three way parallel shoot using NTSC video, 35mm motion picture film and HDTV. It was imperative that these all possess the same framing as much as the physical equipment limitations would

allow. The ideal would be to shoot an existing or standard style commercial production so as to match contemporary production values. Early in the process I attempted to locate an interested producer but was unsuccessful in finding access to a show currently in production. Getting high definition equipment also proved futile, so we settled on 35mm and NTSC video.

There are many obstacles in obtaining a successful parallel shoot. Having witnessed the results of a very expensive but unsuccessful attempt, by trained professionals no less, I was all too aware of the problems. Getting identical footage from two cameras placed side by side is not an easy task. With two operators you get two pictures. When one zooms, the other has to be right there, when one tilts the other has to tilt, when one focuses the other also needs to focus. We eliminated the dual operator problem by mounting both cameras side by side on a plate on an Elemac dolly. The Director of Photography (D.P.) operated the cameras with the help of a professional Assistant Cameraman (A.C.) and an experienced dolly grip. The D.P. aligned the two cameras so that a video assist on the Arriflex film camera was unnecessary. Needless to say it is a complex process but one that is worthy for assessing true viewer response to different media.

Technical Parameters

The parallel shoot occurred in The Philippe Viller Experimental Media Facility (The Cube). The Cube is 61'4" x 62'8" x 45'11" tall (see Table 2).

Arriflex BL3 35mm Motion Picture camera with a Cooke 20-100mm T 3.1 lens
Ikegami HL79 EA Video camera with a Canon J-13 9-117mm T 2.2 lens

The Arriflex was fixed on a 6" riser plate and the Ikegami was mounted on an O'Connor 50 fluid head. Both camera assemblies were mounted side-by-side on a 13" plate which was then mounted on a Worall head. This allowed coordinated tilt and pan motion of both cameras. The Worall head was used for two reasons. One is that it can support the weight of the two cameras and the other is that being a gear head, it allowed very precise moves. The focal lengths were fixed for each shot. Matte boxes were used on both cameras to control flare from the lights. Academy aspect ratio was maintained on the 35mm camera.

The Ikegami was customized with a crosshair and raster generator. This is similar to the crosshair seen through the film camera but electronically generated. This made it easy to align the two cameras. The tricky parts were calculating the parallax, focal length and distance to optimize as much as possible the matching of the frames. We were constantly having to choose the focal length that would give us the shot we were looking for. Was it better to move the dolly or change the focal length?

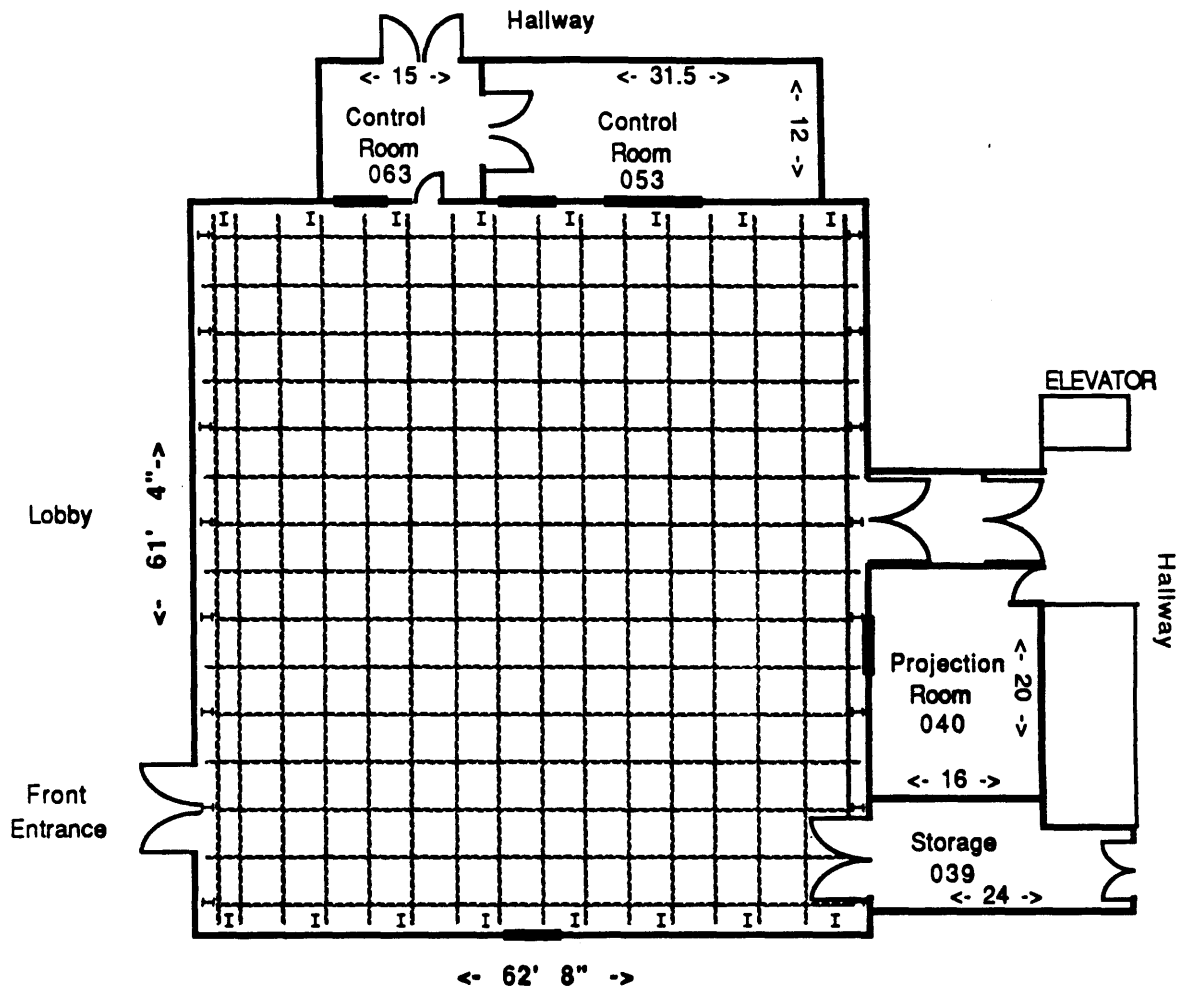
The other major consideration was the image size. A one inch video tube would have given us a closer match to the 35mm image size but in our case we had a 2/3" tube, which is closer to the image size of 16mm film. We had to consider depth of field when choosing focal length and distance.

The 5247 Kodak film stock was chosen because it is close in speed to a video camera. We rated the 35mm at ASA 125 and thereby matched it to the 125 ASA rating of the Ikegami. Our luminance range varied between 100 and 150 footcandles.

1. Dimensions/Layout

The Cube is 61'4" x 62'8" x 45'11" tall.

1.1 Lower Level



FLOOR PLAN - LOWER LEVEL, showing control spaces and floor grid.

TABLE 2

Cube Plan by Greg Tucker

The original source audio cassette was played from a Harmon Kardon TD202 cassette deck and dubbed directly onto a Sony APR-5003 2-track 1/4" reel-to-reel, with center time code track. The time code on the audio was generated with the internal Sony generator on the deck.

For audio playback at the shoot the Sony APR-5003 went through an AudioArts "WheatStone" 16x4x2 board, into a Yamaha P2200 power amplifier and out through (2) Klipsch Lipschorn loudspeakers. The timecode from the Sony APR-5003 acted as the master for the 1" video deck.

To give an idea of the exactitude typical of a film style shoot and to demonstrate the variance between the two cameras, here is an excerpt from the camera reports:

35mm

Scene 1-

- T 3.1/22mm
- 24' focus
- 2'5" camera to floor

Scene 2-

- T 3.1/90mm
- 30' focus
- 2'5" camera to floor

Scene 4-

- T 4/90mm
- 15' focus
- 4' 1/2" camera to floor

Video

- F 2.8/9mm
- 25' focus
- 2'8 1/2" camera to floor

- F 2.8/39mm
- 30' focus
- 2'8 1/2" camera to floor

- F 4/39mm
- 15' focus
- 4'4" camera to floor

The lighting design for the shoot was a complex issue. Lighting for dance is different from lighting for film is different from lighting for video. You get the picture. The lighting designer worked closely with the Director of Photography (DP) to create a light plot.

Backlight:

8 PAR NSP (Narrow Spots), 1Kw, 3000'K
4 PAR MFL (Medium Floods), 1Kw, 3000'K
Color: Lee 183 Moonlight Blue

Sidelight Stage Right:

3 PAR 64 NSP, 1Kw, 3000'K
3 PAR 64 MFL, 1Kw, 3000'K
3 6x9 Elipsoidal Spot, 750W, 2800'K
Color: Roscolux (Rx) 101 Diffusion, Rx 08 Pale Gold

Sidelight Stage Left:

3 PAR 64 NSP, 1Kw, 3000'K
3 PAR 64 MFL, 1Kw, 3000'K
3 6x9 Elipsoidal Spots, 750W, 2800'K
Color: Rx, 101 Diffusion, Lee 1/2 Daylight Color Correction, Rx 803 Pale Gold

Frontlight

Downstage:

4 6x12 Elipsoidal Spots, 750W, 2800'K
Color: Rx 55 Lilac

Upstage:

4 6x16 Elipsoidal Spots, 750W, 2800'K
Color: Rx 55 Lilac

Journal

Parallel Shoot: February 8, 1988

9:45 a.m. Crew members begin to arrive on the scene, (The Philippe Villers Experimental Media Facility, more commonly known as "The Cube" around The Media Lab). Au Bon Pain has generously donated breakfast so the crew is standing around drinking coffee and eating croissants before the massive work load ensues. There is everything to be done to create "the set" for the shoot. We have one day to turn over the entire cube floor (something that has never been done in its entirety until this morning), load in, hang and focus the lights, lay out and tape down the dance floor, set up the audio board, the video gear and the cameras and be ready to go by 9 am the following day. Due to the minute size of our budget we have an almost exclusively untrained but enthusiastic volunteer crew. Joseph Levendusky, the lighting designer, knows that this will slow us down significantly but it's what we have so we make do. Joe is not due to arrive back from Chicago until early afternoon (we paid close attention to the weather reports knowing that at this time of year a heavy snowfall in either Chicago or Boston could paralyze, or at the very least severely impair, our whole production).

The first order of the morning is to flip the floor. This task is accomplished within two hours with six workers at a time. Two teams of two flipping and two pulling tabs out of the unflipped floor and then putting back the correctly colored tabs to match the flipped floor. After this was completed, we laid out the dance floor. This required a lot of care due to the floor being in terrible repair. After one end of the floor was taped, three "stompers" would stomp the length of the floor to try and flatten it out as much as possible and one person at the destination end would be ready to tape as the stompers arrived at the end. We still called it a "rippled effect" floor. It was free and we didn't have a lot of room to complain. Tom Sullivan, our audio engineer, was readying the sound equipment throughout the day. Director Henry Ferrini arrived about noon and we discussed the camera angles that he'd selected. Joe came straight from the airport and arrived somewhere between noon and one. The lighting truck arrived about 2 p.m. We unloaded and went to work on hanging the lights.

Throughout the day various other elements were scheduled to arrive. The Arriflex BL3 and the dolly, track and other accoutrements arrived throughout the

afternoon. Due to the fact that the building is not wired for certain practical applications, it was necessary to move the Ampex one inch deck from the fourth floor to the lower level, (which equals the basement). New faces showed up to lend a hand and familiar ones, to contribute their part to the production. While picking up the film equipment, our A.C., Greg Collier, ran into a friend and professional colleague and we "picked up" a dolly grip. And so David LaBracio, unsuspecting innocent bystander, tumbled into our production, fortunately for us. Around 5 p.m. the Ikegami 79E arrived with its owner and our Director of Photography (Jim Griebusch) and things were falling into place. The camera unit began to set up the cameras in parallel.

Crew changed faces a bit throughout the day but there were several hardcore people who worked into the late night. At about 1 a.m. the remaining crew crawled home knowing that the lighting had a way to go, but the fatigue factor was beginning to dominate and we knew that to stay later was asking for trouble. And we did have a full day in front of us.

Parallel Shoot: February 9, 1988

The excitement and anxiety of February 9 was enough to get me out of bed at 6 a.m. Dorothy and I had to pick up the muffins from the Milk Street Cafe and get coffee and whatever else, prepared for crew arrival which was scheduled for 7:30 a.m. Dorothy was in fine form as she had fractured her arm in a fall on the ice the previous week. Joe appeared and went to work to finish the focusing. We had our first (and really the only) setback right at the start. Two of the circuits on the crane (where many lights hung) blew and it took a long while to get that fixed.

The first shots did not actually get going until 10 a.m. contributing to a frustrated Henry. But once the cameras were rolling, it went well. In typical film fashion, the going was slow. Each shot took at the very least a half hour to set up for the minute or so that was actually recorded on film and tape. The choreographer, insisting that the dancers be out by 3:30, stuck to her plan. Which put us back on schedule.

Parallel Shoot Budget

Technical Production Crew

Producer	-	4 months
Co-Producer	-	4 months
Production Manager	\$200.00	2 months
Director	\$100.00	1 month
Director of Photography	\$100.00	1 week
Lighting Designer	\$225.00	2 weeks
Assistant Camera	-	2 days
Dolly Grip	-	2 days
Audio Engineer	-	2 weeks
Video Engineer	\$50.00	2 days
Gaffer	-	2 days
Tape Operator	-	2 days
Production Assistants(20)	-	2 days
Facilities Supervisor	-	on consultant basis 3 months
Technical Consultants (2)	-	2 days
Photographers (2)	-	2 days
	<u>\$675.00</u>	

Talent \$400.00

Post-production Crew

Off-line Editor (2)	-	1 week
On-line Editor	-	2 days

Equipment & Stock

35mm Camera Package	\$840.00	1 day
Ikegami 79E	\$100.00	1 day
3000' 35mm raw stock	-	
Processing	-	
Film-to-tape transfer	-	
1" tape stock & audio tape	\$450.00	
Insurance	\$125.00	2 days
Lights	\$270.00	
Gels	\$95.00	
Marley dance floor	-	
Food	\$240.00	
More food	-	
Misc, tape, floor plans,...	\$70.00	

Facilities

Production location	-	2 days
Off-line Editing	-	7 days
On-line Editing	-	6 hours

TOTAL \$3265.00

*A dash (-) means a donation - equipment, labor, money, facility or food

"Form Follows Format" Budget

Here I will list only outgoing cash

Talent	\$400.00
Production Manager	\$100.00
Lighting Designer/Stage Mgr.	\$225.00
Video Engineer	\$50.00
2 Aquastar Video Projection Systems plus screens	\$1000.00
Lights	\$500.00
Marley floor	\$100.00
Bleachers	\$200.00
Headsets	\$50.00
Meals	\$300.00
Misc, tape	\$100.00
TOTAL	\$3025.00

There was a sizable crew who donated time through the week of set-up. These people worked without monetary compensation.

These budgets are a close estimate. There are several outstanding bills that have not come in yet, so the total will rise a little.

The Performance

Two days after the parallel shoot, Dorothy, Joe and I had a meeting to discuss the upcoming performance. We had major issues to discuss. The floor plan had to accommodate the dancers' space needs and rear screen video projection system, and there was the lighting- not just for the performers but bearing in mind lighting requirements for the projection screens (in other words, no light on the screens) and budget items, "No Joe, you can't have \$500.00 for lighting, we don't have it," and in the end saying, "OK Joe, we'll find a way."

Retrospect

Typically, a production like this takes many months of preparation and organizing. It also takes a sizable budget. The "real cost" budget for this production was well over \$20,000. We came in at \$3500 for the parallel shoot and \$2500 for the performance. There were several reasons that we succeeded with this budget. Media professionals were interested in the concept and so were willing to work for next to nothing and in most cases nothing. Our "studio" was an in kind contribution. We received reduced rates and donations for most of our equipment. And we received donations for all of our post-production work.

Lest you think that it is easy to go about a production in the manner that we did, let me forewarn you. The work that went into getting these donations should not be underestimated in the least. Let me stress that in most cases, it took many, many hours to get a small donation and that we were entirely burnt out by the time the performance came to a close. Both Dorothy and I were running fevers during the performances. I think that we are both in hearty agreement that we will never again undertake a project that does not have an adequate budget to begin with.

On the brighter side, both the shoot and the performance went very well (no major disasters and standing room only crowds at both performances), the parallel imagery was amazingly parallel, and the studies produced very interesting results.

form follows format

March 11 & 12, 1988

Co-produced by Kim Foley & Dorothy Shamonsky
Choreographer- Rozann Kraus
Lighting Designer & Stage Manager- Joseph Levendusky
Associate Producer- Ruth Henderson
KRAUS AND...- Ramelle Adams, Marquerite Anne Furfey, Rozann Kraus, Nanette Ruggiero
Audio Engineer- Tom Sullivan
Video Engineers- Steve Kuettel, Stuart Cody
Lighting Technicians- Andrew Bennett, Dave Nelson
Electricians- Nina Hasin, Abigail Deser, Julia Lloyd
Facility Supervisor- Greg Tucker
Technical Crew- Jim Paschetto, Ed Slattery, David Larkin, Stewart Krusee, Steve Strassman,
Mike Conway, John Botti, B.J. Davis, T.W. Li, Randy Hertzman, Andrew Mayer, Peter Andrews,
Bill Coderre, David Small, Jim Puccio
Ushers- Nancy Compton, Michael Siegel

ERASE

Choreography by Rozann Kraus
Parallel shoot production credits begin on page 2
Ramelle Adams, Marquerite Anne Furfey, Rozann Kraus, Nanette Ruggiero

PARINGS

Original choreography by Rozann Kraus & music by Daniel Epstein
Video remake by Kim Foley

HANJI

Choreography by Rozann Kraus
Video by Kim Foley & Dorothy Shamonsky
Music by Toby Mountain
Ramelle Adams and Marquerite Anne Furfey

GROUNDWORK

Videodisc by Dorothy Shamonsky
Music by Kim Foley
Nanette Ruggiero

IMAGE

Choreography by Rozann Kraus
Music by John Cage
Rozann Kraus

FEMINEERED (Excerpt - photos from the M.I.T. archives)

Videodisc by Dorothy Shamonsky

ECHOES OF MEN

The solo version of this work was originally commissioned by the Women's International League for Peace and Freedom; the text is from a speech by Elizabeth Cady Stanton, 1888.

Choreography and sound mix by Rozann Kraus
Ramelle Adams, Marquerite Anne Furfey, Rozann Kraus

WAYOUT (Premiere)

Choreography, video and sound mix by Rozann Kraus
Ramelle Adams, Marquerite Anne Furfey, Rozann Kraus, Nanette Ruggiero

.....

Parallel Shoot Credits...

Parallel Shoot Project Concept by

Kim Foley
Produced by
Kim Foley

Directed by
Henry Ferrini

Co-Produced by
Dorothy Shamonsky

Director of Photography
James Griebisch

Associate Producer/Production Manager
Ruth Henderson

Assistant Camera
Greg Collier

Lighting Designer
Joseph Levendusky

Dolly Grip
David LaBracio

Gaffer
George Dobson

Video Engineer
Steve Kuettel

Audio Engineer
Tom Sullivan

Tape Operator
Ben Rubin

Technical Crew:

Jim Paschetto, Nina Hasin, Sabrina Birner, John Botti, David Larkin, Abigail Deser, Bernice Schneider, Stewart Krusee, Matthew Schneider, Layla Strieff, Mike Conway, Betsy Holland, Hans Michaud, Mario Bourgoin, Bill Coderre, Joel Kollin, Steve Strassman, Karim Ajania, Sarah Dickinson

Facilities Supervisor
by
Greg Tucker

Technical Assistance provided

Stuart Cody
Vicki Bippart

Photographers
Adina Sabghir
Peter Schweitzer

Editors
Kim Foley
Henry Ferrini
Spencer Gentry

Film processed by DuArt

Post Production Facilities
Ferrini Productions
Century III Teleproductions

.....

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Film/Video Section
Richard Leacock, Director
Audience Research Facility
Russ Neuman, Director
Music and Cognition Group
Tod Machover, Co-director
Movies of the Future Project
Andrew Lippman, Director

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Bontronics
Boston Beer Company
Century III Teleproductions
Charrette
Church's Fried Chicken
Claire Welty
Ferrini Productions, Inc.
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Heliotrope Studios Ltd.
IAN Communications Group, Inc.
Milk Street Cafe
Minerva Graphics
Strand Theatre
Stuart Cody, Inc.
Terry Hanley Audio Systems
The Woven Hose Cafe

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PHOTO ESSAY

The following photos were taken by several photographers.

Adina Sabghir

Dorothy Shamonsky

Richard J. Solomon

Peter Schweitzer

Kim Foley



Plate 2

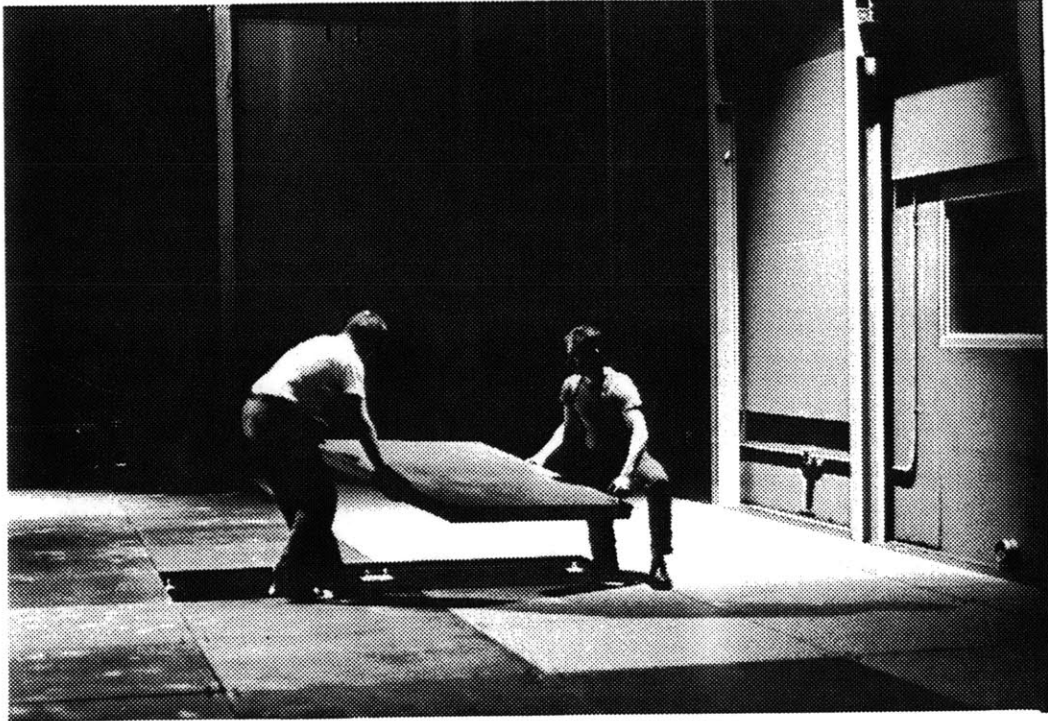


Plate 3



Plate 4

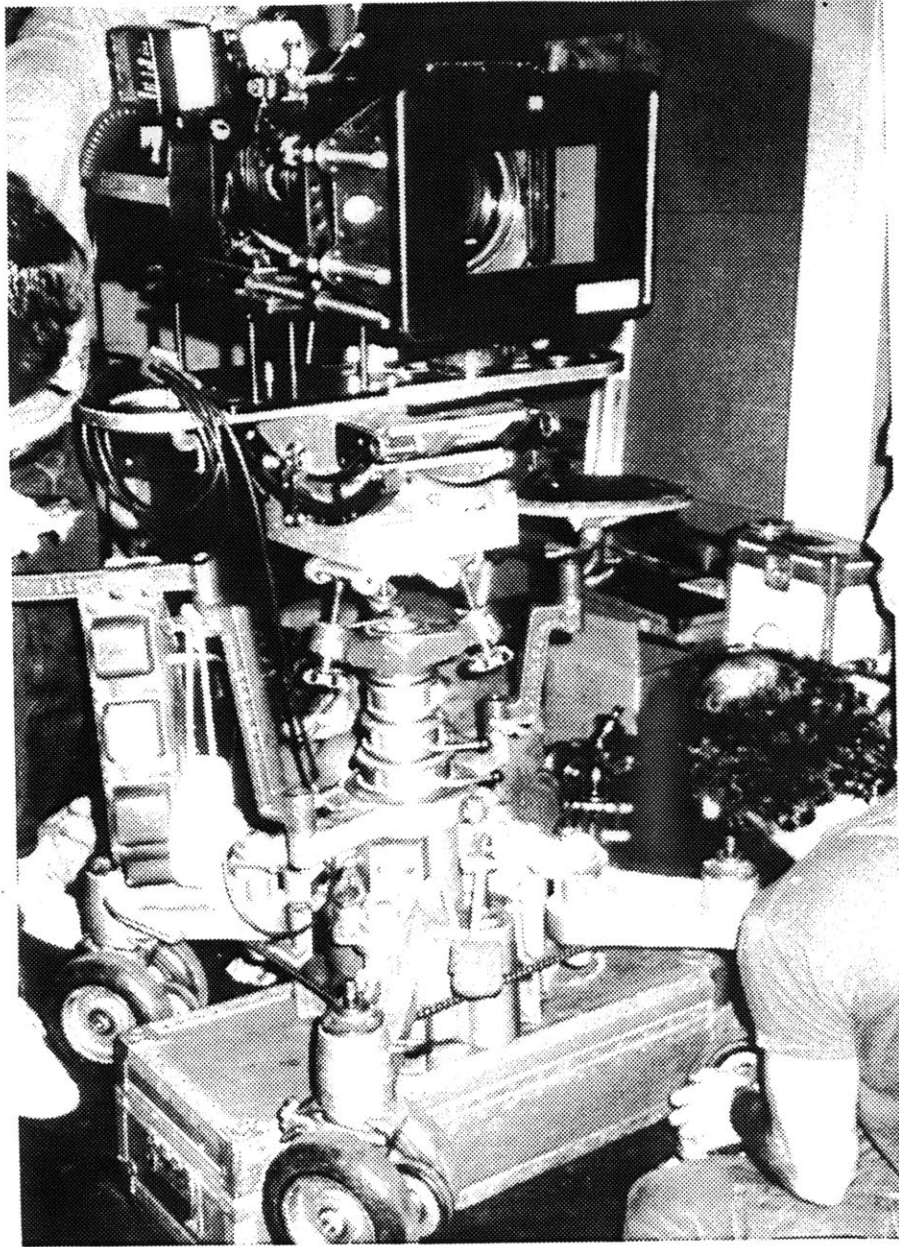


Plate 5

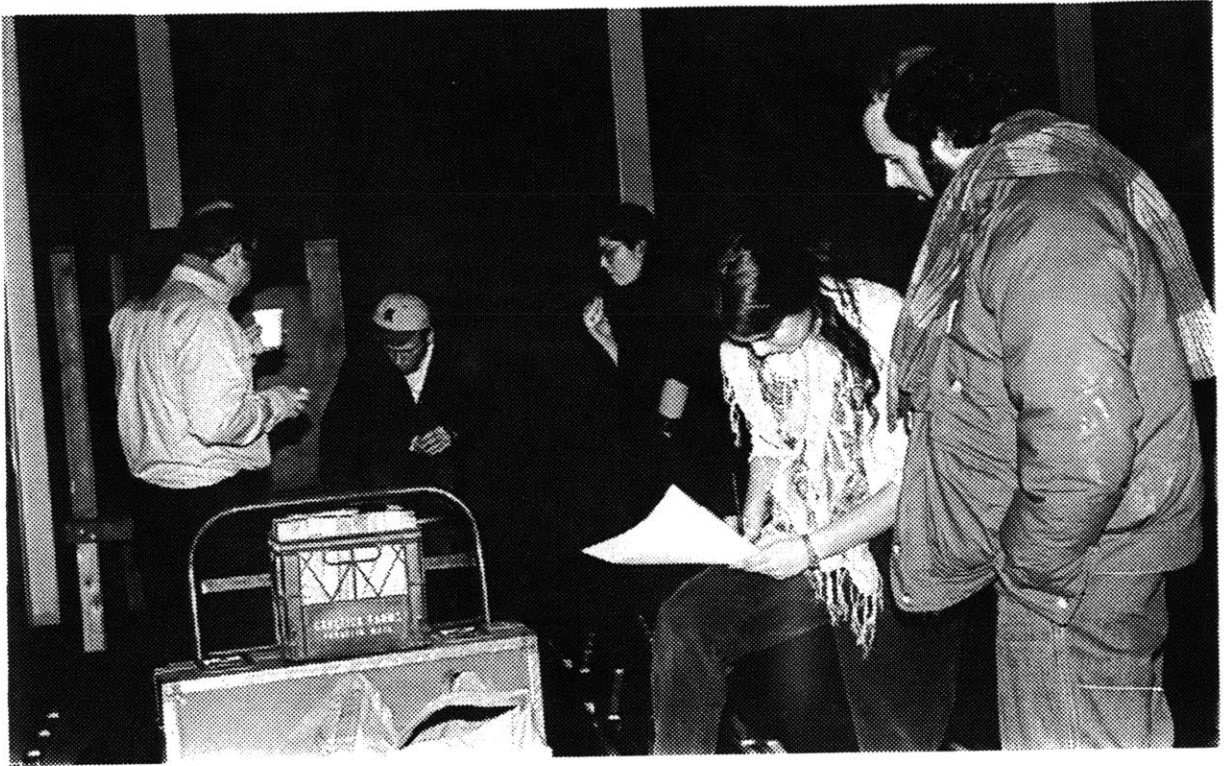


Plate 6



Plate 7

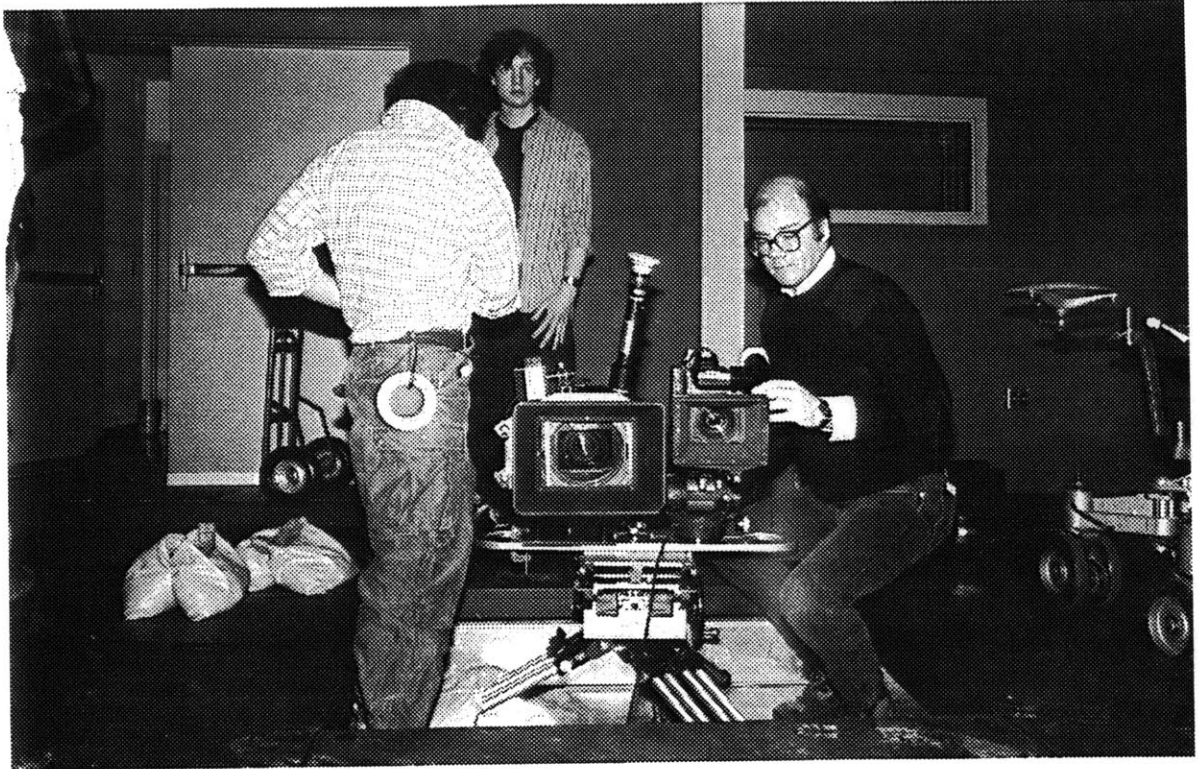


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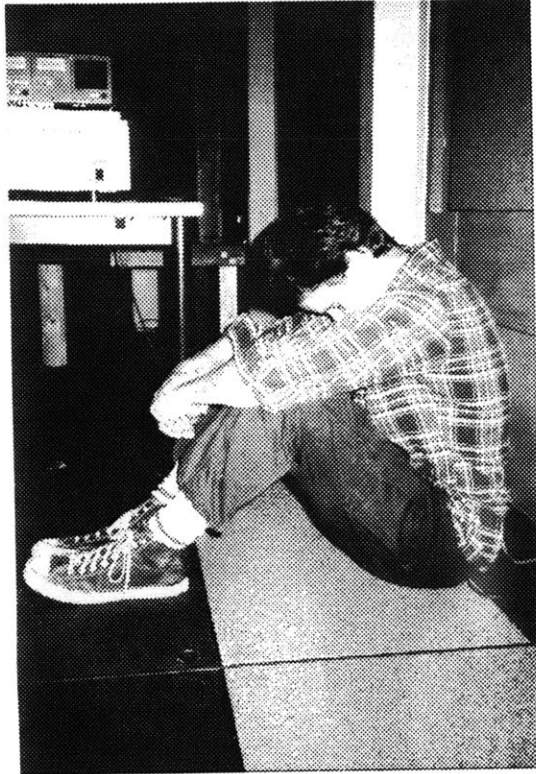


Plate 9



Plate 10

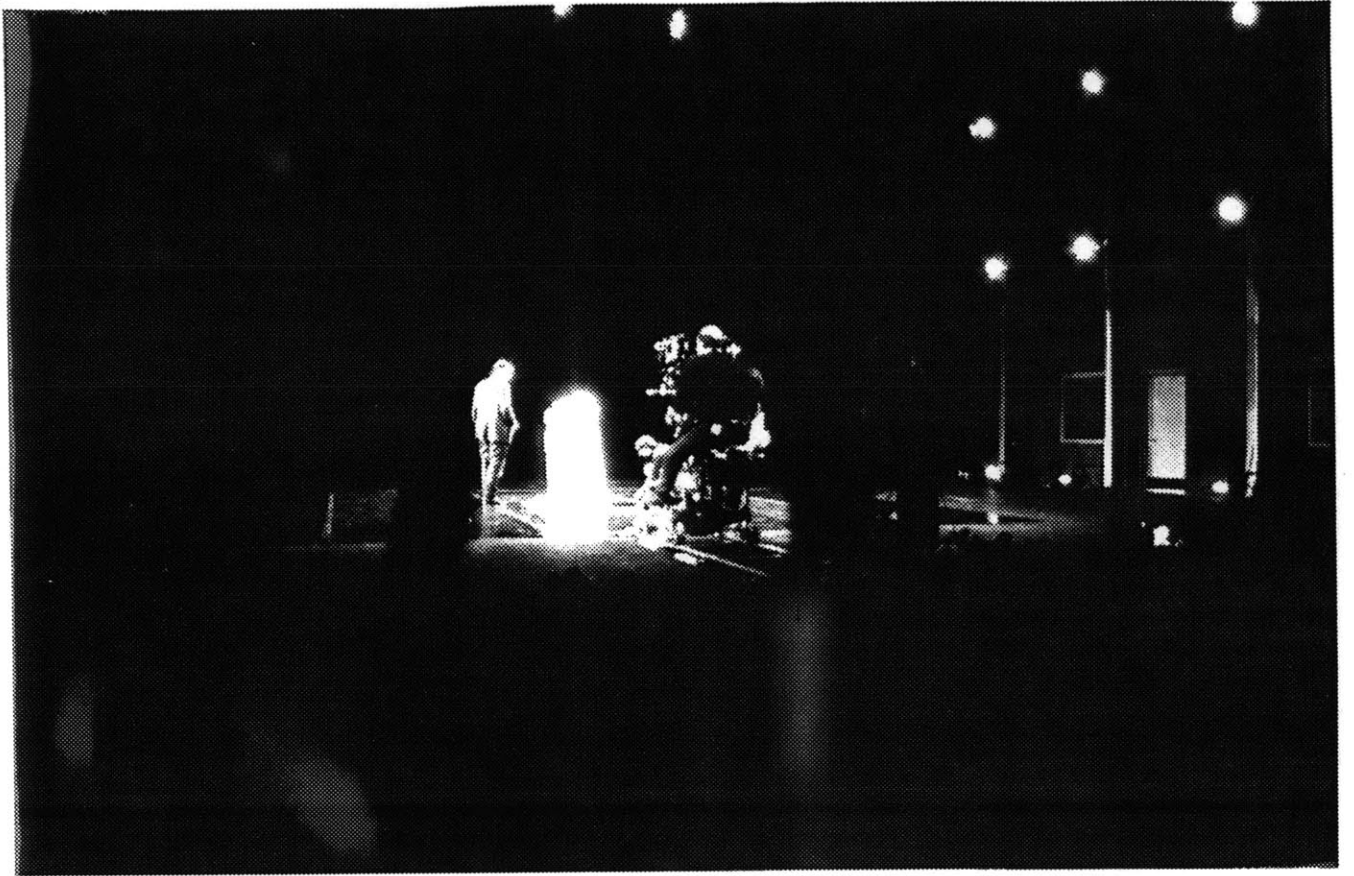


Plate 11



Plate 12

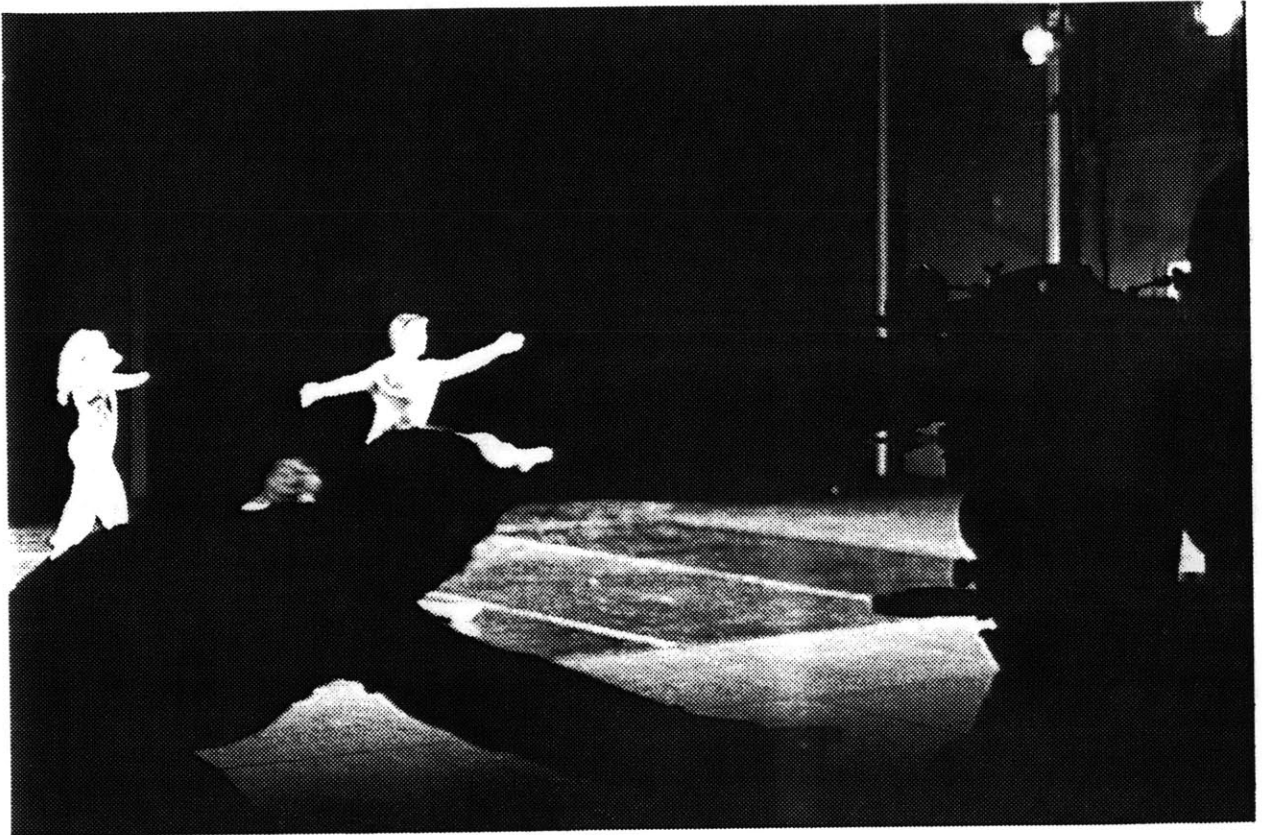


Plate 13

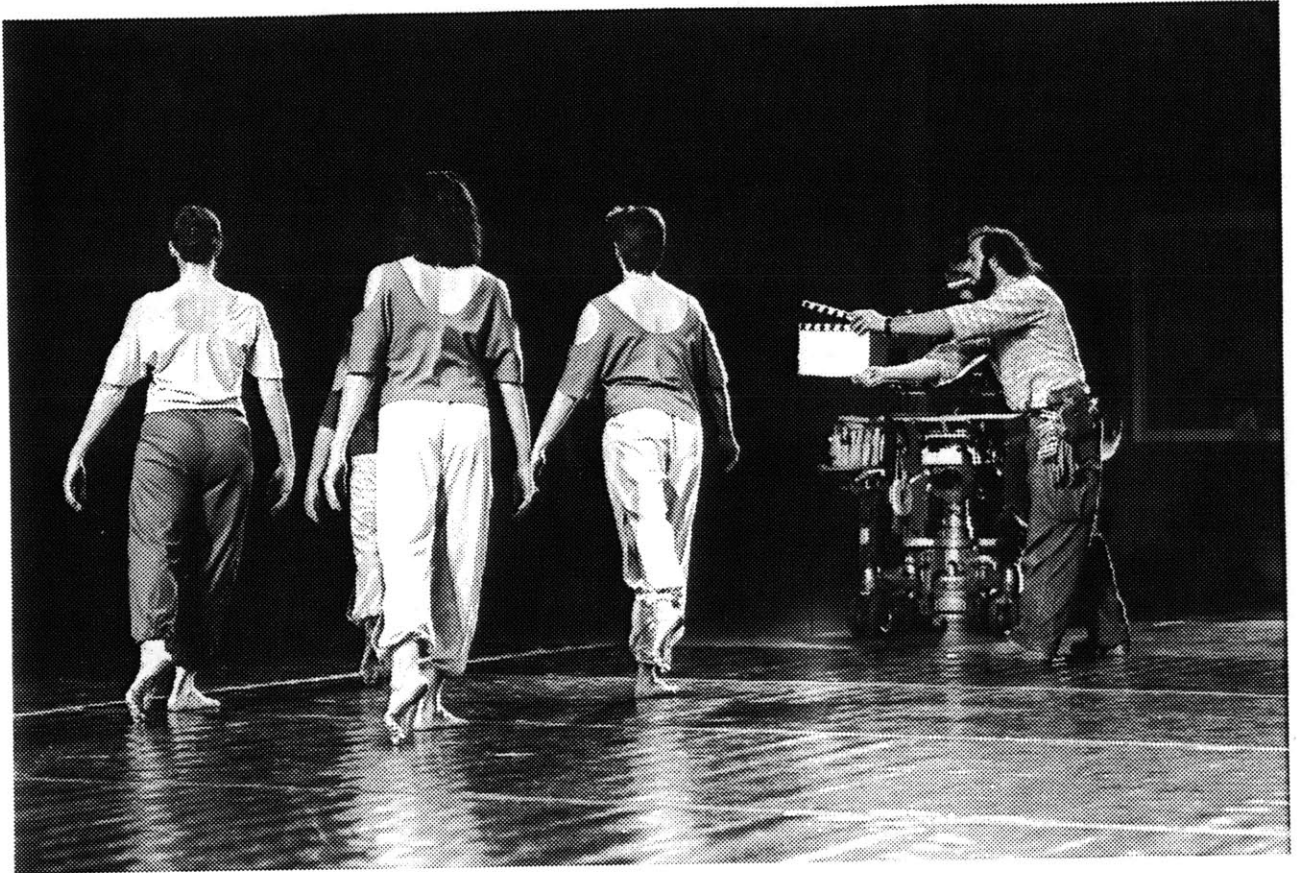


photo: Peter Schweitzer

Plate 14



Photo: Peter Schweitzer

Plate 15

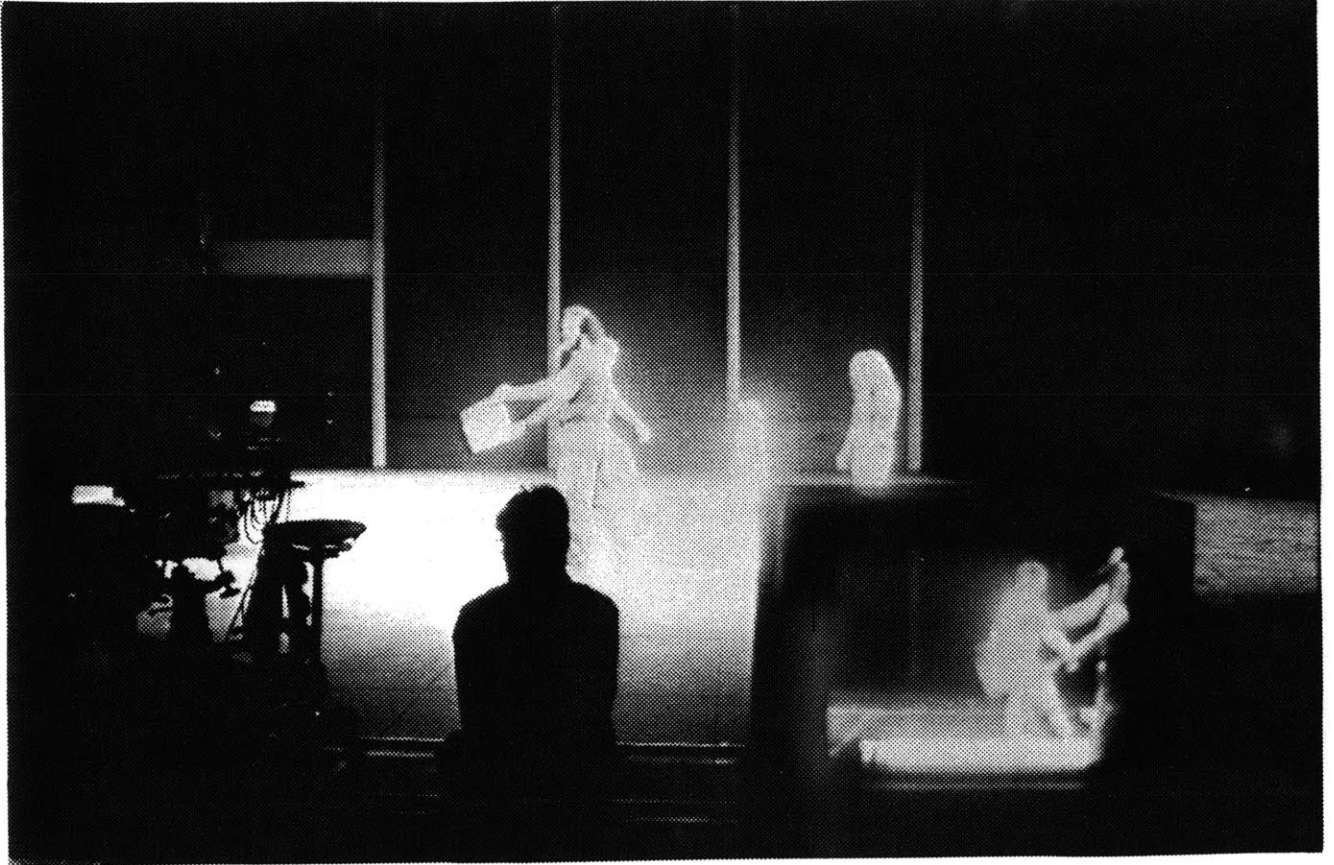


Plate 16

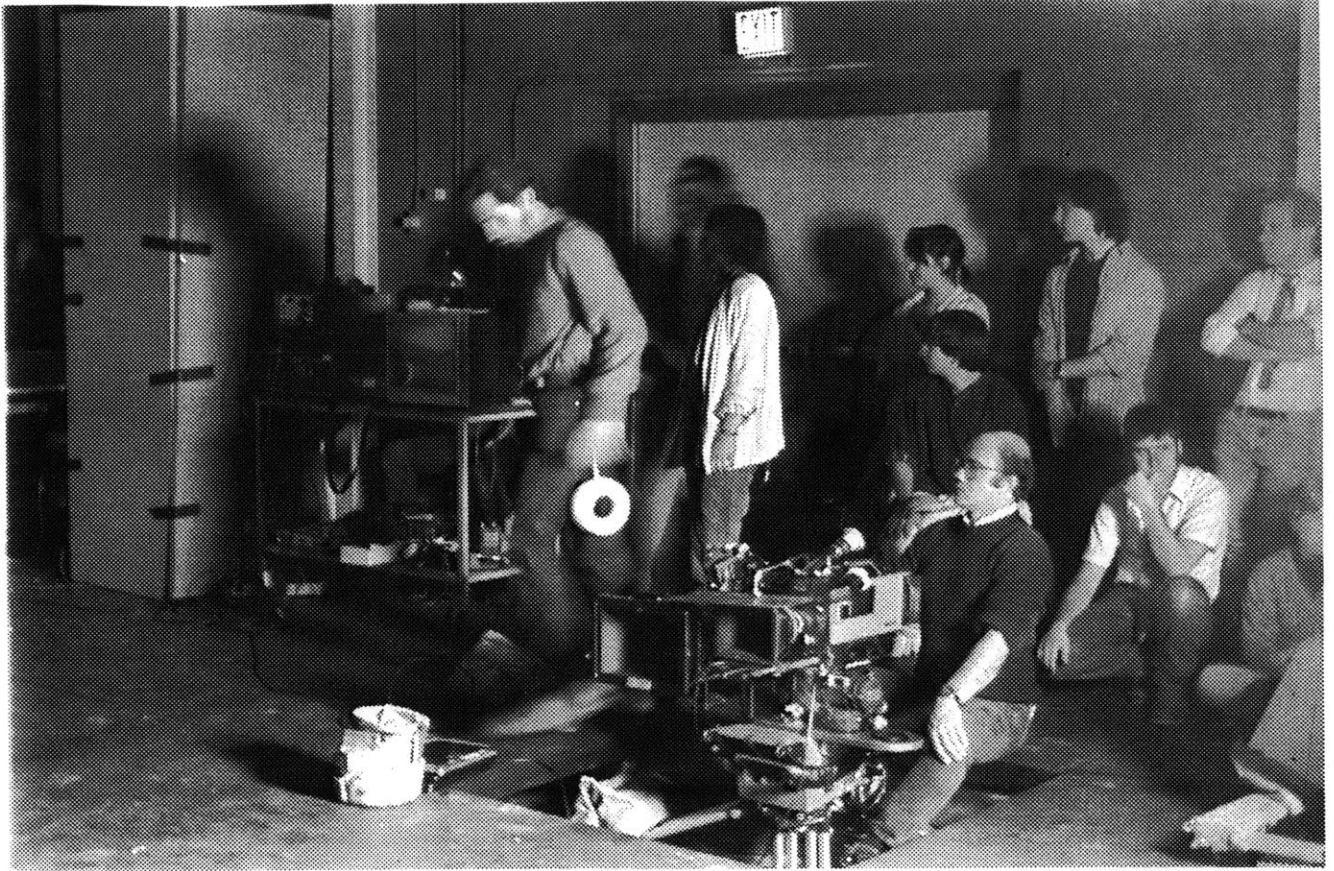


Plate 17



Plate 18

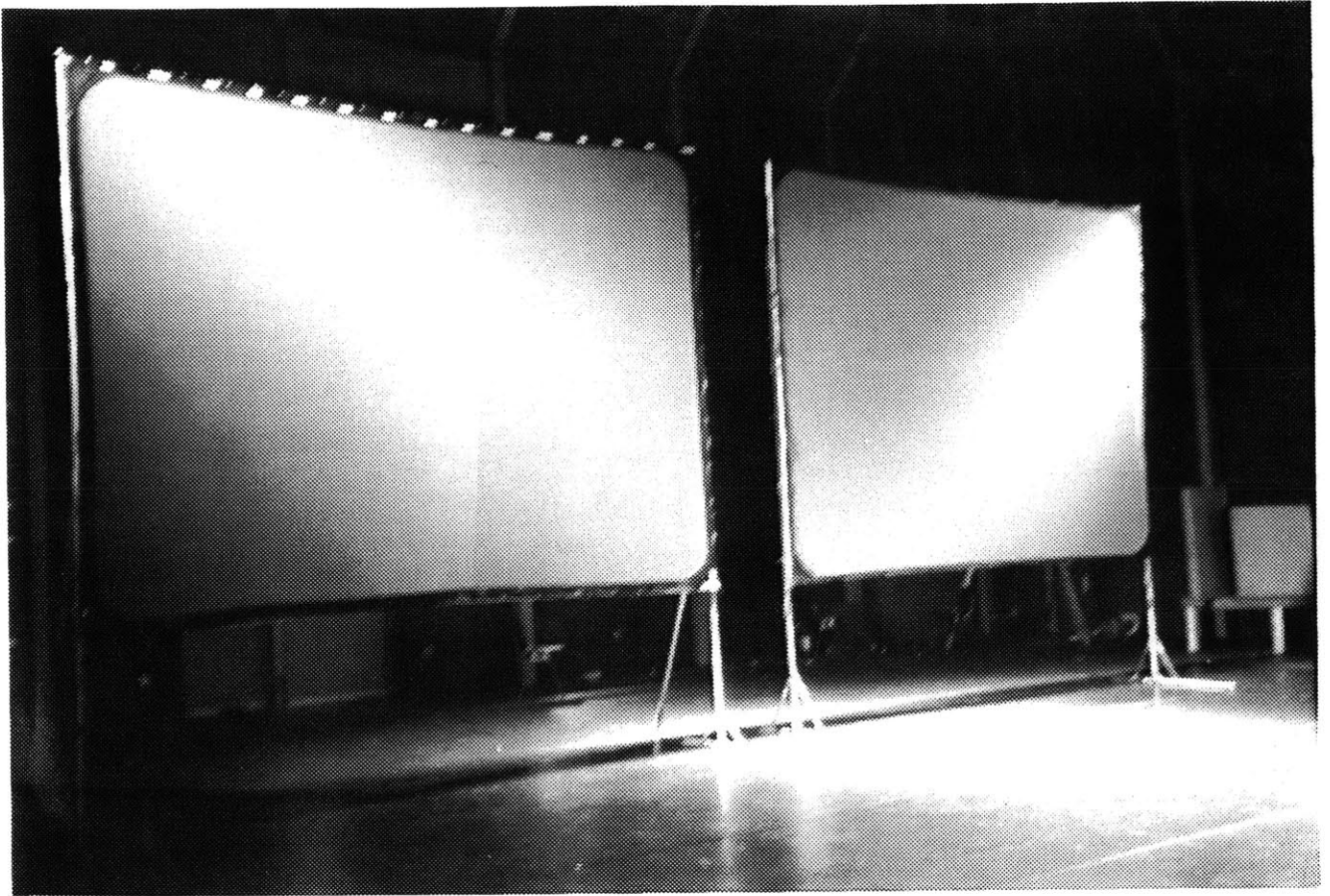


Plate 19

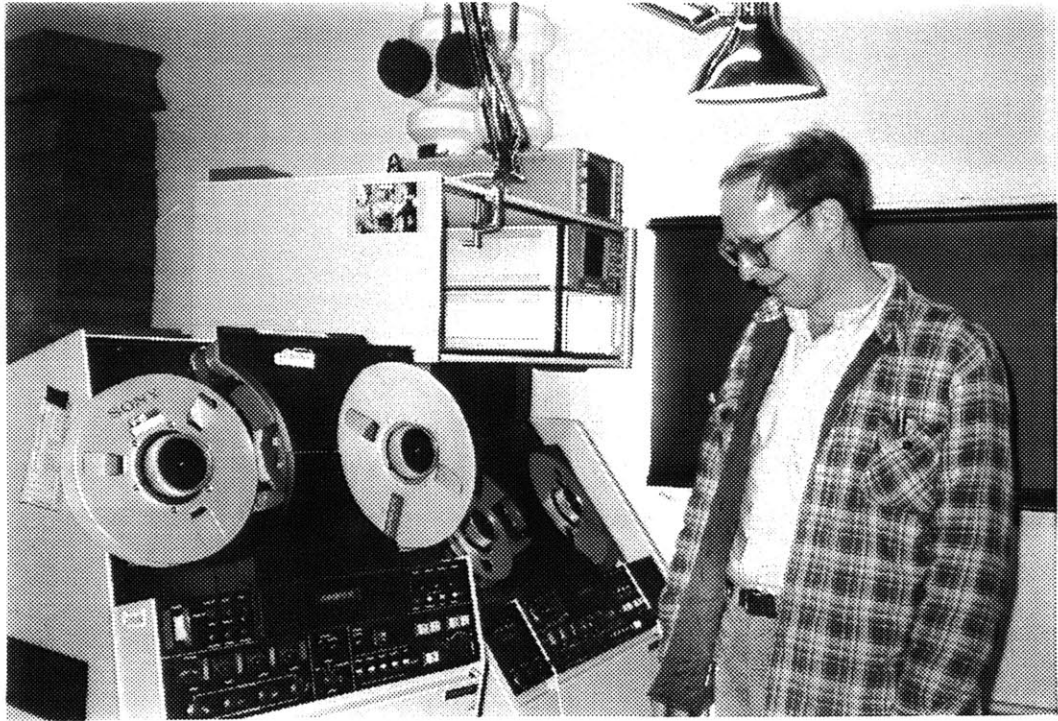


Plate 20

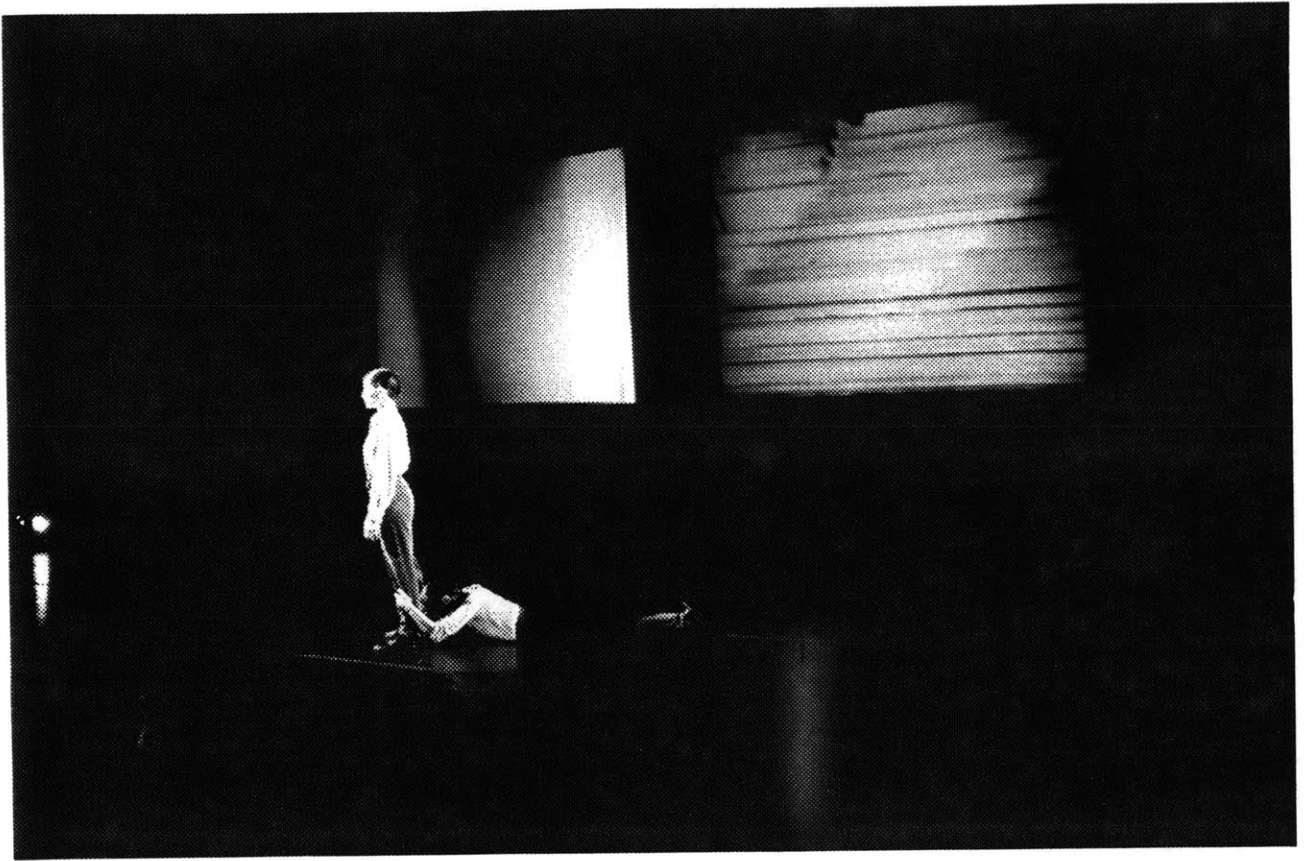


Photo: Adina Sabghir

Plate 21

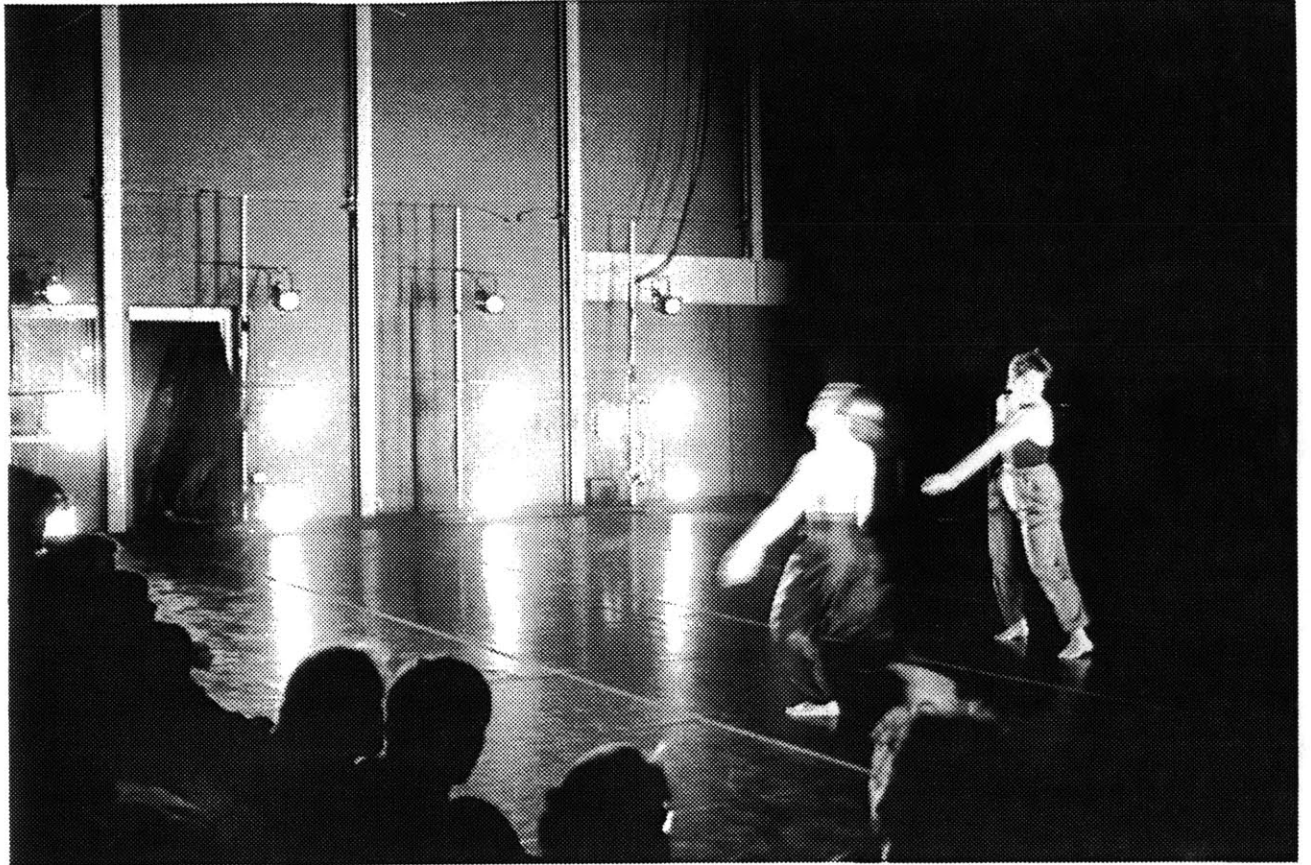


Photo: Adina Sabghir

Plate 22



Photo: Adina Sabghir

Plate 23

CHAPTER THREE: THE STUDIES

"Film seems more real."

"No, video seems much more real."

"Who wants reality anyway?"

-Excerpt from a film class conversation

Some of the questions that the studies addressed were:

- Can viewers distinguish the "film look" from the "video look"?
- Does the viewing public have aesthetic preferences ?
- Is it possible to measure subjective response to these questions and determine a trend?

What I expected to find:

- If it is the "film look" that matters most, then film will rate higher. If it is the film-style production that is most important, then film and video would rate close together in terms of viewer preference.

I began to look for studies that had been previously conducted on audience perception of the difference between film and video generated materials. There wasn't much to find and I couldn't locate anything that had attempted to do what I was trying to accomplish. It is my firm conviction that the only legitimate way to test viewers' perceptions of the "film look" and the "video look" is to show them material that has been shot parallel in film and video. The ideal stimuli for a study of this type would be to have a range of content types such as drama, documentary, sports and news to eliminate as much as possible, content biases.

I had suspected that the untrained viewers would not be able to tell the difference between film and video. I figured that the media professionals would do a

little better and that perhaps the engineers, who are trained and would be looking for artifacts, would be the ones who had a good chance of being right most of the time.



Top: Film-originated
Bottom: Video-originated



Top: Film-originated
Bottom: Video-originated

STUDY I: "form follows format"

Study I was not a traditional study but rather an informal gathering of information within the context of a multi-media art performance. "Form Follows Format" occurred on March 11 and 12, 1988. The purpose of this study was to see if the audience could tell the difference between a film clip and a video clip of identical content when viewed side-by-side and to see if they had an aesthetic preference for one over the other. The parallel material was part of the first program piece, called 'Erase' and was projected on two 10 1/2'x14' screens. The piece began with live dancers and at a pre-determined cue point, the film and video versions faded up from black, in sync with the live dance. After the piece was finished, the audience was asked to fill out a questionnaire which had been handed to them upon their arrival. These were collected at the door at the end of the performance. Though the design of this study was in an art context and very informal it produced some notable results.

The Subjects

The subjects for Study I were recruited by nature of attending a multi-media performance in The Philippe Villers Experimental Media Facility (more commonly referred to as "the Cube") housed in the Media Laboratory at M.I.T. Publicity for the event was generated through the Boston Globe, local area event calendars, postering, mailing lists and word of mouth. Given the informal nature of Study 1, demographics are not determinable, however it can be presumed that it was in general a mixture of an "art crowd" and MIT people. Approximately 270 people attended the performance and from two evenings' performances we received a total of 193 respondents. A number of these were unusable and obviously hadn't been taken seriously, these were discarded.

Apparatus

The Cube is a black box 62' x 63' and 45' high. There were bleachers to seat 100 people, though due to an overflow crowd both evenings, there were people standing on the sides and sitting in front on the floor. The bleachers were 10' deep x 40' long. The distance from the front row of bleachers to the projection screens was approximately 30'. Two Aquastar rear screen video projection systems were used to display the media for the performance. Before each performance the technician fine-

tuned the systems. The screens were 10 1/2' high x 14' wide. The video was played back on two Ampex VPR-2 one inch machines, slaved to each other for synchronous play. The video gear was set up in a make-shift machine room out of sight and hearing range and headphones were used to cue the tape operator. For audio playback at the performance, tapes were played on the Harmon Kardon TD202 cassette deck into a Sony MX-P21 8x2 mixing board, into the Yamaha P2200 power amp and out through (2) Klipsch Klipschorn loudspeakers. For several of the pieces the audio came from the 1" Ampex VPR deck through the board. The performance required a complex lighting design due to the mixture of live dancers and projected media; it was difficult to balance the lighting so that the dancers would have enough and the screens wouldn't be washed out. Sixty instruments were used, a combination of PAR 64s and Elipsoidal spots. Fifteen gel colors were used.

Procedure

The audience arrived at "Form Follows Format" prepared to experience an evening of live dance, pre-recorded film, video and videodisc and were given a questionnaire along with their program as they entered. As part of the first dance, they were told by the dancers (who continued to dance as they spoke) that they would be seeing film on one screen and video on the other and it was going to be up to them to decide which was which. At a cue point in the dance, an edited version of the live dance appeared on screen and played in sync with the live dancers for a limited period of time. The film originated edit on the right screen and the identical video version on the left. After the dance was finished, they were asked by one of the ushers to fill out their questionnaire.

Program Material

Study I used a two minute and twenty second dance program, produced in parallel 35mm film and high quality video. The production of the material took place in the Cube at M.I.T.'s Media Laboratory with the help of many, many people. The parallel shoot is described in detail in Chapter II.

Parallel Dance 'Kraus and..', a dance company of four, performs a dance titled "Erase". This 2:20 program was originally shot with both a film camera and a video camera mounted side by side on a tripod with the cameras registered to be as close as

possible. Both versions were edited with SMPTE time code so that the edits were matched. Therefore the film version and the video version are virtually identical. The material uses dissolves, supers and straight cuts.

RESULTS AND DISCUSSION

- In a side-by-side comparison of identical programming which originated in NTSC video and 35mm film, are viewers able to determine which is film and which is video?

Of the viewers who answered which screen was which, 50% got it correct and 50% didn't.

- Whether or not they can correctly assess which screen is which, do they have aesthetic preferences?

Seventy percent of the viewers preferred the video-originated program.

- Does seating play a role in their being able to tell which is which?

Sitting on one side or the other did not increase the chance of getting it right.

Audience members received a questionnaire with their program as they entered the performance space. After watching the parallel footage, they were asked to write down which screen was film and which was video. Of 187 respondents, 77 correctly guessed which screen was which, 73 guessed incorrectly and 37 said they couldn't tell which was which. When asked for screen preference, 115 said they preferred the video screen, 46 preferred the film, 20 stated no preference and 6 left it blank. When asked to write down which screen was sharper 151 said the video was sharper, 23 said the film was sharper and 13 didn't say.

When viewed in a two by two table the results get more interesting. Of the 2/3 total viewers who selected video as their preferred screen, 3/4 of them guessed incorrectly and thought they were choosing film, whereas of the viewer's who preferred the film, 95% correctly said it was film.

Of the viewers who correctly determined which screen was which, 59% preferred film. Of the viewers who guessed incorrectly, 97% preferred the video, thinking it was film.

Eighty percent of the participants said they preferred film when in fact 70% of those were unknowingly selecting the video as their preference. Comments from respondents who guessed incorrectly:

"I found it hard to tell on the projected image."

"The ghosts were a dead giveaway."

"Only side by side does the preference get established."

"No contest. Right screen same old hard video."

Many viewers have the idea that film is sharper, evidenced by comments like these:

"I think film is a "sharper" medium than video."

"Because screen A was sharper I tended to think it was film."

"I have an idea that film should be sharper although I'm not sure why."

Comments from respondents questionnaires that got it correct:

"Fast motion of dancers is degraded by the film-to-video transfer."

"I have seen better film than your sample."

"Sharp, refined color!"

"I like clarity. Screen A appeared more realistic because there was little blurring of motion. I like realism."

"I like the color and sharpness of A but the motion in B."

And:

"The media used for the image would depend on the subject. The left screen was more lifelike."

"I could care less about the difference between A and B. Both seemed acceptable."

For the Saturday evening performance the audience was asked to check off if they were sitting in front of screen A or screen B. I had wanted to ascertain that the results wouldn't be biased by seating and they didn't seem to be. There is a slight indication that people who sat in front of the film were more likely to say that they

could tell a difference but there was no relation between the seating position and the likelihood of getting it correct.

It seems that viewers want to prefer film; whether they in fact do is another issue. The dance material that was shown in the performance was thought by some viewers to be content appropriate for video and by others for film. Given that viewers were exposed to only one content type (dance), the results need to be viewed with these limitations in mind. Of the eighty percent who said they preferred film (though many incorrectly), perhaps with traditional narrative content they do. Until we can present an array of content types in parallel and test with it, we will have to make do with the existing data. In Part B of this Chapter it will be seen how the results varied from an informal experimental condition (Study I) to one that was more formal.

In summation, we found that 73% of the viewers chose the video screen as their preferred screen, though 3/4" of them thought it was film. But we cannot be sure that this is due to the strength of the impact of "film style" overriding the aesthetic preferences for film. There are two possible conditions that may have adversely affected the results. One is suspected problems with the film-to-tape transfer which may have degraded the quality of the film-based version. This did not have the same effect in Study II however, and a more likely factor to consider is the second condition. During the afternoon before the first performance, the left projection system began to malfunction. We had to trade this projector for another. Previous to this problem we had two identical projection systems. The new one had a different lens of a slightly higher quality than the system on the right. Our performance was set up so that the video was projected on the left screen and the film on the right. It cannot be determined but merely suggested that the quality of the projected image may have been sharper on the left screen (our audience response certainly indicates this).

Study I

Screen Preference x Right/Wrong

	Prefer Video or "F"	Prefer Film or "V"	
Right	29% (28)	95% (40)	50% (68)
Wrong	71% (67)	5% (2)	50% (69)

TABLE 3

This table shows correctness by preference.
"F"-people who thought they were preferring
film but in fact were choosing video
"V"-people who thought they were
preferring video but really choosing film. .

STUDY II

"...you're dealing with persistence of vision. In a movie theatre, persistence of vision helps you. Here, trying to go back and forth between the two, what you're doing is you're confusing yourself a little bit. You're seeing one way persistence is dealt with, another way that it's dealt with and you're trying to go back and forth and compare them."

- James Greibsch, Director of Photography

STUDY II

Study II was run from March 31 through April 29, 1988. This study was designed to look at 1) whether viewers can distinguish film-originated programming from video-originated programming when viewed on home television receivers and 2) to determine if aesthetic preferences exist and how important they are to the viewers.

Subjects were first shown a series of film and video clips and asked to write down whether they thought each was originally produced in film or video. They were then shown parallel footage of a dance and asked to say which screen displayed the film and which one video. After the two minute dance clip, subjects were interviewed and their responses recorded on audiotape. Not all subjects were asked all questions. More technical questions were reserved for the "expert" sample. Following the interview, the subjects were thanked and the random subjects were given a \$5 gift certificate.

METHOD

The Subjects

Study II required two samples, mass audience and expert. The mass audience sample was chosen from a random number selection from the Cambridge telephone directory. The expert sample consisted of advanced engineering graduate students working in the area of video and signal processing, film/video graduate students and production and engineering professionals. Forty-three subjects were selected, 20 assigned to the "mass audience" and 23 to the expert sample. The age range was from 16 to 66.

Apparatus

Study II was set up in a 12'4" x 7'5" viewing room in the MIT Media Laboratory. Two identical 19" Mitsubishi monitors were placed side by side and two chairs were placed 4'8" from the screen face. An amplifier, pre-amp and stereo speakers were used to achieve high quality audio.

Procedure

Subjects are welcomed and asked to have a seat. In the instance of one subject, the chair is placed at center, 4'8" from the front face plane of the monitors. With two

viewers, the chairs are placed practically touching. In rare cases with three subjects at a time, the third chair is seated center behind the other two chairs. Subjects are asked to fill in their name and phone number at the top of the questionnaire. The random respondents are asked to put their age and occupation next to their name.

The experimenter tells them that first they will see a series of thirteen thirty second program clips which were originally shot in either film or video and they are to place a "V" or an "F" in the blank corresponding to the clip number they have viewed. They are told that they should keep up with the questionnaire as the clips move fairly quickly and that they will can fill out the remainder of page one after they have viewed the program clips. These are then viewed on one monitor. While subjects complete page one after viewing the short clips, the experimenter/operator changes the tapes and makes ready the parallel clips. When they have completed page one, they are asked what cues they used to select their answers. Then they are shown the 2 minute parallel program on both monitors and asked to determine which is film and which is video. After this they fill out page two and then the experimenter asks a series of questions.

The experiments were run with one or two subjects at a time and twice there were three subjects. In terms of the arrangement of subjects, it was random. There were assigned experiment time slots and if they could be filled up with two participants then whoever the two were that could make it would be the two who ran through the study. The arrangements that occurred in pairs were:

Mass.Mass

Expert.Expert

Mass.Expert

Possible technical problem: It has been suggested by almost all of the filmmakers who participated in Study II that the quality of the film transfer could have been much better. We transferred on a Bosch telecine. Not having the means at present to try a different transfer system, we conducted the study with the material we had. Suggestions have been the Rank-Cintel (which is rumored to give a more "filmic" transfer) and the Image Transforms process. However, in controlled conditions, most people were nevertheless able to distinguish between the parallel film and video looks, and say they prefer film.

Program Materials¹

Study II-Part A used 30 second excerpts from thirteen programs selected to cover a range of content types including drama, sports, music, news and adventure. Study II-Part B used a two minute and twenty second dance program that was produced in parallel 35mm film and broadcast quality video.

1. Carly Simon "Anticipation", a daytime outdoor concert performance filmed on Martha's Vineyard as an HBO special. Carly and the band provide an animated performance on a special stage set up near the waterfront as the crowd cheers and seagulls fly by. The wind noises were such that the music had to be redubbed in a studio after the performance and edited in with the crowd noises. The editing and synchronization are excellent. But the film is quite grainy generating a very distinctly "film" look. It may have been shot in 35mm but it looks more like 16mm.

2. George Burns/Gracie Allen Show Live Burns and Allen in their prime. December 12, 1951, CBS TV. A Christmas show with hidden presents adding to Gracie's permanent confusion, George's monologue complete with cigars and live Carnation commercials. Much more spontaneous than their filmed programs which began the following year.

3. Pontiac Car Commercial This fast paced, high powered ad represents American advertising at its best. Using night shots, the city and special lighting, this commercial creates a distinct mood, one that makes you wish you had that car.

4. Odd Couple Oscar tries computer dating and Felix can't stop jibbing him about it. This short clip was recorded off air with terrible reception. It represents some of the worst artifacts that can appear, yet demonstrates what viewers will tolerate (for the sake of content) without much complaint.

¹Some of the content descriptions are excerpted from, "The Mass Audience Looks at HDTV: An Experimental Study of Subjective Responses to NTSC and HDTV Technologies", by R.W. Neuman, S. O'Donnell, S.M. Schneider & L. McKnight, ATRP-T-68, A Report on the Results of Study A, MIT Media Lab, (March, 1988)

5. Football Down-converted HDTV footage from the second quarter of the Jets-Bengals game, the Meadowlands, November 29, 1987. This footage was originally produced in parallel by 1125 Productions for an earlier Audience Research Facility study in HDTV and NTSC. NBC supplied the audio feed.
6. Cheers Having just eaten a vegetarian meal in a French restaurant, all but one in the group are still hungry and want something more substantial, like eclairs. Filmed before a live audience, Cheers was the first sit com to use multi-camera in film.
7. Black Stallion Adventure-drama story about a boy and a horse. Selected because of its superior filmic qualities, this film exudes some of the best that film is.
8. The Tale of the Frog Prince Robin Williams plays the frog prince with "Princess" Terri Garr, in a hilarious rendition of the classic fairytale. One in a series of video fairytales produced for television by Shelly Duvall.
9. Donald Duck & Walt Disney In a very old clip, Walt advises Donald that the key to success is "being yourself". Donald's "duckese" is subtitled for the foreign viewer.
10. Honeymooners Ralph's idea of vacation in the remote mountain wilderness is far different from Alice's dream of Atlantic City.
11. News Clip Report on the state of affairs in South Africa and street demonstrations about apartheid.
12. Miami Vice This segment consists of Don Johnson walking through the night streets accompanied with music. It is a very mood oriented piece with the dark night, many bright city lights and taxis swishing past as if it were you trying to cross the street.
13. 1125 Commercial A series of images cut together to demonstrate the capabilities of HDTV under a variety of shooting conditions with sort of a music video format. There is a sunset scene complete with birds flying by, a queenly attired woman ascending a

wide majestic staircase, a panoramic cityscape still, and a car driving along the road with tree leaves waving in the wind. All are assisted with a soundtrack by Tina Turner.

Parallel Dance "Kraus and..", a dance company of four, performs a modern piece titled "Erase". This 2:20 program was originally shot with both a film camera and a video camera mounted side by side on a tripod with the cameras registered to be as close as possible. Both versions were edited with SMPTE time code so that the edits were matched. Therefore the film version and the video version are virtually identical. The material uses dissolves, supers and straight cuts.

Technical Set-Up

Study II:

NTSC Equipment:

Ampex VPR 2 1-inch (2)

Mitsubishi 19" CS-2014R Monitors (2)

Audio Equipment:

Yamaha M40/C40 Power Amplifier

ADS L880 High Fidelity Speakers

Sony TC-D5M Audio Cassette Recorder

ME-80 Microphone

The video playback equipment and time base correctors were located in a nearby machine room and out of sight of the subjects. For the Part A of Study 2, a master tape of the thirteen content clips was loaded onto S-VTR. For part two, the aforementioned tape was unwound and master tapes of the parallel content were mounted, with the video version on S-VTR and the film version on R-VTR. The two machines were slaved to each other so that they would run in sync. The operator and experimenter in this study were one and the same person. The operator/experimenter would load the first tape before the subjects arrival and then while subjects were filling out the questionnaire for Part A, would load the tapes for part two of the study.

The monitors were color corrected and adjusted by a video engineer when necessary and verified at least once a day. The 19" monitors were of the same age, had identical phosphors and electronics so that the color and brightness match was as near as is possible with consumer grade monitors.

Study II Viewing Room

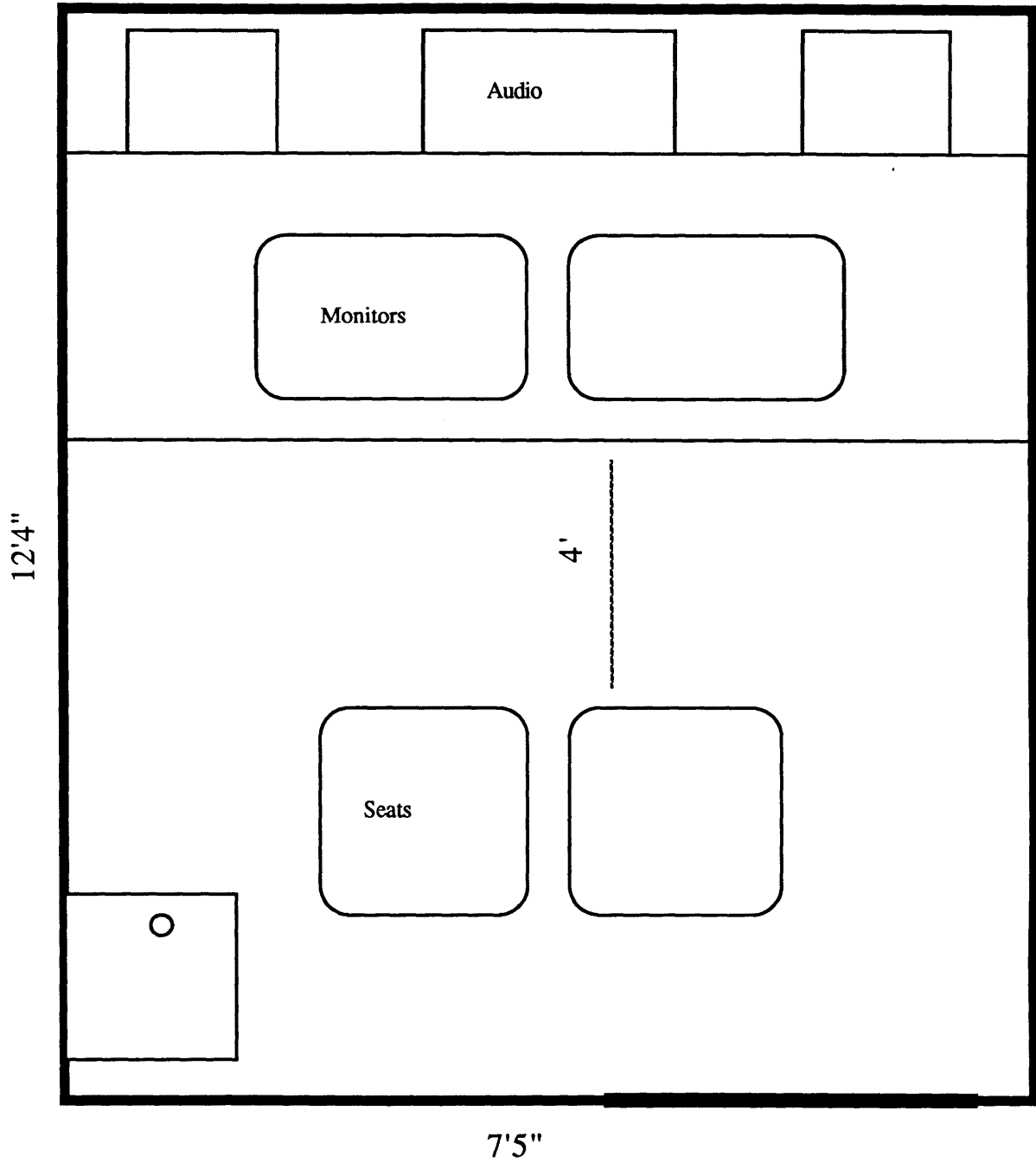


TABLE 4

Experimental Variables and Conditions

OVERALL COMPARISONS

What happens to the comparison of film and video when the production conditions are identical?

In order to determine subjective perception of the "film look" and the "video look" it is necessary to have identical program material. Without identical content, viewers can not help but be biased towards content when choosing aesthetic preference. Even when providing this content, viewers still grab for a context to place it within before they can allow themselves to "see" the pure look. With the dance program viewers sought to fit it into a category of whether they thought that dance belonged to the film domain, or if it was something that they might see on PBS, perhaps a "live" videotaped performance. The best conditions for a study of this type are to provide a series of identical clips covering a range of content types.

Single Stimulus Test How do viewers decide whether a program was originated in film or video? Are their decisions based on content, artifacts or other?

Viewers use a limited number of factors when deciding what medium a program is originated in. These are content, historical, technical and if they can find none of these helpful, they at last resort to the "look". A very few viewers possess what seems to be an innate ability to judge solely by the look or feel of a program. These subjects were found in the mass and expert samples.

Dual Stimulus Test

In a side by side comparison of identical programming originated in NTSC and 35mm, are viewers able to determine which is film and which is video?

In this controlled setting, most viewers were able to tell which was which.

In a side by side comparison of identical programming originated in NTSC and 35mm, which do viewers subjectively prefer? Why do they prefer?

Overall 59% of the subjects prefer the film. There are significant differences between the mass preference and the expert preference.

Components of Evaluation In an explicit side by side comparison of parallel film and video content, how do viewers evaluate specific components of picture quality including:

- a) Sharpness
- b) Color quality
- c) Sense of depth
- d) Picture brightness
- e) Motion quality

CONDITIONAL EFFECTS

1) Does type of program content influence viewer selection of medium origination?

Comparison of results over thirteen program clips.

Without a doubt, this plays a significant role in viewers' determination as to whether what they're watching was originally shot in film or video.

2) Do previous experience and training influence viewers ability to determine which is film originated and which is video originated?

Compare results for expert and mass sample.

Yes training and experience makes a difference, sometimes in the wrong direction.

3) Does type of program content influence viewer's subjective aesthetic preference for film or video originated programming?

Yes. Viewers generally prefer their sports to be video because they say, of the sharper harder image quality, but for movies and stories they like the qualities that film can give.

RESULTS and DISCUSSION

The Interviews and the Questions

Part A - Viewing: Thirteen 30 second Program Clips Question: How did you make your selections?

After viewing the thirteen program clips I asked subjects to tell me how they decided whether each clip was film or video. To get at the intuitive perception of "the look" I had to first uncover the layers of cultural context. This was not an easy task. Learning by trial and error from this study, there are conditions that can be set up in future studies that will help facilitate getting to the "heart of the look". These recommendations can be found in the Conclusion chapter. The three most common cues that subjects used to make their choices were: 1) Content- "I know that a guy sitting in the studio reading news is video, I don't have to see the way it looks."¹ 2) Historical- "I know that mostly because of the date, kinescope."¹ and 3) Technical- "I generally tell by the motion.". Other comments were, "Well, it has to be film,"³ about the Walt Disney clip and "...you expect since they're called 'music videos' for them to be video."³, "For film the big cues were 1. motion, 2. color tended to be more saturated...3. framing- if the picture looked crowded, I tended to think it was film."⁶, "Film is far jerkier than video, video is "fuzzier" especially for long shots.", "...the film is more like a photograph, picturesque whereas the videotape is more like you're right there." and "It has something to do with depth perception."

When in the experimental setting it is hard to get viewers to talk about the "look" and "feel" of an image without seeing these programs within some context, be it content, historical, technical or other. They are coming in for a study and the attitude they adopt cannot replicate the one they wear in their living rooms or the theatre.

Though not totally unfamiliar with American programs, some foreign subjects found it more difficult to draw upon the format cliches of American production. The engineers generally used a combination of content and image artifacts to choose their answers. In some ways, I believe that the engineers were at a disadvantage *because* of their training. They had the most difficult time articulating "feelings" about the look of

a program. On the whole, the production participants had a tendency to go for the "feel" of the program and without probing, expressed emotions about the way a program looked. On several occasions I tried to elicit emotional responses about the "video look" or the "film look." Further along I will discuss what some of the responses to these inquiries were.

Discussion about Part A of Study II

There were two program clips selected primarily for their superior "filmic" characteristics. These were the Carly Simon concert and The Black Stallion clip. It had eluded me that many viewers would interpret the Carly Simon piece as a music video. The results indicate that more than half of the "mass audience" did in fact think that the Carly clip was video whereas in the Black Stallion clip ("theatre type" content) a full 85% of the "mass audience" correctly said film. It is difficult to say whether the "mass" group chose film because of the "look" or because of the content. I would guess that their answers were based on elements of both. Eighty three percent of the experts correctly said film for the Carly clip and for the Black Stallion, 96% got it right. The drastic difference in the "mass" and "expert" samples for the Carly clip clearly indicates the "experts" advantage and suggests that they do know more of what to look for in a technical sense.

The Burns/Allen Show and the Honeymooners were used to add an historical dimension to the study and to see how many viewers knew what was happening in that period of media history. I was accused of inserting trick questions, but one in five of the experts did write down Kinescope. It should be noted that a few other experts did know that it was Kinescope but did not write it down.

Donald Duck and Walt Disney was used partially for the historical element but also because the clip displayed Donald (animation) within the real world of Walt and his office. I knew for the experts this should be a giveaway but I wanted to see how it worked and how much of the "mass audience" knew that old animation was film. Well, either they knew animation was film or Walt was film or this clip really had the "film look" (which it did), because 85% of the "mass audience" got this correct along with 96% of the experts.

Study II, Part A

Correct Answers by Program and Type

Program	Mass	Expert	
Carly Simon	40% (8)	83% (19)	63% (27)
Black Stallion	85% (17)	96% (22)	91% (39)
Burns/Allen		22% (5)	12% (5)
Honeymooners		22% (5)	12% (5)
Walt Disney	85% (17)	96% (22)	91% (39)
Frog Prince	85% (17)	87% (20)	86% (37)
Odd Couple	50% (10)	39% (9)	44% (19)
Cheers	50% (10)	48% (11)	49% (21)
Miami Vice	60% (12)	78% (18)	70% (30)
1125 Ad	80% (16)	83% (19)	81% (35)
Football	90% (18)	96% (22)	93% (40)
News	95% (19)	100% (23)	98% (42)
Pontiac Ad	50% (10)	65% (15)	58% (25)

TABLE 5

Looking for a high quality video production, the series of Fairytale Theatre videos came to mind and The Tale of the Frog Prince was selected. This clip typifies video at its best. The acting is good, the writing is good and the production displays quality in all areas. These tales, produced on the stage, have a very video feel, partially because as Americans, we are becoming accustomed to seeing stage type productions (plays, dance, concerts) in video. It is shot television style in that there are close-ups and easy to see objects that are not going to be missed on the small home receiver. But there is an element about the "look" that is very video, that doesn't have to do with these conditionings. It is probable that viewers perceived the "video look" in this clip. The "mass audience" was 85% correct and the "experts" 87%.

The Odd Couple and Cheers presented a perplexing situation for subjects. These two clips present a very interesting case as in both of them, the "mass audience" achieved 50% correct and the "expert" sample got less than 50%. With the Odd Couple segment, 39% of the "experts" got it right and with the Cheers segment it was up to 48%. This indicates that the "expert" sample probably uses preconceived notions about content and what they think a particular type of programming is shot in. They may have used this more than the "look" although the Odd Couple was taken off air and exhibits terrible artifacts, so much so that many of the "experts" complained that they couldn't see the medium through the garbage. Cheers confused almost everybody. Most likely due to the "live" and multi-camera style of the program, some viewers assumed that it was video, as in traditional studio television. The lighting is also more traditionally video style because of the multi-camera format. Cheers had the video feel without the sharpness of the "video look."

Miami Vice, with its night scenes has a distinct "film look" for viewers who have an idea of what film is supposed to look like. And for viewers who have the knowledge that film handles night scenes better than video it was probably easy to put that together with the "look" and come up with the correct film answer. The "mass audience" guessed this one 60% correct while the experts got 78% right.

Viewers were by far more certain of the Football and News clips. On the football question the "mass" guessed 90% and the "experts" guessed 96% correctly. And with the news, they were even more convinced as "mass" were right 95% of the time with the "expert" sample up to 100%. Many of the subjects remarked on the "instant

replay" feature of football and thought for that to work, video had to be used. With news, most everyone said that to gather the news in the morning and put it out in the evening, they thought it was necessary to have video.

The Pontiac commercial threw a lot of people, half of the mass audience thought it was video and 65% of the experts said it was film. It was film.

The other "commercial" is more of an ad for 1125 Productions, the high-definition production house in New York. It is a high-definition clip down-converted to NTSC and has a very high quality video look. The subjects had no way of being familiar with this content beforehand. One could presume that with the music video type of presentation, the subjects would of course select video (80% of the "mass" got it correct and 83% of the "experts"), but when comparing it with the results of the Carly Simon segment (another "music video" type), it can be hypothesized that viewers are seeing beyond content, beyond the technical and it does appear that in fact, they are relating to a "film look" or a "video look".

It does appear that when asked to state whether a program is of film or video origin, viewers can't help but look at content and historical factors first. Viewers generally agree that there are several types of programming that have a blatant "film look" or "video look" such as movies (film) and news, soaps and game shows (video).

Previous training has a marked impact on the answers that were given and not always in the right direction, though 48% of the experts got ten or more correct compared to 15% of the mass audience sample. On the average, the experts got one and a half more correct answers than the mass audience. This does imply not surprisingly, that the trained eye does have a better sense of the "look" than the average viewer. It is clear that the experts have fixed ideas about particular content types and carry assumptions with them that get in the way of their ability to see only the look, as is likely what happened with the Odd Couple and Cheers. It is difficult to distinguish when viewers are using which factors of identification when, but through further research and refinement of this preliminary study, more can be learned about viewers' perceptions and preferences.

Study II, Part A

NUMBER OF CORRECT PROGRAMS PER SUBJECT

# of programs correct	Mass	Expert	
4	5% (1)	4% (1)	5% (2)
5	5% (1)		2% (1)
6	15% (3)		7% (3)
7	25% (5)	22% (5)	23% (10)
8	20% (4)	4% (1)	12% (5)
9	15% (3)	22% (5)	19% (8)
10		26% (6)	14% (6)
11	15% (3)	13% (3)	14% (6)
12		4% (1)	2% (1)
13		4% (1)	2% (1)
	47% (20)	53% (23)	

This chart shows viewer selection of correct choices, with the fewest number of correct programs being four and the greatest number correct being all thirteen clips.

TABLE 6

Part B - Viewing: Images in Parallel
Depth interviews

Program clip: Parallel Dance

There is a distinct "film look" and a "video look". I had hypothesized that when presented identical program material in film and video, viewers may not be able to differentiate which was which but when asked which screen they preferred would certainly choose film.

Which screen is film and which screen is video?

After having viewed the parallel program clips, subjects wrote down which was which. A full 85% of the mass sample and 87% of the expert sample got it right. The question is how did they do it? The answer is that there is a distinct "film look" and a distinct "video look," and when given identical material to choose from, content becomes less of a factor and history doesn't come into play. Some subjects remarked that this type of content would be preferable on video.

Which screen do you prefer?

The results show that 74% of the mass audience prefers the film originated clip to 46% of the experts. This may be due to the experts being more aware of the technical factors. However, this may have acted as a deterrent in that they were involved in looking for artifacts and not the "feel" of the piece.

"I like the film a lot better and the reason I like film a lot better is because of that depth. With the tonal range that you have on film you tend to get a lot more of a sense of depth."³

All of the subjects who preferred film were correct in their guess, whereas 35% of the subjects who preferred video, thought they were viewing film. This leads to the conclusion that viewers want to believe that they prefer film.

Which screen is sharper?

Fifty-five percent of the mass audience found the film image sharper compared with 35% of the expert sample. Sharpness is one of those terms that has different

Study II

Subject Sample x Right/Wrong

	Mass Audience	Expert	
Right	85% (17)	87% (20)	86% (37)
Wrong	15% (3)	13% (3)	14% (6)

TABLE 7

Study II

Screen Preference x Right/Wrong

	Prefer Video or "F"	Prefer Film or "V"
Right	65% (11)	100% (24)
Wrong	35% (6)	

TABLE 8

Of 43 mass audience and expert subjects, 35 correctly guessed which screen was film and which was video. Of these, 24 preferred film and 11 preferred video.

6 viewers incorrectly guessed the screens. All of them said they preferred film when in fact they preferred video.

One-third of the subjects who preferred video thought it was film.

Study II

Subject Sample x Sharpness

	Mass Audience	Expert	
Film sharper	55% (11)	35% (8)	44% (19)
Video sharper	45% (9)	65% (15)	56% (24)

TABLE 9

Study II

Subject Sample x Preference

	Mass Audience	Expert	
Prefer Film	74% (14)	46% (10)	59% (24)
Prefer Video	26% (5)	56% (12)	42 % (17)

TABLE 10

meanings for different people. Sharpness to an engineer is different from sharpness to a mass audience subject and sharpness to a filmmaker may be different from that of an engineer.

The Interviews

After a discussion about the parallel content, we moved on to a series of more general questions having to do with adjectives describing the "film look" and the "video look", participants ideas about cultural similarities and differences between the two media, and projections for the future to name a few.

Which do you prefer looking at: films in the theatre or television?

Eighty-five percent of the respondents said they preferred films in the theatre to television. The most common answers to this were screen size and the fact that it's a social event. One subject liked both for different reasons. Television is easier, it's more comfortable to stay at home. One respondent said that he didn't like the theatre because of the rude audience but other than that he preferred the theatre image. Several subjects said that in general the quality and content of what was offered at the theatre was better than that available on television. There were a few comments that spoke of adverse feelings towards commercials on T.V.

When asked how they would feel if video were to replace film in the theatre, the reaction was a mixed bag.

"I think it will. Film is an obsolete technology. In the end it's going to be an economic issue."⁴

"Nooooo!! I hope not! I mean I hope not but I'm sure I've been very wrong before. I would really hope not."¹³

What are the differences between film and video?

A generalization can be made that the public perceives video as a tool for information and film as a means for entertainment. Given, these are generalities but they are repeated often enough to make mention. A common belief is that everything on TV is video and to see film you go to the theatre, but this is rapidly changing as the populace becomes more educated about media.

According to Horace Newcomb of The University of Texas at Austin, television is the "central storytelling system" of modern society. He says, "I find more narrative, more interesting and compelling stories on television than in the theatre". Newcomb says that one of the most primary differences between film and video is "the profound serial nature of the medium" of television. It's ability to tell a story that never ends is very different from film.¹

Shooting for film is usually very different from shooting for video. Film has a history of being shot single camera style, moving the camera around to get different angles and changing the lighting for each camera placement. Many hours can be spent with each separate set-up. Video on the other hand comes from a history of multi-camera style shooting in the studio and eliminates a lot of the time-intensive labors involved with changing camera positions. Also with the destination for each medium in mind, the types of images selected are different. Wide panoramic scenes get lost on a television screen and so on a small screen you tend to get larger images so that they can be seen.

The technical capabilities of each medium are different and have separate requirements. Traditionally video has required more light. There are two reasons for this, one being the camera's inability to capture a picture in low light and the other being that for multi-camera production, it is necessary to light everything so that odd shadows are avoided. This contributes to the flat look often associated with video. However this is rapidly changing due to new video technology.

Editing for television is associated with the multi-camera switching effect. Cutting from one actor's face to the other and back and forth. One mass audience viewer had this to say:

"...in a film you're not noticing all the time the different, what do you call it, the different cuts, I think sometimes it's a little bit more fluent in film, I don't know ...it just seemed to be more a series of individual cuts than just one flowing picture sequence." 20

¹M.I.T. Communications Forum, "Industry/Technology/Art, II, New Readings of American Television:"Artful Finales: Network Series in the Age of Cable", March 13, 1988

And from a filmmaker's opinion:

"...the editing here is so bad on the video examples, they just have two cameras next to each other cutting from one to the other, well film people know that doesn't work."¹

The training required for each field has some similarities but generally just because one has expertise in one field does not mean that it transfers directly across to the other. The mechanics of a film camera are very different than the electronics of a video camera. Loading a videotape into a VCR is relatively straightforward. Loading a magazine with film in a changing bag takes skill, and if screwed up, can be costly.

"...with video everyone's a cameraman and everyone's an editor. But wait a second, what about quality? I feel with film, people who have gone into filmmaking and film editing and have really labored over how to make a cut and how to film, and how to make something right in the natural light or how to use lighting properly, it's just so much more time seems to be spent..."¹³

The "Film Look" and the "Video Look"

Just what is the "film look" or the "video look"? This question invites subjective answers. The look- there is something about the pure unadulterated video look that has to do with depth or lack of it,... there is oftentimes a negative associated with the "video look", and usually it contributes to a distracting effect, but it doesn't have to be. As in the aforementioned Tale of the Frog Prince, it can work quite successfully and be regarded as an aesthetically successful work of art. Video often evokes a negative connotation but that stereotype is changing.

Descriptions of the "Film Look" and the "Video Look":

FILM

grainy, distant, lush, soft, liquid, moody, rich, saturated, deep, jerky, textured, subtle, dynamic, emotionally involving, quality, natural looking, natural lighting, natural colors, lifelike, sensuous, realistic, hot, too bright, too sharp, atmospheric, warm, edgy, high contrast, clear

VIDEO

present, like you're right there, washed out, sharp, smooth motion, live, bright lights, artificial, flexible, convenient, harsh, contrasty, cardboard cut outs, lifelike, dull, colorful, unrealistic, glary, pops out, electric, hard-edged, precise, stark

Do you have a preference for watching film or video generated content on TV or does it matter?

"Well, in fact I think I probably, if you asked me, showed me a bunch of shows and said which of these do you like, I would like the film stuff, but I don't know if that's because it's film or because good stuff tends to be on film." 50

"I guess I don't really think about it all that much because I don't have a real high quality television at home so everything is kind of, I have rabbit ears and just slap them around." 24

In general, which medium do you prefer?

"Oh boy, I am a film person up the kazoo." (Richard Hollander)

"For me,...it depends on the kind of program"8

Do you have any emotional response to film or video?

"That one was just more of a film feeling than anything else, I mean you just don't expect to see something like that on video." 9

"I've never been emotionally involved with a TV set, it's just difficult." 45

"I went to a movie last night, I couldn't stop crying." 45

Do you perceive differences between the cultures of film and video ? If so, what are they?

To an outsider the industries of film and video may appear to be interchangeable. By this I mean that if you tell someone that you are in the business of television and someone else works in the film industry, they figure that one is very similar, even the same as the other. There are many similarities but in fact the culture that belies each is quite different. The history, training and production methods are different and in most cases they have different goals for their end product. This is changing but there are still hard core filmmakers and videographers unique to each industry. This question was asked to try and gain perspective on the different points of view from the mass audience, engineers, filmmakers and videographers that were interviewed.

"Video has traditionally been controlled by radio people. ...in a video production, you know where the director is? In the control room. He talks to camera people through headphones, he thinks he's controlling things, camera people are considered to be idiots, ...the editing here is so bad on the video examples, they just have two cameras next to each other cutting from one to the other, well film people know that doesn't work. So the image is denigrated, they don't work for the actors, they just go in and talk to them, so that the whole, it really has nothing to do with it being video, it has to do with the traditions of the industry. The camera man in the tv studio doesn't even have a name." 1

"...film is becoming infected by video. The power of the director is being totally whittled away. Everyday ..they have these conversations, where they discuss the days shots, and one thinks that so and so is terrific, it's insane, it's a committee process. As a cameraman, I don't like a whole flock of people looking over my shoulder through the camera. It tends to, what is so common in video work, play it safe, never

take a chance, never do anything. Add a little bit more here, a little more there, play it safe, play it safe, play it safe. And it doesn't work for imaginative anything."1

"...looking at rushes is a very complicated business. In video you don't even have any rushes, you make all your decisions right as you're shooting them. It certainly cuts out most of what we thought of as editing."1

What if video were conducted with the same craft as film?

"I think you wouldn't be able to tell the difference."1

Is video cheaper than film?

"If you're going to do it properly it's not."3

What are your predictions regarding HDTV? Will it replace film?

"Definitely!"32

"My god, look at it! It's such a minor improvement, I can't tell you!"28

"...everything that's wrong with video is characteristic of the whole process."27

When asked if film will eventually be replaced by video ...

"No, never, never, never, because it's just, it's beautiful,"17

"I don't think so and I think it's the same argument...people predicted that newspapers would disappear (because of television)...and they certainly haven't."7

What is the future for film?

"I think there's always a place for film, I really do. At least short sighted. I'd say within the next 10-15 years I don't see theatres going out of business. Because I think there's a lot of good things associated with the theatre. Just look at how popcorn, people go to the theatre and they get popcorn. I mean that's the last thing you need to do when you go to a theatre, but it's ingrained and it's part of your culture that you go to the theatre to have a good time."6

"I don't think there will be any. Film's horribly expensive and clumsy, and I don't see any point in it."1

"...there's going to be a point at which video and the characteristics of video go the step beyond film."3

CHAPTER FOUR: CONCLUSION

"... film is best considered simply as one stage in the ongoing history of communications."

- James Monaco

CHAPTER FOUR: CONCLUSION

What I was looking for:

- Can viewers distinguish film-originated from video-originated programming?
- Do they have aesthetic preferences for one medium or the other?
- When shot film-style, does video take on any characteristics of the "film look"?

What I thought I would find:

There are certain types of programs which have a very blatant "film look" or "video look" and in these instances I thought that viewers would be able to tell which medium they were viewing.¹ I had hypothesized that viewers who saw parallel film and video-based programming would prefer film even if they did not know which was which.

What I found:

In Study I, participants attending a multi-media performance watched parallel film-originated and video-originated programming on two large screen video projection systems. When asked which screen showed the film and which screen showed video, half got it right and you can guess what the other half said. Viewers overall, wanted to believe that they preferred film, even when what they thought was film was actually video.

Study II consisted of 2 viewing sections and a depth interview. While viewing a series of thirty second program clips, mass audience and expert samples were asked to write down if each was originally produced in film or video. Most often they used content to determine their answers. Very few seemed to use the "look" or feel of the piece and, given the programming, it was hard to separate oneself from these other factors. Then they saw the same parallel program that was shown to the viewers in Study I, this time on two identical TV monitors. Most were able to say

¹Most news programs have a blatant video look, while feature films often have a blatant film look.

which was film and which was video. Subjects wanted to prefer film and chose it more often.

When asked to articulate the difference between the "film look" and the "video look", most subjects found it hard to describe. I think that on the whole, viewers do see a difference but mass audience and experts alike have a difficult time pinpointing what that difference is.

Asked if they preferred movie theatres or television, the majority of viewers chose the theatre for screen size, environment, the higher picture quality, newer material and the fact that it is a social event.

The results from these studies have shown that viewers define "look" in broadly different terms. While trying to get at "the heart of the look", people used content, historical and technical cues. The terminology of one word varies from subject to subject. When designing or selecting a new medium of communication, these varying perceptions should be considered- aesthetics are important to the viewing public.

Future Research:

There are many variables to be covered in this area of research. Format is relevant to content. With varying content one can either "get away with" using one format or the other; or use it to great advantage- for a specific purpose or effect.

Although the parallel programming approach was fairly successful, viewers' perceptions were colored by preconceived biases of which medium they thought belonged to a particular content type, i.e. news is shot in video. It was suggested by several subjects that dance content is suited to video, like Public Broadcasting System (PBS) shows of the same genre. Whereas, if one takes a feature with a story, and actors, there is a different effect. This would probably change the results. Given the high content influence over viewers' perceptions and preferences, it is important to conduct further research in this area. A series of studies should be conducted using multiple parallel shot programs and spanning a range of content types, (let's start with ten) and we should shoot them 3-way: in 35mm, NTSC and HDTV.

This has the potential to yield significant insights into audience perceptions, as well as on the varying aesthetic impact of different production formats and technologies.

In future studies, it would make sense to use clips from non-specific programming. It's very difficult to get to the bottom of the "look" with the historical and other factors coming into play. Another method is to show the viewers the parallel footage and don't cue them that one is film and one is video.

The Future:

Why not wait for a state of the art solution for a new TV standard? All things considered, content has more to do with what someone will watch than which medium it is produced in.¹ When rushing into a quick decision we may make an unwise choice, rather than exercising patience and waiting for an option that will settle with us much better for the long haul. NTSC as we know it has been with us for 35 years and the next standard will probably stay around for awhile. We should wait for state of the art, instead of replicating inefficient technologies, as in the case of 1125-line HDTV. Viewers will not mind the wait; they *do* mind buying new technology and having it become obsolete.

¹"The Mass Audience Looks at HDTV: An Experimental Study of Subjective Audience Responses To NTSC and HDTV Technologies", W.R. Neuman, S. O'Donnell, S.M. Schneider, L.McKnight, ATRP-T-68, A Report on the Results of Study A, MIT Media Lab, (March 22, 1988)

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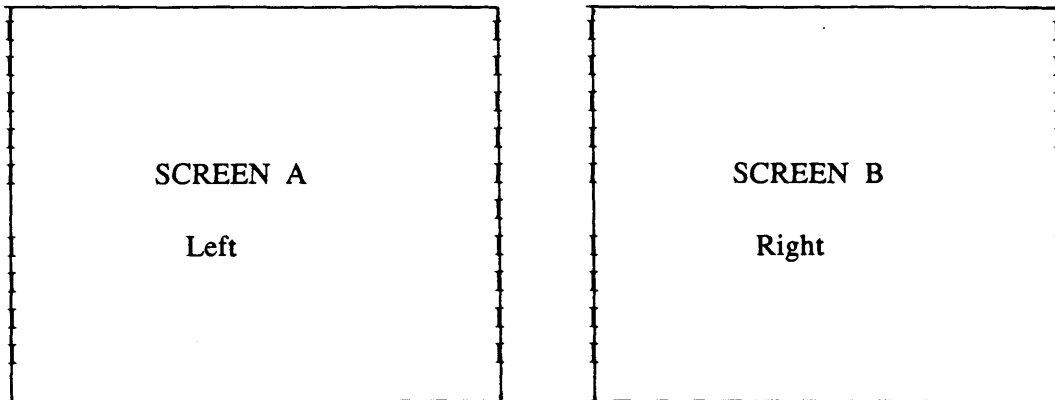
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Questionnaire for ERASE

Projected on one of the screens before you will be an image that was originally shot with film and on the other screen you will see an image that was originally shot with video.



1. Can you tell which screen was shot with film and which was shot with video?

YES _____ NO _____

2. If so, which screen is video and which screen is film?

SCREEN A _____ SCREEN B _____

3. Does Screen A or Screen B appear sharper?

SCREEN A _____ SCREEN B _____

4. Do you have a preference for Screen A or Screen B?

SCREEN A _____ SCREEN B _____

COMMENTS _____

Please give this to one of the ushers who will be standing by the door as you leave.

If you would be willing to participate in a study in late March or early April regarding differences between film and video please give your name, address and phone number on the back of this form. Thank you very much. Kim Foley

Format Comparison Study

March/April 1988

Name _____

Phone _____

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____

8. _____ 9. _____ 10. _____ 11. _____ 12. _____ 13. _____

1. Which do you prefer looking at:

films in the theatre _____ or television _____

2. When viewing television can you tell if what you're watching was originated in film or video?

yes _____ no _____

3. Do you know the difference between film and video?

yes _____ no _____

4. Have you ever noticed how some programs look very different from others? For example, game shows and movies?

yes _____ no _____

COMMENTS:

APPENDIX B

1.P X V

I know that mostly because of the date, kinescope. I know that a guy sitting in the studio reading news is video, I don't have to see the way it looks. That was video? High definition or regular? There's something wrong with your process. 'Cause it couldn't be that lousy. 35mm film? Then it's badly transferred. It's got to be. It couldn't be that shitty. Why is it so bad? In that case I don't know what you're testing. You're testing the transfer system, what did you use? It's unbelievably bad. It doesn't even look as good as 16mm transfer. You can find out from the lab what the exposure was. I can't believe it. It come out the wrong way. The video's miles better, isn't it? It's sharper, clearer, The reason they shoot all these fucking sit coms in film is the quality's better. Yes it's sharper, it's just altogether better. It's easy to make it softer, you just put a filter in front. That's weird; I think there's something crazy there. Sports always look marvelous. It's shot in video.

About the future of film?

I don't think there will be any. Except the big formats, for the time being... the only advantage film has is big projection, at the moment; but that's short lived. Film's horribly expensive and clumsy, and I don't see any point in it. Usually it's economics that does it. Once they start running films in theatres; the end of film... just wire it in and they pick up signal from, they don't send stuff around, they just pick it up from central whatever, and you don't need to ship all these cans of stuff around, just have a signal coming in from the satellite and punch a button, all you need is the cash register. That's what they'll do. They're starting in England. Video theatres. That's what I heard. The problem is Hollywood likes film because they can control it more or less; they still have a terrible time controlling it. The big fight is well, X is involved in it.

Money, the product; how do you prevent it being pirated? They've had people murdered getting hold of prints of movies, first run movies. There've actually been people killed. Truck pulls up, outside the theatre, they make a deal with the projectionist, the wheels come down, goes into the truck, they go on the tape, boom, it's all over with. Hollywood's lost millions, and it's not so easy to make prints of films and ship them around... Probably they'll like distributing (video, film) on disks; it's more easy to control.

Do you still prefer film?

So far in a theatre, the quality of film is better, so far. Under good circumstances, I prefer to see a film in the theatre. A social thing. Especially if it's amusing. It's a much bigger effect. Now would I like to see a high quality projection of a film on a wall in my house? That's conceivable, but we're quite a ways from it. It was fun seeing Frantic on a big screen, though the ends of each reel were unbelievably covered in garbage.

On Wim Wenders viewed on home VCR,

I thought maybe in a theatre I would stand it longer or resent leaving more.

On "Day for Night" ,

The dubbing was so bad; the voices were so inept.

Why still so sharp line between film people & video people?

Oh there're lots of reasons for that. Video has traditionally been controlled by radio people. And in a video production, you know where the director is? in the control room. He talks to camera people through headphones, he thinks he's controlling things, camera people are considered to be idiots, that's what I said, the editing here is so bad on the video examples, they just have two cameras next to each other cutting from

APPENDIX B

one to the other. Well film people know that doesn't work. So the image is denigrated, they don't work for the actors, they just go in and talk to them, so that the whole, it really has nothing to do with it being video, it has to do with the traditions of the industry. The camera man in the TV studio doesn't even have a name. The person who does the lighting in the TV studio doesn't even get a credit. They are considered to be people that if you have one on Tuesday and another one on Thursday it doesn't make any difference. Absolutely no regard.

Why don't film people go into video, take that craft with them?

Because they're not paid. Video won't put up with it. They're not going to pay that. My god, a Hollywood cameraman gets paid. He's spent years developing his skill. Video camera hasn't. I've seen, I've literally seen an opera blocked by one crew and shot by another. Another crew came in after the blocking. It's part of their job to do what they're told. It's incredible. In some places you get a little bit more effort and sometimes it's pretty good, "Alive From Lincoln Center" is very well done.

If video was conducted with the same craft as film,

I think you wouldn't be able to tell the difference.

Cheaper?

It would be slower. One of the problems is that film is becoming infected by video. My brother, a director, said it's becoming unbearable. The power of the director is being totally whittled away. Everyday... they have these conversations, where they discuss the days shots, and one thinks that so and so is terrific; it's insane, it's a committee process. As a cameraman, I don't like a whole flock of people looking over my shoulder through the camera. It tends to , what is so common

in video work, play it safe, never take a chance, never do anything. Add a little bit more here, a little more there, play it safe, play it safe, play it safe. And it doesn't work for imaginative anything. I've had experiences where, for instance, I shot a film, about the testing of an F100 jet. It's not a very great film but it's, when they saw, they had a screening of the rushes... after the shooting, at the end of screening the rushes, the head of all of this looked at me and said, "look I think I'll call you tomorrow but I think we should cancel the whole project." An I had to get on my bended knees and say "look, I will not charge you, I want to edit it. I just will edit it. Just give me the material". They loved it! Now there are producers who claim to be able to, you know looking at rushes is a very complicated business. In video you don't even have any rushes, you make all your decisions right as you're shooting them. It certainly cuts out most of what we thought of as editing.

2.* Δ N

Sometimes I tend to tell the difference by some social context. In terms of visual quality (or esthetics?). I feel that TV gives more natural and brighter image and film screen gives some grainy impression. NHK shows a Japanese series. Each year they choose a historic person... Once they were making this program in 35mm film. I feel personally that video gives such a vivid and very actual image.

Do you prefer film or video?

It's very hard to say. Actually these two media are different. Video is very convenient (VCR?). Japanese film industry is declining. HDTV? It's sometimes futuristic and NHK is keeping their own right, copyright, right now. It's so few programs made by HDTV, other equipment makers are very reluctant to make their own demonstration films by HDTV so it's

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very hard to say but probably HDTV could expand many theatre types... It's very evident that HDTV is aiming for the theatre market. Video is soft and film is hard. My very personal strong experience, when I grew up I never went abroad, most of the image informations that come from abroad was made by film. So film media gave me some kind of distance, distant in terms of time or space, now that video... gives such an actual feeling, so when I visited abroad for the first time I felt something very different between the film image and what I felt. Now that I get this information by video I don't feel any... Video is more natural. It's more consistent with human view in terms information and brightness of the scene. Sometimes I feel that HDTV war is too much. NHK is so probably premature to make all this and they are not very socialized... it's a very technically oriented product.

3.P Δ F

I often don't care which medium is used just so that it does not detract from content. Well, it has to be film... yes it has all of the characteristics but you know.

About Walt,

You know it's always hard to tell when they're recorded all on the same medium in kind of a strange way but...

What allows you to tell?

Well, in this case it was contrast range, the funny thing is in some of the commercials they could either have been film or video because the contrast range was so highly compressed and controlled. So they were the harder ones. Things like sharpness, things like background being in and out of focus... Oh sure, the music video which was actually film or the music video, the very first one, Carly Simon, I think was film, you expect since they're called music videos for them to be video. Whereas

the last one was high-definition, so yeah you expect one from content. There are times when the left screen (F) appears to be sharper because of the image and there are times when the overall sharpness of the right is because of the enhancement so which? I have to put B (V).

Elaborate...

Well there are some times when, especially when the dancers are going left to right about half way through, it drew you in more because you had a little more, it really drew the focus alot more, it wasn't as flat, it had more depth to it, you know because the foreground/background was the same that was on the right screen but it was stronger on the left screen and that's probably for a lot of reasons... This is a lot flatter (V). The whole image was a lot flatter, very much two dimensional, as much as we tried to make it the same. I like the film a lot better and the reason I like film a lot better is because of that depth. With the tonal range that you have on film you tend to get a lot more of a sense of depth just through having the tonal range there. Whereas video because there's a lack of, much more of a lack of tonal range, it felt as though it was very much more two-dimensional.

Tonal range...

black to white and all colors put over that black to white range. Latitude, yeah. Grain doesn't bother me, and I really mean that, (comment above) the grain disappears for me, as long as the content is strong. Same thing on video, a lot of the noise disappears for me if it's well done, if it's done to it's optimal parameters.

About the transfer...

There's an illusion, you see, you're dealing with persistence of vision. In a movie theatre, persistence of vision helps you. Here, trying to go back and forth between the two, what you're

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doing is you're confusing yourself a little bit. You're seeing one way persistence is dealt with, another way that it's dealt with and you're trying to go back and forth and compare them. I can understand why someone would say it's an atrocious transfer, it's not. (3-2 pulldown) Yea, that's part of it, the blur, there's a blur in that sense. That is much of it. And also dealing with motion that's moving you tend to get a little bit of a strobing so your persistence of vision trying to deal with... When you're at a theatre, the reason your film is softer is that you're dealing with 35mm settings that are actually, you're in low light levels. Going above f4 is rare in alot of interior films. What happens there is your depth of field is very narrow because of the format size. That was one of the things we had to deal with here in trying to make them look as similar as possible, that was the hardest thing to deal with; that's why the focus pulls were so very critical when they happened because they, the depth of field of a 2/3 inch tube and the depth of field of 35mm film, you know the format size is so different. There is a big difference in depth of field. If there was a story that was shot half on video, half on film, and a really interesting story, something that's really human condition stuff, you would find that people would notice a difference when the shift took place, but shortly after that, there'd be absolutely no, unless it detracted from the content, unless you're shooting something and you're distracted by the fact that video is blooming all over the place in the whites, that's when it would start to be a real consideration. It's nice to look at sharpness but you can adjust sharpness. I can make video look just as soft as film, sometimes that's aggravating.

Take the Black Stallion, I don't how you could get video to possibly capture that. You can, that's part of the point, is you can, but the thing is, you lose a lot of the

gentleness, you work so hard at conquering the technical side that you lose the gentleness of the images. Or the real response to the gentleness.

Do you really believe that it's possible to make video look like film?

It's possible, it's not worth it sometimes cause it's so easy to do on film and so difficult to do on video.

But it's so expensive.

Film is not expensive. If you were to make a film, let's say make an hour long film, let's say you could do it at a modest budget of maybe \$350,000. - \$400,000., it would cost, independent, non-union. If you were to do the same thing on video, taking all of the pains and all of the stuff that you have to do to make it work, you'd have to change some of the shots, because you just wouldn't want to do it shot for shot, you would shoot it a little bit differently but it would cost the same amount of money. Film is not expensive, yes, I mean the cost of a single roll of film is outrageous... but you can do it, it's just that it takes so great a pain to do it. You can do it to the point at which you can look at one independent of the other and accept it as a story without thinking about film or video. Take a series, Lassie, if you shot one on video, one on film, one on video, one on film, people would never know the difference. And it would probably cost very much the same.

What do you think about the statement "Video is cheaper than film"?

If you're going to do it properly it's not, and what I mean by doing it properly is having the right equipment.

What do you think about future of film?

It'll always stick around. I mean, I won't say always, it'll stick around for a long enough time that there's going to be a point, because we have conceived of a point, there's going to be a point at

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which video and the characteristics of video go the step beyond film. We're at the very bottom of that scale right now. There's going to be a time when we have the imaging characteristics in terms of resolution, there's going to be a time when we have the contrast range, the saturation potentials that are greater than film's capabilities, from a really technical point of view, not just home perception point of view but from a really technical point of view.

HDTV already is said by some to have greater resolution.

Yea, but that has resolution for all of the wrong reasons. It's like apples and oranges, resolution for high-definition is very different than film resolution. Hi-res TV is still using lenses that can't even compare to film lenses. because to make a lens for hi-res camera is harder than making a lens for a film camera. Lenses really come into the whole thing right now in the sense that a \$10,000 film lens is not equal to a \$10,000 video lens. A \$10,000 video lens is more or less equal to a \$500 or \$600 or \$800 film lens. And there's a reason for that, and the reason is that until we have a single plane imaging system which is almost here, the chip is a single plane, you have to design a lens so that it handles light and sends it through splitters without changing the timing of when the light hits the three tubes. It has to be able to handle going through a prism so that the reds go one way and don't lose speed, the blues go another way and the greens go another way, whereas on film, it hits one plane, all three of them arrive there at the same time, so you can use a relatively simple lens for that to happen. As you use a simpler lens the resolution is higher, the carrying characteristics are higher and all of that. As long as the medium doesn't overcome its reason for being, content, each is its own. They're both there to tell the same story, but it's like who cares if it's going to be projected on TV,

who cares as long as you don't visually make it hard to watch, or even marginally hard to watch.

How would you feel if they took film away?

As long as I would not be able to sit there and say, you know, I really wish they'd shot this on film because they didn't think about the program, they didn't think about the fact that the softness here is appropriate or the depth here is appropriate. That would be fine, but what ends up happening... in any transition, my feeling is people just glom onto one, I mean they're there selling me. It doesn't matter whether it's film or whether it's video just so the product is done. You know the artist comes in and says well, you know, if we use film here it will achieve the right texture. The bean counter says, it's going to cost more, under all of the circumstances. If a television company, let's say is has made the transition from film to tape technologically, just kind of said, we've invested x many millions of dollars, they're going to say, we can't shoot film it's too expensive. Because they've figured their overhead for the next 90 years. an exaggeration. Since I'm holding the answer, (laughter), the consideration for me would be this, if video were as easy from a standpoint, you know if it were as easy to shoot as film, you know with equipment that was the same general size, same quality and all of that, and also the freedom from the sound recordist, umm... I think yea, I would shoot video.

So you think film is easier to shoot?

It's much easier to shoot. You can put yourself in more situations with a film camera than you can with a video camera because of the bulk. Right now even though we have cameras that have built in recorders, electronics are not very good in them yet, they're getting better... sheer size and weight, it's like carrying around a great big box, it's like

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carrying around a boom box on video. Whereas film you can choose a camera for a situation that's this big, or this big, for different reasons and there's a benefit to having something that you can push the button on and instantly start recording something, video's not there.

I want to talk a bit about group processes.

Nothing's more aggravating than shooting a video commercial because it's exactly that... but at the same time nothing's more aggravating than shooting a film commercial with a video assist because what happens is people, I have a great story as a matter of fact... let me finish that thought... because people don't know how to look at a video assist raster. I had somebody say well are you sure you don't want to pan left? Yea, I don't want to pan left. And then over lunch they said well "what's that little X on the screen?" and I said well that's the center, "well it's off center on my screen" but it's one of those things that everything is relative and as long as you understand what is actually being captured, that's ok but everybody has an opinion. I had a commercial a couple of years ago which is when I stopped shooting commercials, I just got so disgusted with them, I had a commercial that was for Duracell batteries I think it was, and we were ahead of schedule. We were having a great time that day, the producer or the director, the director had stepped out, I was overseeing the lighting of this thing, and put up general lights, we were just roughing them in and tweaking them, and the producer came in and said "I love it, it's wonderful, it's wonderful, don't touch a thing because I think it's fabulous." I said "Well, it's not going to fit with the scene that comes before and the scene that comes after because blah, blah, blah, blah." "No, no, no, no, no, I love it, it's perfect, we stop right here." So we were almost an hour ahead of schedule, I thought well, you

don't really want to do this but, ok. My mistake. Because what happened was, when they cut together the commercial, it didn't fit with the scene that came before and the scene that came after, and what happened was, the person who saw it through the camera was the person who made the mistake, and I did. But that's what happens, yea, people do tend to hover around the monitor... people when they're on location looking at monitors don't know what they're seeing very often, whereas film you register in your mind, 3200 degrees, you get so used to that that you eat, sleep and think in those terms, and then when it comes around to telling the film what it is that you want to see, you're talking from the same base, you're talking directly to the film, you aren't talking to a monitor that may not be set up properly and have you ever seen a monitor, one of the worse things you can do is walk into someone's home to say "Well this is a program that I did, would you like to watch it?", have them turn it on and as you arrive back from the bathroom you find that all of the faces are green, and ...they look at the color and they say "Ah boy, that, that looks great!", and in their minds it does look great, because they're used to seeing something green, if it doesn't look green, they're not happy. You're eyes adjust to the strangest of things. We don't allow ourselves to accept variety often in life (laughter), especially when we're trying to get people to see our vision.

As far as preferring one medium?

Technically I prefer film, from a technical hands on standpoint, I prefer film, but I go right back to what I said before, as long as, video looks very very nice, especially played back on a good monitor and all of that, it's not the best, as a matter of fact it's.. opinion is that it's probably the second or third best in the world... but it's one of those things that, you know, you can get used to anything and as long as you get used to

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something, as long as its boundaries are never exceeded for you as it relates to the content, it's fine. A couple of days ago I was watching.. "Lil Abner" which was a very, very, early, early, early, early sound film. It was the funniest thing to watch. It was from an old, it was a dupe of a dupe of a dupe of a dupe which may have been put to video and then kinied from that. And it was extremely difficult to watch from that standpoint, but it was wonderful to watch because it, it's a bite out of history. It's a slice out of life. As long as the content strikes a chord, then... your mind kind of takes over and communicates with it.

Colorization?

They should be shot, absolutely!

You like the nostalgic effect of what you watched the other night?

Not the nostalgic effect, the artistic effect. I think the nostalgic effect, that's what everybody's trying to erase.

Artistic, that was the technology of the day.

Absolutely,

And so do you consider that part of the art?

Yes. Technology of the day and the way that people dealt with the technology of the day. I saw a film, I saw a couple of films last year at Radio City Music Hall... one was "The Big Parade", one was "The Wind", Lillian Gish's big film, we're so used to watching those films when we can get copies of them, in dubs of dubs of dubs... and we say well that's old film, these were from the original, actually dupes of the originals because the originals are gone now, they were the most beautiful prints I think I've ever seen, the art alone in that beauty is incredible!

The stocks of the day don't have the same look as in the thirties.

No they don't!

Most of us don't realize that we've lost that, and maybe that's the same thing that will happen as film is phased out and video comes to replace it, people within a short period of time won't even realize what they missed.

Of course they won't because we're adaptive creatures. Film is merely a reflection of those changes...

The future?

A lot of confusion. I'm curious as to what happens after digital video and I'm not sure. Digital video will kind of take everything to its pinnacle... Film went from very rough film stocks to more refined grain. They had very good grain back then, very very good grain structures, it's just that you had to hammer them with light. Now what we've gone for is something closer to the eyes way of seeing things which is less light, better grain and better image rendering. We have to go through the cycle where all of the little techies say "Well, I know we can do it better"... and when they get to a point at which they say I know I can do it better and they go to the next step... all of a sudden we'll say, well video's no good. What we should have been doing, is we should have been walking down the street thinking all of this stuff and the next phase is going to be something entirely different from film, it's going to be entirely different from video and it'll be some other way of imaging, cause images are very important to us as a society. In the same way that if you look at film, who would've thought back in the thirties that we would have these little boxes that were electronic. We never thought that we would ever use electricity for projecting movies. Maybe it's the wrong use for it. Old is not always better. Film is a very very good, very gentle, very communicating medium. It's impact in the theatre is less than it was ten years ago, which is kind

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of sad in a way... but we have to look at a way to optimize the next generation of all of this, which is the reason for its being, communicating. And we're up against some pretty stiff barriers because we had McKluhan in there kind of talking about all of that stuff and that, there was a lot that influenced the whole process that he said. And a lot that's very true in and of itself.

4.E Δ V

This old black and white stuff, I was definitely tempted to say that this was film. I can tell whether it is film or video when the camera is moving, when it's panning, for instance in the # 8 I made a question mark because there wasn't sufficient movement for me to tell. 3:2 pulldown. It's not that bad when you look at films in German television because they speed them up, and they play 25 pictures per second instead of 24, and then you see every picture twice, as you usually see in the cinema. There's a motion jerkiness there, although the picture quality is certainly much better on the left in general, there's much more noise on the right one (F), and the left one the colors are kind of bad. It's certainly not a matter of the monitors. In this case it's definitely the video, but this is not a fair comparison of film vs. video because the film was also played from video. Sometimes they have this artificial sharpness... (films on TV)... there's all this aliasing. I think it depends. (preference) I wasn't aware of them (artifacts) before I started working in video. (Stereo example; high quality vs. lessor.) People as far as I can tell tend to care much more about the content than about the aesthetics and actually if we listen to music its very important that the reproduction be perfect, as a matter of fact we are very close to perfect reproduction - if you close you eyes it's like being in a concert hall, but with video we are very very far down the quality drain... it's really gradual differences of something that

you can easily distinguish from reality anyway.

Is one more real?

No, they're both artificial. I like to concentrate on what I see..an environment where everybody is doing the same thing and are sharing the experience with many other people. Additionally in the United States I go into the movies because I hate commercials. I don't want to waste my time sitting in front of a television and waiting until the movie goes on. How to transmit real high quality high definition TV digitally, for instance with 140 megabits per second - that's one of the data rates in the European PCM hierarchy. Usually when you start off with HDTV digitally you have more than 1 gigabit per sec. rate.

Is HDTV trying to achieve the film look?

I hear contrary viewpoints about high def trying or not trying to achieve this.

I hear contrary viewpoints as well. I think it would be a great thing to do that and especially distribute also movies on video, because if you look in a cinema and you look at film, usually the jitter is pretty annoying and the scratches you have on the film, especially if they have played a lot of time, it looks pretty lousy. When I say it looks better it's completely subjective, certainly I see it through technical eyes.

On HDTV vs. film-resolution, so you think it would be good if it could achieve 35mm film quality?

It does, if you could project it brighter.

But that's in terms of resolution, lines of resolution, it's not in terms of feel of the piece because when you see the hi def next to a film, they do have a very different look, the film is softer and hi def is more crisp and sharp and all of that.

Right, I enjoy this.

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It's not the same look, the technical quality may be superior, but it's not at all the same look right now.

No, it's not. It doesn't have to be. Why should we try to mimic the technical deficiencies of 35mm film with HDTV.

Some people say video will replace film.

Well, many years from now certainly it will. I'm very convinced of that. Film is in a way an obsolete technology. Something like a hundred years from today. I think the storage of the moving video is going to be mainly digital then. The Sony system is entirely analog. I don't think this will last. Sony builds digital studio tape recorders today which store 160 megabits per second. If you combine this with data compression there is no problems to store great HDTV on that digitally.

Film replaced by video in theatre?

I think it will. In the end it's going to be an economic issue. What happens with a new technology, the new technology is very expensive in the start, but as the technology matures there's going to be a rapid price drop. I don't think there are any great cost reductions that we can expect in the future (of film). There are great cost reductions with digital video so at some point in time, digital video and also digital hi def video is going to be less expensive than film.

5.* N N

6.E Δ V

For the b/w clips there were too many other defects to decide between film and video. For film the big cues were 1. motion, 2. color-tended to be more saturated and broadband, 3. framing- if the picture looked crowded, I tended to think it was film. The motion is terrible on screen A. Screen B looks sharper when objects are in motion. A looks sharper when still. The contrast is closer to optimum on A and I think this contributes to A looking sharper when

objects are still. If screen B were processed, it would beat A all the time.

5 & 6

How did you tell which was which?

6 Motion.

5 You mean that in this one there's a lag?

6 There's jitter on this one.

Why do you go to the movies?

5 Bigger screen.

6 Programs are better, more interesting. They're newer, never seen them before.

Do you have a preference for film or video?

6 Film. Mostly because it's new material, the other thing is that there's more realism because the atmosphere tends to be better. It can draw me into thinking that I'm actually in the place where the film is being shot.

5 I like it, like film, because it engulfs me. You can sit and you can become part of that reality while video you're always looking into that screen, looking into that reality like through a window.

What about movies from the video store?

6 Not the same effect.

5 No, I think that they have a certain effect, each one has their advantages and disadvantages. Well this one did some really nice things because it stuttered, when they moved you saw a few images, it was like, zebra striping, I think it's an interesting thing to happen because it really accentuates the motion... and it kept on drawing me over to that screen. That was film? That stutter was caused by the film itself?

6 By the way they transferred it. I have one that's been transferred (30fps film to 30fps video). I thought the motion was terrible, I couldn't stand it.

Because of the pulldown?

6 Yea. Because what I was trying to concentrate on was the dancers and if I'm looking at the dancers what I want to do is be able to focus on one dancer and

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have her clear when I look at her and that wasn't the case over there, I just lost everything when she started to move. I think you have to adjust the set too, because the black level on here's not right compared to that one, that one has more contrast compared to that one, that one has much more contrast than this one.

5 He brought up an interesting issue earlier, the issue of film becoming reality or video becoming reality, becoming this image that you look into very much like a 16th century painting where you're looking through a window into the world like an English landscape painting. I'm starting to look at video as a form of thing where you look at the surface because it isn't reality, no matter what you do it's still a surface, it's still this projection, so what it does and how we interpret it as reality, I think is more interesting than it actually trying to be reality. So the surface effects that these things have, because they do that, whereas my reality doesn't jitter, (laughter), is really something which I think is sort of nice. I think it can be used.... It does have a certain affect on you, you can start using it as a tool to convey meaning,... That's the nice thing about film is that it always has that sparkle to the screen, it's like watching diamonds.

6 I think that's certainly one very big aspect of it is you don't have commercials, (laughter), it just goes through and the story that the pace keeps going.

Video more real, film more dreamlike...

5 I would agree with that, it's definitely more surreal, but I think as a culture we've come to accept that as reality.

Describe the look to me.

6 The film look is the colors aren't right, the colors are saturated, there tends to be more contrast than you would see in the outside world, and because of the way that they shoot it they

make sure that they get rid of all these annoying things that you would normally see in the outside world. For example, the sun shining in your eyes, they would put a filter in and take that effect out, so you get rid of all the bad things that you have in the world and you tend to have what's left -because you're going through the eyes of the director -is all the good things that he really wants you to focus on. Video you don't have that much latitude, I think that's one of the big reasons why film tends to be a bit more realistic, it kind of shows it more towards what you would like to see rather than what it actually is.

What about production qualities?

6 I didn't realize how much they differ.

5 But I think at this point that we can start going beyond, because it's starting to really mature (video) in comparison to film. I think the basic difference is, visually as image things... that video tends to be a softer type of picture, it's more blended. You can get a crisper image, I think it's also because of no matter what you see, you see the lines, there's always lines in a video image and you see grains in a film image... you only see grains, if you ever go to a really big movie, even like the Omni theatre, where you're surrounded by it, and it's all film, you can actually still see the grains in people's faces, they're like, they look like little crystals or something. The other thing about video is that it tends to have a unifying wash, it tends to have an underlying tone. There's always an underlying color which I think is really a nice thing, it sort of unifies the picture, it tends to have all blue cast or all pink cast, whereas the image the film I think you can get oranges next to blues, greens next to red, so you can use the complements a little stronger. Emotional tie to either medium? I think that is only the limits of the people who are producing video, not the limits of the equipment, you just have to find a way, it's a medium like

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pencil or paper and you just have to find a way to make it work for you.

6 Well, from a consumer standpoint I think there is a stronger emotional tie to movies, because going to the movies is a big deal. You do go out, you have to go out to a theatre, you have to mingle with the social activity. You tend to have more pleasant memories of some movies that you see. TV's are always in your home, it's very private, I don't think it stands out as much if you see a really good movie on TV as opposed to when you see a really good movie in the theatre.

5 Theatre is a special event.

Film in the future - are you a hi def advocate?

6 No, I'm not. I think there's always a place for film, I really do. At least short sighted. I'd say within the next 10-15 years I don't see theatres going out of business. Because I think there's a lot of good things associated with the theatre. Just look at how popcorn, people go to the theatre and they get popcorn. I mean that's the last thing you need to do when you go to a theatre, but it's ingrained and it's part of your culture that you go to the theatre to have a good time.

Will that be a sad thing, film theatres being replaced with video theatres?

6 No, I guess what I'm more interested in is the experience itself of going out and going to see this, I think the underlying medium is not that important, it's the atmosphere that it creates, having the darkened theatre, and comfortable seats, and something different.

Landscape effects in film...

6 I don't think HDTV can ever achieve the film look. The main reason is that whenever you look at video you make certain assumptions about how far you're going to sit away from the screen. And the scan lines are designed so that when you sit at least that distance

you won't see them, but with film there's no such constraint and you can sit as close as you want to the screen and you won't see scan lines and the grain will be a little bit larger but people are so used to that, that it doesn't really matter, so unless they can come out with something that's just totally ridiculous on the order of 2000 by 4000, I don't see how HDTV can take over film as far as that quality, that film quality. I can see how people might be willing to go to video theatres, the pictures are not going to be that bad, but as far as what is the best, absolutely best, it will still be film, especially resolution.

5 You're comparing something that's got, films already got almost a hundred years of history behind it right?, since Muybridge... and video is really the sixties.

Back to resolution...

6 Well the way that most people typically define resolution is that they say that if you were to give me a sine wave pattern and I were to put it on film at a certain point the contrast would drop down to something like 20 percent or so and that would be defined as the resolution, it's somewhat arbitrary, and for TVs the resolution is pretty well defined because you have a certain fixed number of scan lines and certain frequency that you can support, but I think that if you actually do take that measure, I think that film comes out much better, I'm not sure why did you think that? It's kind of like the cd/lp debate....because you can say that the human ear can never hear above a certain frequency anyway so there you have such a perfect medium, but the fact is that there are so many other things going on that they really don't know, you actually do need the high frequencies. that you get on the LP. I thought the sound was great.

7.* Δ F

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Sometimes I can tell if it originated in film (I think); identifying if it originated in video seems more difficult, however. When I'm watching television, though, I usually don't question the origin of the clip, but rather its overall picture quality; I think American audiences are more trained in this question. Screen A seems to be able to capture more of the artistic feeling; although B handles motion rendition better. Perhaps parallel shoot isn't the best way to test the aesthetic nature of the (film) medium.

On Bill Cosby show,

It feels like in you're in the family's living room. Video is "live", like a play vs. involvement of film, video is good for critiquing dance, overall feeling of closeness in video though there are specific camera techniques that can be used in film to create a close up effect. When you are talking about a feeling, it's hard to mark it numerically. (In reference to study design). There will (always) be a place for film. Film is important for different reasons (than video). Always a need for film. People predicted that television would replace newspapers and that didn't happen. In performance, people were exposed to... experimental data. The football confused me and I realized later it probably was shot in video just because of the nature of the motion rendition. Is the Carly Simon clip, that's also in film, right? And you feel it there... it captures more of the atmosphere, um her and the crowd and you get that same... you can really see the difference, especially in the dance clip because you feel like when you're watching the video you're almost watching a rehearsal more than the screen A, feels more like the performance cause you really feel the, I don't know why but I guess it has to do with the motion, the way the motion is, is captured, is different than in video, although that might be the way you're trained specifically to watch that art form though, that you do watch from more of

a distance. I feel like when I'm watching the video it feels too close to me, it doesn't feel like it's the right way to capture the essence of it so I guess it depends on what you're trying to portray, which you like better. If you really wanted though to watch for the technical characteristics of the dancers, you might want to watch the video because you might want to see if their leg is turned out, if their toe is properly pointed, which you might miss in the film version of it, although you get more of the overall feel in the film, and I was thinking that that comes back to what Russ was saying in terms of that perhaps they should, that the nature of the parallel shoot isn't always, might not be the best way to look at this stuff, because it could be that you might want to have filmed the performance from a different perspective using different camera angles, different distances to get, to be able to really capture the nature of the medium better. Whereas the video might be used for something else. It's confusing when you're doing the first part of the test, because you're sitting there and you're going wait a second, I'm not sure now which it was, like I had a feeling when I was watching the film that oh yea, this is film although I was reluctant to put down film, and when I was watching video though I had a feeling that sometimes it was the video but I was reluctant to put down video because of the stereotypes of picture quality and.. or the expectation rather that a better production has better clarity and better motion rendition and these other characteristics as well. You have the feeling that the better clarity, the better motion rendition, and I guess more of a sense of reality in some way, you're falsely clued in, I think they're more attributable to video, although it loses other characteristics. All I can say is it's just more sort of an artistic feeling that you get, you get more of a wholistic sort of sense, I don't really know what that means technically because I don't

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know the technical difference But I feel like I can feel the difference, but ironically I think you're expectations of audiences are trained to like better picture quality, better, or have expectations of that and so I think that sometimes where the confusion comes between film and video, because while you have those expectations you expect the film to be the better... I guess the criteria for measuring them are sometimes mixed up in your head. On the other hand, you don't want to watch a football game in film, I don't think. I wouldn't want to.

So you think it's content related?

Yea. You want to be able to see the football spinning... you want to see more of the perfection of the movement, I mean maybe you're trained that way. I would want to see the videotape if I were the dancer and wanted to look at how I had danced. As the audience member in this particular content, you want to see the film.

Why go to movies?

I always like to see films in the movie theatre both for the scope of the screen and the stereo sound and it's both the physical set-up of the theatre, that it is the large screen and I guess it's also film, you're seeing film; not downgraded.

Look of films on TV; involvement:

There are different types of feelings of involvement, you can feel involved artistically, you can feel driven in by this whole artistic presentation or you can feel drawn in just by, I guess it's a more, a feeling of proximity or closeness that you get in video, than you get in film. There are certainly camera techniques that you can use in film to get that, to get those same feelings but it's just a, overall it feels different. I felt it was like critiquing the dancers performance whereas in the other one it was more of a, it was more portraying their performance, or allowing the

performance to present itself... a presentation of the whole experience.

What if I told you you were wrong, that that was film and that was video?
I would be devastated. Am I wrong?

No.

Good. (laughter) I'd be shocked because I really do feel like that was film and the other was video and there is a real difference.

People have expectations about the content that is shown with video and film?

No, I don't think they do, I think unconsciously they do, I don't think they're sitting in their room and saying, "I'm so glad Dan Rather is being presented to me on videotape..." I think you're even trained just by fact that the medium has been presented to them that way. Film is expressive.

Film vs. video culture,

I'm not aware of the people who do video... I didn't know that people would call themselves the video people.

Well they don't necessarily call themselves the video people.

(laughter), I mean you have a sense of the film artists, they're the artists, I don't think necessarily you think of people who do video as artists.

What do you think of them as?

I guess practitioners, you know they're taping a performance just for, I guess you don't that they're really doing anything artistic... I feel like they're just recording the reality... not trying to capture its whole essence. It's seems more to me like film is more of an artistic medium.

Is video cheaper than film?

I don't know, cheaper in what sense? Well I obviously have some kind of glorified sense of the film thing, so yea I

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think film is probably more expensive although I really don't know. I have the sense that it probably would be but that could just be because of the big bucks in Hollywood, that you're sort of expected to believe that.

Video replace film for distribution to theatres? Video theatres? Will film disappear?

No, I don't think so and I think it's the same argument that television, newspapers will disappear because of television... there will be a place for film, I think people really do feel that film is an important medium for different reasons and people predicted that newspapers would disappear as well and they certainly haven't. There will always be a need for film by virtue of filmgoers, people that want to experience film. I think the American audience really likes film and the medium of film although the fact that you say that a lot of people get the difference between film and video wrong, I mean, and the fact that I asked the question, that "are they doing this, are they showing video?" I mean obviously means that this could all happen and we might never know it did. I guess what I really would expect is that there will always be films produced and maybe there will be more videos produced, maybe I'm wrong and maybe video will become more and more of an artistic form, and people will choose to shoot in video based on the characteristics that...

If the viewing public cannot see the difference then why is the industry spending all of this money to develop higher qualities that the public won't even notice?

Our own research shows that people can't really tell the difference, isn't that right? I guess it comes down to the same thing that all of these media can, are better and worse for different things... I guess the idea is that the

engineers know what's good for them (the people).

How did you select film or video in the clips?

Well actually I realized I was getting confused based on the fact that I know that I like film better, and so then when I saw something that was in better clarity... I thought it was video but then I thought, well wait, I like film better, and I got confused as I was going along and that made me, that's when I suddenly said wow, I've really been programmed to think picture clarity is good. and although I think film is good, suddenly when I was presented those two opposing criterion sort of felt, I got confused. Picture clarity is good, you want it on your television set, you want to spend more money, you go to the store and you buy the best picture quality. Your parents went off and bought the clearest television set... At first Carly Simon came on and I said, Oh yea, that's film, isn't that beautiful, isn't that wonderful, I feel like I'm experiencing this whole thing, it feels really right and wholistic, then what was the next one? the old clip? and then I knew that that was in film, probably be virtue that it was old.

The car commercial ?

It felt like video to me. It felt clearer, it felt different.

8.E Δ V

9.E X V

The ghosts present in some of the clips were really annoying, there seemed to be other clips that were really noisy. I had a difficult time determining whether they were film or video. Sometimes I guessed film based on the fact that it was an old film or TV show. Although I am aware that there should be some motion rendition differences between the two formats this knowledge did not help me. Now I feel unconfident about my

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answers. Motion didn't seem to be a big factor. The right (video) monitor seemed sharper and overall less noisy. The colors looked better on the left.

8 & 9

How did you choose?

9 To me it wasn't clear whether the artifacts were due to the conversion process or so I was kind of guessing, sometimes there's a lot of noise and I really got confused whether it was film or video. And also there's the overshoots, the ghosts, basically, once you know what is due to what, you can probably get them all right, but then when you're trying to think of what the process was that you went through to get, because you had to convert the film to video... so that could be a problem right there.

8 There are two kinds of noises. One is film processing noise and other noise if the usual TV problem noise. One more point is the motion, film is 24 frames and...

Aside from the technical things... can you describe the "look"?

8 One thing is film camera and video, using the different tube and there is a different kind of gamma...

9 I know if was watching a program, I don't consciously try to say hey this is shot in film, this is shot in video, in spite of my training, of course maybe I don't watch that much TV anyway.

8. Maybe in case of film, the color is more rich than video. and sharpness is video is sharper than film, but color richness, film has more color richness... and more dynamic range.

Are there other characteristics of the look?

8 I worked for you know the broadcasting corporation I worked in the master control room, and maybe technically 24 hours I watched the TV screen. (laughter), it was my job.

The car commercial. I mean, I could tell because I thought it looked like film.

8 Yea, maybe, sure. (laughter)

9 I was basing my answers on that if it was an old program I would tend to think it's film but then I changed some of those, so... I had no consistent basis.

On Walt Disney?

9 That's why I guessed too, because it's old. Especially if it's animation, I just thought about that, animation has to be.

8 Kinescope is different kind of quality more than video.

9 Gosh, I did surprisingly well, I can't believe it.

Do you have a preference for film or video?

9 For me, it'd be the film because you go to a theatre and you the big screen... of course there's the film atmosphere too, with a bunch of other people, it's more of an event, other than the intimate television viewing.

8 For me the kind of program, it depends on the kind of program, you know, in the case of sports or some kind of active scenes, I prefer the VTR and some old traditional movie, kind of Japanese or Samurai movie or some kind of... I prefer film.

How about if Kurosawa shoots with video?

8 (laughter) Ahhh, maybe I won't to go to the theatre.

You want?

Yea, W O N T, will not. (laughter)

You won't go see a video film? Why not?

It's difficult to say but the taste is different, color richness, or in such a case there is no need for sharpness, a Samurai movie... in case of film some ghost remains.

9 The overshoot, or halo. You know I went to the concert, and I saw the overshoots, I thought that was video

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because, but it turns out it's the film because in the process of changing it over, I think that's, so I guessed that it was video because of the overshoots, because film, you won't see that.

Does one medium feel more real to you?

8 I think the video has more reality.

9 He likes the motion of video, which I can not tell very well the difference, even with side by side, sometimes I think I can...

Fate of film?

9 It's going to be around. Kodak's going to have a strong lobby.

8 Film movie will survive maybe... because as I said before, different taste... in the case of Superbowl, if we see in the theatre we prefer to see HDTV... Also in case of film, maybe it will be 30 fps or 60 frames, in case of TV it's difficult but in the theatre it will be possible. Very clear and color richness. I saw a 60 frames per second movie, a film movie at Sokuba, that was terrific film.

9 Have you ever seen IMAX?, that's great. They show it like 5 story high... it's huge.

Niles quote, hi def a whole new medium.

8 I don't think so. HDTV doesn't cover film.

9 As the differences become smaller and smaller, people, it to me it seems like people are going to opt for video, instant feedback, you can look at it, you don't have to develop it like film.

9 As far as the resolution is concerned I think HDTV is trying to, would like to match 35mm basically in resolution.

10.E Δ F

11.E Δ V

The difference between film and video is often overwhelmed by the quality of the picture. In many instances my answers to 1-13 were guesses based on content,

not quality. The left hand picture was noisier, and there were more motion defects. The contrast on the left was higher than on the right.

10 & 11

How did you select?

10 I was guessing more on content.

Were any of them obvious by the look?

10 Video you can usually tell but I can't remember any examples.

11 I don't think there was any that particularly struck me as thinking that this is obviously film or this is obviously video.

10 I guess I think the news one, that was video right?

What's the video look?

10 I guess that it's kind of flatter, or glossier

11 Glossier. I don't know. The type of things that I was looking for, a lot of times were sort of hidden by the quality of that particular picture, for example the "Odd Couple" scene, there was a lot of noise and so it really wasn't clear and so the type of things I was looking for were just totally masked there... (about Black Stallion) That one was just more of a film feeling than anything else, I mean you just don't expect to see something like that on video, is more the reason I chose film than anything else.

What's the film feeling?

11 It just seemed like someone had actually taken a fair amount of care in shooting that scene, whereas your typical video, something like ? it just didn't look like someone took the time to get the lighting right. That's more based on content. I think typically people take more care shooting film than they do in shooting video. Looking back it just seems that way, I don't know why. The contrast is also different. There are too many variables.

10 (about the 2 kines) So, I put V for one and F for the other.

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On the football game,

11 One of the few I was sure of. I got most of the first line wrong and most of the second line right.

Why do you go to the movies?

11 Usually there's something you're interested in seeing...

10 a social activity. Prefer film or video?

11 ...video's obviously far more convenient, whereas just the fact that you've taken the time and money to go out and see... I prefer film in that case. I usually would actually rather see the thing in the theatre than renting it.

On TV?

11 I don't think I have a real preference.

10 I don't know, there is something about the video, the video look that does bother me, now that you mention the "Cosby Show", (laughter), that's the content... I can tell when it's video, personally, it's just that I know it's video.

Does one of the mediums seem more real, more present?

10 There's something plastic in the video, I guess that's the best word I can think of.

11 Again it depends what I'm looking at because occasionally you'll see artifacts that make it clearly film, for example, that last... and if those are present then it sort of detracts enough from it that it just is annoying, I would prefer that it would have been shot in video, in many other cases, you know, normal scenes, I don't really have that much of a preference.

Future?

11 I think it'll probably stay around. Despite working at ATRP in some sense there are a lot of advantages to film, for example you can argue that maybe HDTV is comparable to 35mm, it depends a lot on which stage of the process you're talking about, when you

look at the original master, I think that film in that case is clearly superior to a lot of the high definition video formats available now, but practically speaking if you actually go through several generations of copies to go through the distribution process, by the time you've done all that, it may have reversed itself. If we start considering years down the line, larger screens, the television on the wall, whatever, then the resolution, I think you'll start noticing that you really need the resolution and right now anyway, it seems that if you want that resolution you can shoot straight on 70mm film. If you actually wanted similar resolution in that case you'd probably want 2000x2000 or 2000x4000 and that's starts getting relatively hard to do. Well here I preferred the video but that was because of the motion artifacts more than anything else, also the one on the left is awfully noisy, it was surprisingly noisy... it seemed like a lot was probably lost in the transfer. the reason I mention it is they they did grabbed video of "Moonlighting", off the film and the video is extremely blurry and it's definitely in the film to video transfer. There are several things that affect the perceived sharpness, there's contrast, there's also a difference as to when something was moving and when something wasn't moving, when something moved, the left hand side just broke up because of the film look, but if you look at some of the wrinkles on some of their clothing, some of that just because of the contrast looked so much, looked a lot harder than the video side and I think a lot of it's just more on the contrast effect than on anything else.

10 I was using the wrinkles in sharpness, that was the hard part because they kept moving and I couldn't get the same wrinkle.

12.E Δ F

Some of the answers in the first part are biased due to a prior knowledge of how

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the pieces should have been shot and severe artifacts and ghosting in some of the piece (i.e. taping from TV). Film is far jerkier than video, video is "fuzzier" especially for long shots.

13.P Δ V

In examples 2 and 3 it was difficult to know because it looked like 3rd or 4th generation film transferred to video; then video again taped off of TV.

About parallel imagery

It looks like a bad transfer from film to video. The only way to tell is if it were shot at 30 fps. I usually prefer Film or film transferred to video. Film has a real history; so there's a classical way of working. Almost like studying painting. You go through a training. Video is really new.

12 & 13

Talk about the film look and the video look...

13 For me the film look is more textural it's more dimensional, more a sense of 3-dimensionality... when I say softer I don't mean out of focus, it's more, maybe more like paintings, more painterly or something.

12 Film for me is crisper as far as the look too jerky and video is very smooth but at the expense of a loss of resolution.

Live?

13 yea, video...

12 I would agree on that.

13 Maybe because it is two-dimensional, there is a sense of immediacy, because it is stark .

12 It seems to be more spontaneity in the video, just taking on the spot and less sense of rehearsal or things with video, you happen on the corner and you just shoot something.

13 But you could do that with film too, that's what real documentary filmmaking is, just capturing a moment..

12 yea but how much nowadays of real documentary do you have?

13 I think I'm the last one in the media lab that will be doing documentary here.

Do you think that there are some things that video does excel at?

13 The news.

12 No. Why do you say the news?

13 I'm thinking of just the way you can shoot it in the morning and have it edited and put on the air by the evening.

12 Ah, so more a question of convenience.

13 Convenience yea, and you can capture information quickly...

12 Ok, if you look at convenience I would say maybe as a means for a producer as far as wasting less time, basically you have instant replay and deciding right away whether you need to reshoot... ok, convenience.. In a sense the artistic talent of the director maybe lost...

13 It'll be just a mish mash..

Film obsolete and replaced by video?

13 Nooooo!! I hope not! I mean I hope not but I'm sure I've been very wrong before. I would really hope not.

12 If video basically increases quality I'm fearing yes because it's more permanent .

13 I think it's all economics.

12 It's more permanent and more economic... Video is never going to make it as projection on the big screen, on the very big screen and that will mean also the disappearance.

13 Maybe high definition will...

12 Ehh...I don't think so.

Video theatres?

12 Oh yea, if you take the video theatre like you've got the movie theatre that you've got a screen is at best that size (gestures to the 19" monitor)... sure you can show video... but when you really go this big screen to have the full effect, no way that video is going to be able to do that.

13 Especially movies that are in 70mm or something like that, I mean I don't

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think there is anything, maybe it's about 25 years down the road or something...

12 I would say what is really A movies are shot in 70mm. I mean how many A movies do you have in a year, overall?

Perception of film vs. video culture?

13 Well I think of sort of early video when people were doing video art, quote, video art, there was sort of a style... that's too small a group, the sort of video art world. I don't know I get the sense that the people that are working in video or the kinds of shows that you see on TV that originated in video are more kind of trendy and ah, culturally things that are happening right now. And if you're going to do a film it feels like something is very well planned and thought out and there is a sense of preservation or what you're making you want to have live on..whereas video is throwaway. I think it's economics right now, I think if you asked the question ten years ago you would really start seeing the split, you know the die-hard filmmakers and then those that were venturing to video and I think now it's cost that a lot of filmmakers are working in video because of the cost, not necessarily because of the look.

12 ...Video also evoked for me a fast buck in the sense like all the video clips... trying to turn around the product very fast, not putting a lot of effort..to give something that the public wants or some type of public wants. And for me it's just, that's so obvious when sometimes I see a video clip that's made for money. I guess that's a bit of a stigma that I see with video and on the other hand, the perception I have a tendency to put with film is something that was planned, something that is rehearsed, ..because it's more costly, it's more of a making, that you plan it more and you tend to have maybe better production.

Are the people trained in the same way?

13 I think part of what you say of making money, I think with video everyone's a cameraman and everyone's an editor. But wait a second, what about quality? I feel with film, people who have gone into filmmaking and film editing and have really labored over how to make a cut and how to film, and how to make something right in the natural light or how to use lighting properly, it's just so much more time seems to be spent, creating even a single frame whereas video, if that doesn't look good let's try it again, if that doesn't look good, you know?

12 I guess there's something else, I guess people who are working on film got a larger vision of what it should look like in the sense that video is to be for a small screen so background is going to be there, who cares, now a filmmaker knows that a film is going to be projected in a big theatre, need to pay attention to the overall picture, because it's going to be amplified, it's going to be big... I think a much larger overview of what's going to happen on the full screen compared to video, video you've got the foreground and that's what's important and I don't think the background is that, it's less important, but in filmmaking, if you are good, you need to take into...

13 Consideration, everything...

12 Everything...

13 Same with lighting, I think actually when I mentioned lighting that's really really important, video tends to just flood and not bring out the subtleties of an image whereas film lighting is so crucial and subtlety is sort of more tended to.

Video production cheaper than film?

13 No because the editing will blow you right out of the water. Although the shooting is certainly cheaper if you're mastering, it depends how you do it,

12 They've got a Pixar machine.

13 Well at \$400.00 an hour to edit that adds up.

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12 Yea, but I mean if you look at a video you can use like a Pixar machine, basically you can have many soundtracks, many movie tracks and just mixing electronically, I don't know how widespread they are...

13 The edit is what does it... in video.

In watching TV do you have preference for film or video orig?

13 I think film I like better. I think specifically of a movie that's made for TV versus a film that's on TV, I like the film.

12 I would prefer the film but eventually when it's going to reach the receiver and you're going to watch it, there are so many more degradations that came after that I don't think it makes any more difference.

13 What if you watch Wild World of Animals or something that was shot in film and then comes right onto your TV, it's a nice transfer.

12 OK, yes. OK it's definitely far superior.

13 You don't want to see "Wild World of Animals" in video.

Niles quote,

12 Looks like he's trying to justify his company. (laughter)

13 I mean high definition looks obviously to me, more like video than film, but you thought that the two things that were high definition were film (to 12) so...

12 Well maybe some people really have a lot more experience and they really know, Each medium has it's artifacts and if you know exactly well enough your medium you're going to look at that and say well, ok, sure, that's film or video. I don't think there is a perfect medium because it's a compromise, it's better, one of the mediums is better in one of the aspects and worse in others, so it's personal taste, some people are going to be more sensitive to one of the two aspects and that's basically might drive them to say I prefer film or I prefer

video, and definitely I would say high definition is going to bridge a gap because it's removed one of the problems in the sense that you get more resolution.

The viewing public doesn't really care... about origination.

Well you're assuming that the public is really blind and I don't think that's the case, I think with certain things you'll watch anything because of the content. I think when it comes down to something with no content and great quality, you won't watch it and something with great content and no quality you'll watch it. Anyway what I mean is I think content is definitely a factor with what you will or will not watch certainly but I think ultimately, I mean even I notice in my parents, they go to the movies all of the time, they love films.

12 The other thing I guess, you can educate a person, even if you look at different things you get now more educated consumers and basically alot of people don't care because they never saw anything better, so I'm happy with it. Now if you tell them well you could have that, maybe they're going to pay more attention, well why did I ever saw something that crummy, and as a European I actually there is one bit of experience, in France or in Europe, we've got 50 Hz so that means it's much more jerky but you get a higher resolution and I never noticed that it was jerky because I was used to it, I came here and now when I go back to France I say gosh, it's so much jerkier but also I notice that it's much sharper in France because we get many more lines so you get tuned to something, after a point somebody pointing out to you the difference and then you start to be sensitive. The content is a big issue although a big part of the public will watch anything... but you need to educate them and also you still have a sizable portion of the population who are discriminating consumers and want

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something better and they might deserve this research and trying to improve it. How many people go to museums? And you would say ok, it's a few percentage of the population so let's close the museum because it's not mass appeal, so why do we have museum?, just to satisfy a minority. I don't quite agree with that. So even if it's for a minority I would say it's worth it.

13 ...If you could remember when the first home use video cameras came out, they were really pretty awful quality but because it had an image everyone was buying them like crazy and then the better ones, the little chip cameras came out and the Sony 8 and suddenly people, consumers were saying, wait, how can I look at this ugly VHS, I'm going to buy an 8.

12 Right now they just don't have the option, or if they have the option in some country there's such a price tag difference that it's not worth it because how much are you willing to pay for that? That's another issue. Very few people are even willing to pay more than a hundred bucks and the thing is... another experiment was really great, people are going to watch a program as long as the sound is ok, even if the image is impossible to watch, they are going to watch it but if the audio starts to be corrupted and a great picture, they are going to switch. So they care.

13 Yea, the sound is really important.

12 Also if you like at the study that Neuman did I mean, everybody, people pay much more attention to the sound, they want stereo before having a good quality. It's a bit disappointing for you guys... (laughter).

14.P Δ F

You know what it was, it was real easy to tell a lot of the video sequences when the camera is moving. I generally tell by the motion. Logically it's an old TV series, it should be film but the way it looked was video, because I was

watching it through so much video crap on the screen. I guess the other thing that sort of raises a red flag and says this is video is sort of funny little video noise patterns, moires and stuff, so maybe that's why I was confused. If the camera is moving in film you get this sort of stutter effect with the 24-30 conversion, so that's pretty easy to tell and for video it's just a smooth continuous thing. Another is the noise patterns are different although you go down a couple of generations and you can't really tell anymore, but assuming the same sort of original quality in both. Video has these funny little artifacts that hang out to the side. Another thing is the grain pattern especially if it's 16mm you can tell right away, cause the grain is like snow. Another is the lighting, the contrast ratio, anything that's supposed to be at night... the film is able to render it at a wider range in colors, black and white... and the other is just the perception, hard to describe but when you see something it looks more live and I guess that's just cause there's more information coming at you with the video. Because of the sort of 3-2 problem in film, everything sort of has this almost slow motion perception to it even though it's happening in real time, so it's sort of unreal, whereas the video is it's happening right now.

It was incredibly easy to tell on this one because of the fast motion of the dancers limbs. I thought that the film images on the left were sharper and the video, although it seemed more live, was a little fuzzier. Well, generally I would say that I like film images better but maybe for this subject matter the video is better because the stutter step problem of them when they move quickly which they do a lot of is very noticeable and somewhat distracting.

If it had been shot at 30 fps do you think that you'd still have that problem?

No.

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What about other movies?

They aren't all action like that, a lot of movies are just people sitting and talking.

You prefer film generally, why?

It has a much better, more expensive look to it, slicker presentation than video.

Film look versus the video look,

To me the film look is something which is a sense of non-reality, non right here and now, which is sort of the overriding sense I get when I watch something which is film, it doesn't feel like it's happening right now, video feels like it's happening right now and I think that's because of the 3-2 situation, which puts it in this slow motion type of category. In the theatre you don't have the stutter step problem but on the other hand the motion is still, especially when the camera is panning over a scene, it gives me an incredible headache. I love seeing films in the theatre, I hate cameras panning in the theatre. And the other big thing is the contrast ratio, film looks a lot more subtle, a lot more slick, expensive, you know has all those sorts of connotations for me, um, video can look expensive but it is hard to achieve subtlety in video. That was getting there but the video was having a hard time with all those blacks (reference to the video "Erase") and the brightly lit dancers and they have little edges around them. There's lots of video fuzz in the blacks. On the film the black looks like night, or black and on the video it looks like a dark gray fuzz you know, like lint or something, just a different texture.

Cultures...

I think there's a lot more made of the difference between the cultures than there actually is.. I would say I like film people better, they're just more different, or individualistic and unique, well, they wear more black generally. Obviously the trades are very different, different

kinds of cameras,... things like that,...I think of video as more like, you think of film people as being more artistic quote, unquote, and video I think of like producing commercials on the local news so it's more of a trade and I look at video as more a straight product

15.* Δ V

The jerkiness of film was most noticeable out of the corner of my eye when looking at the video screen! Dead on, they are about the same.

16.* Δ F

This is fun, very interesting concept, shooting same thing in film and video. I've only recently become aware of the differences and able to distinguish.

15 & 16

16. I think the football game was really obvious, that really looked like video. Because there wasn't any grain whatsoever in that and everything was very sharply defined. It's kind of a tricky word, sharp, because in some ways you think automatically that that has all positive characteristics, but it's not necessarily so, it's just, maybe sharp isn't quite the right word but it's a mixture of some kind of sharpness and contrast.

15 Sometimes you noticed, if you noticed any streaking or smearing, if it's from film it goes up and down, if it's from video it goes left to right... near the shadow details, it becomes a little muddier in the shadows when you switch it to video, ...I did notice a few motion things, like the film to video is a little jerkier... I guess about a quarter of them I made just almost random guesses.

...When I was looking at the video screen, I could see the jerking around on the film screen but when I looked at the film screen I didn't notice it as much. so there's the 3-2 pulldown which is surprisingly less noticeable when you're looking at it straight on. there seems to

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be a lot of problems that just came up from the transfer because you notice the film print looked significantly contrastier, the tone scale was rather different, all of the lights in the video part looked pretty much flat and white, and in the film part they were very noticeably colored and... I think it's part of what the transfer did...

16 I think I'd agree that the video looked a lot flatter than the film side did.

15 It's less contrasty and the tone scale looks a little different and that's what you get when you put them side by side, the dancers costumes were more vivid on the film side, there were more saturated colors.

You preferred the video?

15 Yea, a little bit, when I looked at things straight on the motion was pretty much, looked about the same,.. I'm hesitant to say one is better than the other...

What did you think about the color?

16 I think like I said before the video seemed flatter, and I noticed the first time that I saw this when I went and saw it on the big screen I could tell a lot of difference in the color, one thing I remember in particular is the white pants of one of the dancers and I compared the two between film and video and on the film side there seemed to be a lot of other color, not just plain white, it seemed to have other, I can't remember exactly how to describe it, but, I'd have to say that the film I think was more, I don't know if I should say more colorful or more... it's hard to describe.

15 It's probably the lights, the lighting on the white pants just came out, brought out more of the color of the lights, I did notice that. It's hard to say, they're both really close, they're both nice color renditions, both had skin tones that looked very natural and good, overall I really liked the way the color looked on both of them, it's just that this one was a little more peppy and this one

was a little more... the film was more peppy, it had a little more saturation to it, had a little more bringing out of the subtle colors...

Prefer film or video?

15 On this size screen the things like grain and stuff like that are pretty much, they looked almost exactly the same, I didn't really notice much difference, maybe there was a slight bit more noticeable grain or some sort of artifact like that on the film side... but they were both very sharp, they were both very in focus, they both resolved very nicely.. on a big screen I'm sure that the lower resolution of the video would become very apparent.

16 My impression is that film is a little more artistic... and so on the one hand you know, hey I want to choose the artistic sort of thing but I haven't really in my mind formed an opinion of one or the other. I think the character of what I see at the theatre is a lot better...

15 Yea, definitely the theatre is much more pleasant, it's partially because I have a teeny little TV set, and I'm a definite down in front person, I'm right down there in second row center all the time. I love peripheral vision effect, it's very important. the theatre has a lot of nicer features cause you get this, it's much more sensory, it affects you much more. Yea, given the choice I'd like a TV set as big as a movie theatre.

17.P Δ F

To me, film tends to beautify a subject. Colors are truer, not as washed out.

18.* Δ F

Image on screen A(f) appeared sharper and deeper; movement smoother on A.

19.M Δ F

I like screen A because it is more of what I am used to. It is more professional.

17 How do we perceive the difference between film and videotape? I was just

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thinking about that that's funny. Video almost has I don't like to say a sharper look to it but the edges are a lot sharper on the objects on the screen. It's so hard to describe, for me I can usually just tell what's video, what's film although I have to say that the old clips from like the "Honeymooners" type thing still throws me a little bit. but I think to me the film is more like a photograph, picturesque whereas the videotape is more..almost more like you're right there, whereas a film is more like a photograph, what you're seeing, it's a little more of a distance.

19 I felt the same way... I can sort of tell. but the jets game was obvious to me.

18 Well I have to say that I really couldn't tell all of the time. I mean partially cause I knew, I mean I thought I knew what some of them were and that really got in the way for me, I mean I looked for flicker and stuff like that but I'm not at all sure...

17 Weren't they like the first people to shoot multi-camera film for sit-coms? I saw them filming it once and they said, the director had mentioned that they were like the first show to shoot multi-camera film.

So what did you think?

17 Interesting. Different than seeing just a clip of something on film, and then a clip of something on video, it's really interesting to be able to see the exact same thing in comparison. I was like, am I going to be able to tell? To me, I just think that film tends to beautify a subject and the colors stay a lot truer to what they're supposed to be and video no matter how well lit it always tends to wash out colors a little bit and I prefer film.

18 The contrast was so stark.

19 I couldn't watch the video for some reason... and I had to watch the film cause it just seemed, like if I was sitting in front of a TV, it just seemed more professional and there's more quality

and I can't, I don't like to watch the lesser.

Describe what qualities do you see more of in the film?

19 the colors, the background, there was something about the background that just like my eye was much more in tune with it than the video. It just sort of jumped out.

In general do you have a preference?

19 Film, yea

18 I thought that the depth of field in the field was significantly greater, I'd never really, I'd never done a comparison like that before and I was shocked at how the movement was smoother and the resolution was higher in the dancers but the floor was so much more interesting in the film. It was just sort of a washout in the video.

You did something over at CIII, some kind of a shoot in multi-media shoot?

17 That was before I got there, I saw a copy of it... that was film versus tape and all it was, was there was a clip of 16mm, 35mm, and I think it was high speed beta, but that's all it was was just 3 clips and the thing was they weren't even the same clip, it was 3 different things, so it's kind of hard to compare when you're looking at 3 different subjects. But you really can't see the real difference until you see something, one right up against the other.

Things that video does better than film?

17 Visually? saves you money, it's easier to edit, but in watching it, no I don't.

If people put the same effort into the video production as in film, do you think it would be cheaper still than working in film?

17 Yea, I think it still would be, but I still don't think that the quality would ever be as great as film.

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Culture?

17 Just in the people I've met and not even just at CIII, I find that film people are much more dedicated to quality in general than video are, it just seems they're more dedicated, it's more of an art form, it's more of a craft than video, and maybe video will get that way at some point but for now I think that film people tend to be more artistic...maybe it's just because it hasn't been around as long ...

Film replaced by video?

17 No, never. never never, because it's just, it's beautiful, it's visually beautiful, I think it's more pleasing to the eye, I think people will in my opinion will always prefer to watch film than video, I don't think that film will ever be replaced.

Future?

17 I think video may advance more than film will, I mean film is advancing but I think video's going at a much faster pace.

At home, do you prefer film or video origination on your TV?

17 No, for something like that I think the content tends to be more important than the medium that it's on. I don't know if it makes much difference if I'm watching it on television.

Emotional aspects created by either medium?

18 I did, just from the side by side comparison, I found the film a more transparent medium in the sense of sort of becoming, I was much more emotionally involved with what I was seeing and felt more connected to it, whereas the video clip seemed just as though I was, I was much more aware of watching something... on television, on a monitor as opposed to being into it itself.

17 Yea, it can almost distract you from or that's what I found just from

watching the video piece, it was like, the fact that it was video was inescapable and that kind of draws away from what you're watching, the content of what you're watching whereas with the film, the film is just so pleasing to the eye that your mind just automatically, it's film, it's not even an issue, but video is so noticeable that it sort of takes a little bit away from it.

20.M Δ F

Judgement based more (although not always) on guessing appropriate medium to be used for a certain programme, rather than visual quality/appearance. Found preference choice difficult as sometimes preferred screen B (V) also.

What influenced your decisions?

Well for instance in the black and white ones, I just presumed they never used video all that time ago, that was the only reason.. I suppose that things that are shorter clips, like things that are obviously ads, I think that maybe they make those with video these days because it's cheaper. It wasn't that often that caught the actual pictures that I was looking at and making judgements from it, it was just what I thought the kind of medium they would be using for making that kind of a program... the one exception was the boy on the horse scene, that really looked as if it was being shot on video. Because every single shot, well the shots just seemed to be individual single shots instead of one, I mean in a film you're not noticing all the time the different, what do you call it, the different cuts, I think sometimes it's a little bit more fluent in film, I don't know I'm not very good at expressing why it just seemed to be more a series of individual cuts than just one flowing picture sequence. The first one as well, I thought was being done on video, was it Carly Simon? Because that just looked, I felt if they were doing that with film the background would have been clearer and it just looked to me as if it

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were one person with one camera that was just doing, maybe it looked a bit amateurish, I guess.

Parallel,

I found this one difficult. I find it difficult to choose, I don't know which one was film and which one was video so I have to say know, but I tried to guess anyway... I thought that one was video, because maybe it looked a little different from anything you're used to viewing on the screen, it was more soft focused, or it seemed to be more soft-focused, I might be wrong, I found that one sharper, but not all the time.. I kept thinking sometimes that maybe I did prefer watching that one for awhile but then I'd switch back. But if you'd have told me that one was video I would have accepted it, I would've said ok, I'm wrong, it was only just this feeling really. The faces were sharper.

In general do you have a preference?

I think maybe until recently, I would have said film, because just by video, I always think of home amateurish video films that you're just using a Camcorder and what you see of those you think are not very good, so it's just you think of film as being much more professional.

21.* Δ V

It's tough to say, at times I thought A (f) was video, and B film, at other times it looked the reverse.

About the car commercial, thought it was video...

Because of the colors and the edges...

The Frog Prince,

That was just clearly video to me, the edges and colors, the edges were sharper and the colors were oversaturated.

About Carly,

When we first got the clip and showed it to the engineers, they were saying oh that's bad film, it's very grainy and then

we talked to somebody, one of the people who knew that clip said it was shot in film but the director of the clip wanted to have this grainier look for aesthetic reasons and then when it got transferred to video of course it didn't look that good. X was kind of laughing about that because all the engineers are getting upset about this technical thing, that for the director was an aesthetic question, he purposely made it that way.

Parallel,

It was my first reaction immediately, I sort of said that looks like the film, especially it seemed a little clearer on the distant shots when the camera was pulled back and then at times I wasn't so sure. It was an initial impression. Sometimes the colors looked relatively better on the film, or more accurate. You preferred the video, why? Somehow I was thinking that this looks like something that should be on video. Now that I go to movie theatres, I notice that the quality isn't that great... because of the mechanics and the degraded... video seems not to get degraded that quickly, and since the tv isn't that big, it doesn't look that bad on a tv this big. But I would say I prefer film if I could get it in good quality.

In reference to a movie that he'd just recently seen, the print was quite dirty and beat up. So if the movie had been shot in video would you have enjoyed it more?

Less

Why?

It's a movie, it's a film. To me the video look is clearest when you're watching daytime soap operas. That's video and somehow it's a more subtle medium, film is, the palette is richer.

So in spite of the dirt, the jitter, you'd prefer to have that on film?

Definitely.

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Describe the film look and the video look.

The video look has this, I think of it sort of as this, especially NTSC video, has this sort of surreal aspect to it, the sort of oversaturated colors, and, the sharpness is such that it doesn't feel like a real space, or people moving in a real environment. There's something artificial about it, it's an artificial video space that people are working in, especially like these daytime soaps, there's something unreal about it. Film on the other hand has this more, again, is more subtle and it's a softer medium, more sensuous, more, and also more lifelike in the way, I don't know, it comes across as more real, more realistic.

Does one seem more live?

Video. I think I've thought for some time that video is best when it's live, or it feels best, then it feels real, video feels real.

Merging?

No, I don't think so, there will be a blurring, or an overlap, but they'll still be somewhat separate areas too, I think.

Film die?

No, because it does have these qualities that, well perhaps some day, having seen the 2000 line monitor downstairs, HDTV still has this sort of artificial, unreal, something less about it than film, and I don't know if that's just a characteristic of the medium or if it can be overcome in the future somehow. If you could have the full range,.. with video then maybe that would put film cameramen out of work. And the economics of high definition television being so favorable, that's just not true yet.

About Julia and Julia,

They still had to shoot 3 or 4% of that in film, I mean the cameras aren't portable, these things can be overcome in time...

these cameras are really bulky, for action sequences it just doesn't work.

Supposedly the "Chasing Rainbows" thing, maybe that was cheaper, but that was, they got Sony to rent them the equipment for the equivalent of what they would've had to charge for 16mm equipment.. But it does have advantages for special effects and stuff like that so I'm sure it'll be used in cases where that is really a big element...

Niles quote,

High definition may become a whole new medium, ... it's not there yet.

If quality isn't such a factor to the viewing public then why all the r&d?

People have been saying they don't care about image quality, if you ask anybody if they care about picture quality they say "Of course, yes I do.", and there is a market for higher quality, ...And people even though they couldn't, a lot of people wouldn't see the difference between those pictures and pictures they take with other cameras, preferring the prestige of saying, of course I have a 35mm, not a junky little one, instamatic, so there could be, I would expect that same phenomenon to occur too, so that even though a lot of people don't see the difference they'll want it anyway and then too, as people become educated, ...and then there's also the ever occurring need that Lenin wrote about of capitalism to create new markets and new economic opportunities, and that's clearly the Japanese strategy of developing an incompatible system, basically. You create a huge new market because all of the equipment everywhere, in everybody's homes and in everybody's studios and everywhere else, has to be replaced and that's from the point of view of the capitalists, a good thing.

22.* Δ F

23.E Δ F

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It seems that film gives one a much more natural impression of the lighting in the scene. Video seems much more compressed (in chroma) as well as seeming "washy". The sharpness and spatial resolution of film also set it apart. (Even though a lot is lost in the film to video transfer.)

The color dynamic range of the monitor on the left (f) was much better. Better highlights and better textures also made the left monitor seem better. The material itself made the discerning process much harder.

How choose answers?

23 The big thing that tips me off to when somethings shot to film is film noise. The only thing that threw me was the second one, it was shot to black and white and it gave the impression of video but it seemed to have film noise in it. Night shots where you have fog and city lights diffusing through fog and things like that, it seems really apparent which one is film or video, I can't quite define exactly why, but I can usually pick it out, or bright, like an outdoor scene, like the one where the car was coming down the road, video jumped out at me, .. it just looked like that.

Articulate.

23 It seems like things are more washed, it seems like they had to put brighter lights, it seems like either the scene was artificially lit with bright lights, I mean that's the way that things look to me when they're shot to video. And things shot to film seem more naturally lit. I don't know how to articulate it but it seems different to me.

22 Washed. Some of the stuff I guess just by the format, the source, like football and evening news, you kind of figure that's video. but then the color on video I tend to associate as washed out or flat color, not as great a contrast range with video.

23 Definitely better color in something shot to film, midrange color intensities, they're not quite as compressed as things that seem to be shot to video are. The source again, tips you off immediately. I didn't even have to look at the football or the evening news to know that's shot to video because that has to be, but it still looks like it's been shot to video... but the other things, like the Chevy commercial and stuff, I didn't have any presumptions other than what I saw.

Parallel,

23 The only cue I had was chrominance resolution, dynamic range and the color. Some things really tip you off, like wrinkles and things like that, and shadows, and highlights on the floor, but if you threw an outdoor scene at this with lots of leafy trees, and people walking by with lots of stripes, things like that, then you could probably pick out video a lot easier than you could in a case like this. That one had much more intense colors than this one did and normally you see that in film and that's what led me to believe that was film.

22 That one I guessed was film, it seemed sharper.

23 You had artificial lighting, there's this completely black background, it's definitely a hard test to figure out which one is film and which one is video in this case.

22 Also when you transfer it to video, it's not going to look that much like film. If you're watching a film, it looks like film, but if you're looking at film on video it takes on some video characteristics.

In general what do you prefer?

22 I prefer film but you know I just enjoy going to films more than I enjoy looking at my crummy television. I haven't seen a big screen television that looks as good as film, and plus the stuff you see at movies is better than the junk that's on TV anyway, the programming.

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23. The only thing I really don't like about film is film noise, when you go to a theatre, a real scratchy frame, that really gets annoying.

Future,

23 The 2000 line monitor we have in the lab is approaching the resolution of 35mm film. If they do something about the video standard then great, if they stay with NTSC...

So would you care if HDTV replaces film?

23 If they can do something about the color then I wouldn't care. If they could get the color to look more natural and less washed and less compressed. You're right there's a look, there's a lot of things that film does to the light.

Where's it going?

23 Now that we have the ability to capture the same spatial resolution as film, with HDTV video cameras...

22 I just like film better.

24.P X V

B (V) looked sharper most of the time.

Tips?

Almost always a depth of field or a contrast difference between film and video. The hardest one for me to make a call on was the Jackie Gleason one because it was so flat. I know it was done on stage so that may be one of the reasons. It looked like early video and the edits jumped a little, usually the contrast isn't as good on video. Some of the special effects on the last piece, I put down film because there were so many night shoots of the city... film is just better for that, although the stop frame stuff could've just as easily been done with video, the last one could've been high definition video, the animated sections on it were so perfectly symmetrical.

Is there a look you attribute to film or video?

I think I have probably a, I'd say film has often times a greater depth of field, it's better in low light situations, that traditionally, except in high budget things like "Miami Vice", the lighting (in video), isn't as fastidiously done, so when you look at something that's very well lit, I immediately think that it might be done by film people, if there's a lot of special lighting to enhance that depth of field.

Parallel,

When I was looking at the floor shot I was sure that screen B was film, and then there was one other angle, it must have been the one from the balcony, my best guess is that B is film.

Were there particular things that looked sharper?

On camera A, there was one scene that looked better than B.

In general which do you prefer?

Film, on television? I guess I don't really think about it all that much because I don't have a real high quality television at home so everything is kind of, I have rabbit ears and just slap them around. I'm not that fussy about it and I do it for a living. I have a lot of friends who I work with and they'll come over and immediately get down on their hands and knees and start adjusting it cause it bothers them, it doesn't bother me. Mostly I don't care, when I'm watching it on TV. I thought that I prided myself on being able to tell the difference but this study will show you exactly how accurate that is.

What does each excel at?

I think film tends to look better in lower light situations, because you have more control. Video editing has some advantages in that you can do things a bit more precisely and probably a lot cheaper. (About the Frog Prince

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segment) it wasn't perfect and it wasn't attempting to be perfect, which is the way I guess I always think of video editing...

Is there something that typifies the look of film for you?

Maybe just traditionally the higher attention paid to the lighting.

How about video?

There's probably a number of cues that I look for.

Culture,

If they're professionals they do their work carefully whoever they are.

Future, do you think that film will continue to exist?

Well I hope so but I think that's a real question. I think the marketing dynamics are pretty grim for theatres, the VCR will kill the industry, which is dependent on the industry. Actually I have worked with filmmakers doing video tapes and there is almost a cognitive style difference, in that I actually enjoy working with filmmakers who are working video because they've got it all worked out in their mind before they get there. It's more as though they've begun to assemble, or they have a better idea of what they want, they have it blocked out in their mind better than many video producers and it's probably due to the fact that the film processing is the expensive part...and videotape is cheap, and I've worked with lots and lots of video producers and they just bang off a lot of stuff and they're not really sure how they're going to put it together and they make all those decisions in the editing room, in post production. So my experience working with people out of film who are using video cameras, is they don't feel as though they have to do 75 cutaways because they've got a better idea of what they want in the first place. and I think it's a cognitive style difference.. the real expense (in video) is just the labor of

getting it all there, renting it, and setting up the lighting whereas in film it's a whole different budget.

Why did you choose to work in video?

I started studying broadcasting and I never really worked in film.

25.* X V

How did you choose your answers?

At the beginning it was very strange cause the image quality was kind of the same... some of them were done just by knowing the time periods of some of the technology, although it might have been the first black and white sequence, I'm not sure, I thought it was film anyway, the other things I was looking for, the problems with video resolution as far as loss of definition... also for lines and how pure the image was for details. Then also knowing three or four things that I knew were shot with one or the other.

Like what?

Donald Duck, or like the "Honeymooners", I mean all of the black and white I thought was film, and then for dark things, ..I thought it was film. But I was trying to not get technical so I could, I wouldn't get totally biased towards technicality and also get like a feel of the image.

Did you judge any of them by feel of the image?

Yea, but trying to remove the fact of, it's kind of hard.

Is there a look that you attribute to each?

Yes, I mean, although video has been very creative in the last few years, I still think film is giving more of a feeling to whatever content it has, mostly from the fact that it's not an electrical medium, therefore you don't have this kind of motion sweep, you know when you move the camera, video, real fast, it cannot interpolate between the images... but in film for instance you can get some these nice, you know, travellings that

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you cannot really see in video and also the fact that you can perform from 5 to 180 images per second. I have a few videodiscs at home that they were shot in 16mm and 35mm and then transferred to video and have no comparison whatsoever, you cannot even tell except for the fact that you're watching it through a tube that it's video cause it really looks good.

In spite of watching it on a monitor you still get the benefits, that it was originated in film?

If this was projected on the screen people would still get a different type of feeling, cause the medium kinds of biases, and in the fact that both of them were done in two different ways but then being brought to you electronically still, there's a lot of problems with that because you're not seeing it on it's original support, but yes, if something is really nicely shot, interpolating all the formats, 16mm, 35 or 70, then yes it make a difference when transferred to video and looks a hell of a lot better.

When you are watching television do you prefer...

Things that are originated in film

Parallel, which one do you like?

Well I had a mixed feeling, cause even though I believe that film was on the right, the sharpness is very different than when it was projected with the RGB tubes and very strange, cause there was more contrast on the video than on the film for me, now, but if you say sharper as the better feeling as far as the overall definition, then film is better, but as far as the saturation of the image then video has more, is stronger. Sharper as meaning focused is different than sharper as far as being able to see a little more light, getting more light reflection from the floor of the video than you are getting on the 35mm, even though the floor is sharper on the film, you were sensing more image information in

video. Here for instance, all the clothing was sharper than on the video but all of the floors and ground things were sharper in the video, because the floor is shiny and therefore was electronically enhanced, that's the general feeling, but it depends what you're shooting. If you're shooting like the water in the sea, the film will be much more sharper because it'll be kind of a polarized version of the video which is going to give you an incredible amount of noise.

Do you have a preference for screen A or screen B?

Yea, definitely, I always go for film.

In reply to his own comment...

Solves standards problem, solves definition problem, solves all problems

In general which do you prefer?

If you transfer film to video then I would prefer film and of course since we don't have any video projectors in movie theatres yet, I enjoy more watching a movie than I enjoy watching TV but with the same support, definitely.

Does one seem more live?

Yea, I think film seems more live

Do you think film is going to last?

Yes, for the next 15 years. And then it all depends, there will be people who are still using dark chambers for photography, these people will always exist, so I'm sure there will still be people doing 70mm production for big, movies. If technology gets to the point where it's all digital..as far as the home is concerned, I think that the productions of home entertainment, they will probably be only video or its equivalent.

Culture

I think that film for other reasons has a larger crew and also need to be, the people have to be more conscious for the fact that they cannot preview what they've done, they have to be a little bit

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more conscious about how they film, they cannot just throw away..film. The mentality of filmmaking is very different from the mentality of videomaking because with the same amount of time you can do much more with video, produce or preview or rearrange in a much easier fashion than in film.

In terms of quality I like film much better, in terms of flexibility, I think there's no question that video can do so much more.

What do you think about high definition?
I've seen it and it looked great... I still think it's video. I think the big switch will be when it's going to be RGB because as long as you cannot get rid of the two fields you're still going to see a difference, no matter what medium, but if you get rid of retrace I think you can solve the problem of definition standards.

So you think it can then compete with film?

Oh, Yea! As long as video remains video with no digital processing it'll look video forever, whether hi def or not hi def, I believe that the number of lines is not the extending definition factor, the extended definition factor relies on getting rid of the field, and right now the only way to do that is digitizing on the fly... that's definitely the way to go.

Some people have said that film seems more dreamlike and video seems more real.

I believe that then you get into content and that if I showed you, if you go to the movies, even if it it's 70mm and wide format that you see of some beggar vomiting, no matter how dreamlike this might be it'll still be incredibly real to me and if you see a video of someone tripping on drugs no matter how real it might be, it's still dreamlike.. with a nice image you can get a lot of emotion out of it, which in video because of other factors in the restitution part.

26.* Δ F

For questions 2 and 3, I never used to pay attention to it, but I believe I could probably now tell the difference most of the time. I prefer the film mainly because the colors look more saturated. Also, for this subject matter, I think the 'motion blur' from the film adds. Film is softer... no film won't disappear

27.E Δ F

A (F) is less "harsh", and also has less chroma crawl, yet somehow appears slightly sharper. B is more contrasty, and has worse color. Video destroys subtlety.

Why all the r&d?

Well if the industry comes up with things that are totally incompatible they can sell more things. Film is here to stay. Hi def still looks like video. Hollywood isn't going to give up producing in film.

So how did you select your answers?

26 Well, some of them I assumed were video because of the subject material, a football game, the news program, film somehow I think has a softer quality to the images and so some fo them I picked as being film for that reason. And some video , the images seemed to be flatter somehow, actually I think in some of the older videos..just sort of my impression of the difference between the two and a lot the subject matter.

27 In addition to the softness, there's also graininess, and there's also the occasional little blips moving by which were on the print during transfer and there's also, if the camera pans too rapidly you get doubling, funny effects because of the pulldown in film. Kinescopes have a weird look which is kind of hard to define but the wrong things are sharp. That Pontiac commercial was shot in film wasn't it? It was a really good transfer and another thing is that the intercutting is so fast that

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you can't get into a scene long enough to think about whether it's film or video. ...The football game was very good video.

Talking about degraded quality, I'll watch things that look bad if the content is good.

27 I don't have cable so... the "Odd Couple" the reception was so bad, that it looked like something from a VHS VCR, I know that the "Odd Couple", at least several segments, were shot in film.

26 See, on all three of those I biased myself the wrong way. (Odd Couple, Cheers, Commercial) I assumed that they filmed sitcoms on video and I assumed that they filmed commercials on video, even though I really wanted to say film for the commercial. I biased myself towards video.

Why did you want to say film?

26 Because, for the same reason that the Don Johnson thing was film, it was nighttime, it was soft, the soft lighting and all of that.

27 The "Cheers" thing was a terrible film to video transfer, there were scratches the whole way down, and so that's a tip off- if you see junk moving vertically it's film and not video, if you see junk moving horizontally it might be dirty heads on the video deck. That was a very good, that was very good film, but it was badly transferred.

Parallel,

26 The left one was film, right? B looked sharper, I said I preferred the film for two reasons, the colors looked more saturated to me and for this particular subject matter, I liked the kind of blur you get from motion with the film, for dance or whatever, I thought that was nicer, more suited to the subject matter than the sharp, closed images that you get from the video.

27 The B, the video, I don't think it was sharper, I think it was just more

contrasty, or that's the impression I got, and a lot of people like a lot of contrast and there's some confusion between contrast and sharpness, but I think probably the film was significantly more real, true to life in this case, the colors were certainly a lot better in the film.

Film future, what do you think is going to happen with film, do you think it'll stick around?

27 If video continues to be that bad, yes.

A lot of people refuse to shoot in that., B was contrasty, somehow the lighting effect, I know you went through a lot of trouble to do the lighting in there and I think a lot of that was lost in the video, and it came out in the film because I think for instance in the folds in the dancers clothes you could get a much nicer feeling for the form from the film and the video was very contrasty, there were a lot of lights and a lot of shadows, but there wasn't a nice transition in between, and it was really not, I don't really like a lot of stuff shot in video. I don't know, it's just I think that everything people don't like about video, I mean, film shot at 30 frames per second transferred to video is fabulous, there isn't anything in video that looks that good right now. But some people really like that kind of harsh football stadium light images you get out of, I don't, I prefer film.

What's the film look; what's the video look?

26 Video looks to me a lot of times like cardboard cutouts that are animated and pasted on a background, it flattens the 3 dimensional shapes, and it gives that..

27 It gives that harsh video look...

26 That harsh video look, yes, yes.

You're working in hi def, right?

27 I've done some stuff in hi def, yea and it's just as bad. (laughter) no, everything that's wrong with video is characteristic of the whole process, I mean, video shot with CCD's or photo

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diodes, solid state cameras, looks different from video shot with 3 tube cameras, of course we all know that video shot with 3 tube cameras looks different from video shot with one tube cameras, but they all look like video, none of them look like film. One thing that's definitely true about film is that film has a whole lot more dynamic range than video.

Some people say that hi def has much more resolution than film, by the time it gets to the theatre, then certainly by the time it gets to your homes. What do you think about that?

27 Well, I know for a fact that it doesn't have more dynamic range at any individual point, now the fact that, it's probably true that by the time it gets to your home TV set, the artifacts are no worse, but they're not the same artifacts.

There seems to be a controversy. Some people say that hi def is trying to achieve that film look, and others say that's just not true.

26 Well, if they are they're clearly going to lose, because the difference isn't just a case of spatial resolution, the color resolution, the more saturated colors, all the other aspects of the images, other than just the number of pixels, there's more difference than that, so I don't see how just by simply just using more spatial resolution, make it look like film.

27 If 1125, the whole point is just to put more spatial resolution and do everything else pretty much the same, which is what they're doing right now, then it's going to look like better video, it's going to look like the same video, you know, if you're watching it from across the room, it looks exactly the same as 525 line video, so, because the only difference is the spatial resolution, if you sit much farther away than this, I mean in my bedroom I have a TV that's about this big (small) that's on the dresser across the room and that could have a hundred lines in it and it would

look about that good, so I think it's very true that just spatial resolution's not strictly the point. I don't know, the best video I've seen, is no where near as good as the best 35mm or 70 mm film I've seen. However people don't get to see that sort of thing too often because they go to places like the Copley Place Theatre and they see a screen about this big. (forms a small rectangle with hands).

Rumors of video theatres replacing film theatres; do you see that happening? Do you think that video will wipe out film in spite of aesthetic preferences that some people have?

27 Somehow I can't see a lot of producers I know shooting, spending all that money and producing video. I just don't see that happening, I can see for a certain level of stuff, I mean I don't know if it matters a whole lot whether your typical Eddie Murphy movie was shot in video or film, but I think there are a lot of other things that people, the people in the industry would greatly object to going to all of that trouble and having a video camera.

26 That one shot that I assume was from a film of the little boy and a horse on the beach, that ended with a sunsetty kind of sky, that would be kind of washed out on video, anything like that, the movie, "The Last Emperor", if it had been shot in video, would not have been visually effective because it was just the brilliance and all the color and all the..

27 Video tends to get rid of subtlety, I think that's really what I don't like about it.

26 No, I couldn't really see that happening. I'm surprised to hear you ...say today that they film a lot of TV commercials and sit coms and I just assumed that almost everything that I saw on my TV set was video.

27 Well the major reason for shooting things in 35mm film is because then you can put them in syndication and you get, when you transfer film to video over in

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Europe, you get a higher quality product... I don't know if you watch channel 2, but lately they've been bringing programs shot in video over from the BBC and converting them to NTSC and they look awful, I mean they really look bad. The one thing that I remember definitely and this was really driving me crazy was, "Passage to India", whatever that show was about India that they did, they did it at the end of last summer, and part of it was shot in film and part of it was shot in video and then they basically made a video transfer from PAL to NTSC of the whole thing and there were a whole lot of scenes where they had a rapid pan where the whole picture would just become a mess, because there were all of these different temporal artifacts all at the same time.

28.P Δ F

Video had smoother motion, but I still like the film "look" better - nicer colors, light. Film has more life.

We have a sax and synthesized sax, more intimate experience to play it the vibration... now we have both and the technical means offer options but will the artists really want them? film people take more time,

A phone conversation:

Joe basically couldn't tell the difference. He said his cues were artifacts, motion artifacts and edge artifacts, and I was just looking at the quality of the picture and the feeling that you get from it and I think I can tell almost instantly whether something's film or video without seeing any artifacts, just by color. He thought there was more artistic potential in video, well not necessarily video as it is but in the electronics... I think he was saying that film technology will go the way of analog audio recording. The french horn analogy... the film image is not live in terms of it can never be understood by a computer or manipulated by a

computer... for an artist, someone who thinks about an image saying something, the intangible quality, the feeling of a picture, just outweighs that, it doesn't matter what you can do with it, it just is what it is. violin has been around longer than the french horn, both violin and french horn are still around. Film has established itself well enough that it will never be phased out as an artistic medium but that it would coexist with video or with whatever current electronic system. Video I think is gone. I think that people can do radically better.

What about hi def?

My God! Look at it! It's such a minor improvement, I can't tell you. I don't know if they (viewers) really don't care, I really don't know. In your thing, in the total picture, what was important to look at was the dancers...

A couple of people said they preferred the film because it was more artistic, but a lot of people are choosing the video because it's sharper and crisper.

29.E Δ V

A lot of my answers are conditional in that I can usually guess based on some simple cues but I am usually far from certain. It had better be "film, or I'm going home". Screen A appeared sharper but noisier and the added noise offset the advantage of increased sharpness (in my vaulted opinion). If I can get high quality video, I much prefer that. Whether it was originated in film or video never much mattered to me. I like the theatre because of the size of the screen and the sound. Even the stereo television sets can't meet that. video can achieve the film look electronically.

Do you think there are some things video does best and some things film does best? This is right up my alley. I love Twyla Tharp. Video can do far more.

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To provoke 29, film is far superior and there's no way video can touch it in terms of aesthetics and art.

Well, you have to ask why you're here. Things evolve. The shakiness in the film is annoying.

30.M X V

Prefers video(thinking it film).

31.* ? F

Video is at the stage of photography a few years back- Along documentary photography is art photography- Documentary video and art video- there is more adventurous visual thinking in video than films- Video because of its availability, will change the static visual aspect of T.V. T.V. hasn't progressed as it should have, because "amateurs" didn't enter T.V. studio.

Prefers film "Because of lights."

Visual impression of film in theatre,
Visual is always linked to content, there's no doubt about that.

Adjectives for film...

Inventive, poetic, very often nothing new, I could be very impressed with the sound, atmosphere.

Does one feel more live?

In a sense video seems more present in the sense that it seems less tampered with, while film is a unity that is tampered with. There's certainly more crap with video because of its availability... it's easier to make a video than a film, ...Publicity for TV is very aggressive... and it's very tiring.

32.* Δ F

I might be wrong. However I certainly prefer screen A.

What led you to choose?

Well, it was quite difficult for me, so sometimes I just guessed. Contrast, contrast and the lights, these things,

nothing else. I think that the color was better, more bright, ...so that was why. Better contrast and better colors, more brilliant colors. The difference was very noticeable in terms of contrast and color. I thought I would prefer film but I was wrong before, generally it's film.

What is it about film that you prefer?

All the usual things like contrast, definition, but maybe I have to review my opinion.

Describe the look, adjectives for film...

It looks sharper and video is more flat. It's definitely too flat, video, ...in music you have different planes of sonority, so you have very low amplitude and very high, and it's something like that, there is a wider range of dynamic in film, than you can get in video. The football game was very present. Also that depends a lot on sound.

Culture,

Well I believe that film people are usually more conservative, they don't want to accept new technologies, they don't want to change their old way of thinking. I read many times about directors that don't want to accept video, they're not interested and will always use film, which is wrong because of course video can be improved and also has other capabilities like real time preview.

Why do you think they don't want to switch?

I don't know, maybe they're usually older and they are not so flexible for new things.

Do you think maybe there's a significant difference in the film look?

Yea probably there is but usually I trust what the possibilities in the future can be and probably they don't, probably, they're very realistic. They say, "video is not as good as film and so I don't want to use video." and they don't want

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to put any energy and research in or doing something with new technologies even though right now maybe video is worse.

When you saw HDTV did that strike you as looking like film, looking better than film, or equal?

I don't know, it was definitely better than my TV. I usually think that they don't do many experimental things and there are a lot of experimental videos, there aren't many experimental films anymore... so all the underground things are in video.

Film replaced by video?
Definitely.

When watching television, do you have a preference for film or video originated?
I don't pay attention, anyway I just look at basketball games.

33.M Δ F

In regard to #2, it may be that I knew it was a film by looking in the TV guide rather than at the screen. Screen A seemed much clearer and well defined. The B screen was brighter and much more "live".

34.M Δ F

Context plays a role in the choices (knowing something was a TV show). B looked like live television (or taped I guess) B had less resolution - like an enlarged photo - where the dots that make up the picture are larger.

35.M Δ F

Television (for comfort of body).
If this is correct, then of course I prefer film over video.

36.M Δ N

Could clarity have something to do with my decision?

37.P Δ N

The look of a particular segment was not

always the primary cue I used to make my decision - I thought about TV/film history (Honeymooners-Kinescope?) and my knowledge (limited) of various programs and their production budgets (film = more \$). Screen A seemed "hot" - colors brighter, some glare - not as flat as screen B (V).

38.P Δ V

Until recently, someone could put a lot of effort into a tape and they'd still come away with garbage.

39.M Δ F

40.* Δ F

Sometimes used other information than quality to determine, i.e. football = instant replay = video. I've had some small experience with video cameras, editing, etc... and a very little with film. Screen B (V) seems more realistic to me, but I like the image on Screen A; it seems softer, more pleasing to the eye.

41.M Δ F

I'm guessing which is which. I assume film is sharper.

RH (Visitor from Hollywood)
CA (Visitor from Apple Computer)

RH. Well I have my favorite, so far the right hand one. I almost feel like I'm looking at edge ringing or artifacts being produced on the left, it could be real key lighting that's occurring, I just, I don't know.. You know what would be great is to put it on the same monitor and switch it, an AV above, have yourself a switcher and get a horizontal AV and a vertical AV you don't have to go back and forth, I feel like I'm almost looking at the difference between your two monitors in some cases. I was looking as part of the evaluation process trying to say, well how good did they match up their monitors? Which one was which?

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Which do you think?

I felt like the live feed was on the right, I don't know, I can't, umhm.

How about you?

C.I initially thought that film was on the right and video on the left, but I flipped half way through, we do a lot of video work and we do mostly shooting on film and then transferring to video and I've seen the contrast but not side by side before. And I assumed that the clearer image was film later transferred to video and then I looked at the lighting and the contrast and it had everything I don't like about watching live video which is the colors get washed out, you get very harsh edges, and too much contrast. so I'm stumped.

The film was on the left.

RH. Now, where did you have it transferred? We had it transferred at CIII which is a local production house on a Bosch. So they just took it and on a regular Bosch transfer went through on a flying spot and that's how they did it for you? Have you ever tried it using image transforms process? which is a four field device that likes to do some smart thing across the fields and stuff like that? Fairly amazing, I saw an Av test a long time ago of a western scene, yea, and I was flabbergasted

C. with the wheels spinning and everything?

RH. No, no wheels and no shiny chandeliers, ok? so we didn't have our contrast ratio as a relative, as an item to look at in the scene. but for a non contrasty scene, I was remarkably impressed. Well Image Transform is the company, I don't even know what they call their machine, their transfer box, but ah, it's been around for awhile and they've actually standardized it, there are a couple of new frame standards converters out that are a little more sophisticated now about doing the standards conversion both from 24 and 30 across the fields and doing some

dynamic stuff on the line in terms of averaging that gets rid of some of the spatial problems and then they also have some stuff that gets rid of or tries to deal with the contrast problems, of course film being like this, and what to do with that, you know, what do you do, do you clip?

In general do you prefer film or video?

RH. Oh boy, I am a film person up the kazoo. I mean I know where video stands and I do a lot of stuff in video...

C. I'm film too but I also have seen a lot better film to video...

42.M Δ F

I like A (F), I think, because it seems more transformed: B seems more "lifelike", but A seems to have gained something that I associate with film: warmth, atmosphere, density.

43.* Δ V

The motion in A (F) seemed not as smooth as B. A seemed "sharper" only because it seemed to have more high frequency - including noise, which is why I preferred B.

44.* Δ F

Colors very bright on screen A(F), maybe too bright. Sharper lines, colors a little too bright.

45.* Δ N

A (F) had an edgy look: higher contrast, more detail, ex. in the floor. B - a little dull looking, colors look faded.

What is that look?

44 Mostly I knew it by context, sitcoms you know are filmed in video. The old ones I suppose are filmed in film.

45 That was pretty clearly film to me... from the image. The only way I could answer these I thought correctly was to just think does this look like what I would see in a movie theatre? I think what it is is the video looks to me artificially contrasty. I don't really know

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the context answers, I don't know it well enough to get it right that way.

44 The guy who was here the other day said it would have been easier to shoot the commercial on video but it was cheaper to do it on film.

45 I thought film was so much more expensive.

44 I think the post production costs are higher in video and the production costs are higher in film.

44 What was weird is you could see differences in quality and they were independent of...

45 Yea I think these were selected so that you couldn't base your judgements on qualities.

44 Low quality and stuff I can tell the difference... Even when you see those (film noir) on TV, it just seems to me that their lighting effects, there's no way you could create on video.

45 Yea, I would say that's the biggest clue.

Parallel,

45 I can't do this, there's obviously a difference, but I just get myself all tangled up trying to figure out which one is film and which one is video.

I thought you looked at pixels all day long.

45 Yea, static pictures, you know, digitized images, I don't know the difference between film and video.

Describe the difference.

45 Well the left one looked, there were outlines around everything, it had an edginess, that's what I saw, the most striking thing, there was also more contrast on textures and things, like the floor itself looked like it had more contrast, more detail. But it looked a little bit artificial, so I don't know whether that makes it film or video.

45 What did you think?

44 Well, screen A was definitely sharper but I don't know, see they could've used the higher resolution video or lower

resolution film.

45 Or is could've been boosted contrast video or something...

44 But the other thing, to me the colors were too sharp, too bright...

45 But they looked a little dull on the right...

44 Well, in relation, yea...

45 But even compared to the real thing, which I saw, I saw the actual performance, the colors were pretty bright. I don't know if I have preference, I would like something right in between. I didn't really like either one. I think this looked artificially edgy, it was too much for me.

So you preferred A, 44?

44 Yea, cause more for your money you know? It was sharper. I think that the video looks a little flatter, that the sharper edges give the image a little more depth (in film).

Adjectives...

44 Cablerific.

Film look,

44 Sharp, clear.

45 More realistic, more natural looking, natural colors, natural lighting, natural contrast.

44 One of the things about film is huge space.

Video,

45 It looks like a TV set, it looks like they've got a whole bunch of lights all perfectly adjusted so they're shining right on the set and everything's either nice and bright or dark, that's sort of the way I picture it.

44 Video is like, usually when I see video it's always crummy, TV sets are always misadjusted, my own I never fiddle with the color, it's always wrong, it doesn't really bother me.

Culture,

45 I just think of film as being on a much higher level than video, not

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because of Hollywood by any means, just film in general, I think of it as more of an art form. I think of video as just something that's done for the masses, it's you know a communication system for the masses and not something something for portraying, I think of film as coming out of photography, which is really an art form. and video, there's something about the fact that it's temporary that, you know, it's done on a tape, that's part of what adds to this sort of feeling of it not being an art form or something truly, you think of art as something with a lasting or sort of an eternal aspect and I can't think of video that way. (Laughs) That's ridiculous, but it's true.

44 It's certainly the reputation that video is not as artistic and you see it, a lot of the video that's done is quick, get it in and out, on the news and game shows, and soap operas but there is something about a video image compared to a photographic image, that just isn't the.. the things that you see in photography you never see in video, and in fact the, I don't know why but I think that you might not be able to get certain types of lighting and focus and I have no idea but that's my preconceived idea.

45 It strikes me that... there are probably very subtle things that go on at higher frequencies that you're capable of picking up indirectly or in some sort of aliased way ..At a quick glance having a higher resolution of a movie on a screen you can't really see anymore than you would on a TV set but I think that there's psychologically something going on there.

44 The experience is so different, just sitting in front of a really bright little box or being in a dark room

45 Is it something to do with gamma correction? I think even if you can't consciously point these things out or make a note of them I think that they do affect you subconsciously when you're watching something and that's what I mean about me saying before in the past

when I watched TV I could see that something looks better than something else and I was told at one point by somebody that oh that's cause it was shot on film, so I have this sort of vague notion of what that looks like. I can't, it's really hard to put your finger on it. It's something that you sort of pick up subconsciously.

Do you find that you have more emotional involvement with film or video?

I've never been emotionally involved with a TV set, it's just difficult, I think it's really an annoying thing to sit and watch a screen. I went to a movie last night, I couldn't stop crying.

46.M Δ F

Film is more pleasant to watch, while video seems cheap in a way.

47.* Δ F

A (F) not so much sharper and deeper.

How did you select your answers?

46 I could always tell, video always seemed to be like kinda colorful, like the way I always compared video and film was like sit coms and football programs as opposed to movies and like the old Mash and stuff like that. Kind of like a shade of light. It's kinda just a feeling, I couldn't really explain, it's just um, video to me always seemed to me like just kinda more colorful, it's hard to explain.

Do you like that?

46 Not really, I kinda like film better cause, some of it looks cheap, like the Cosby Show, looks too unrealistic, too lighty.

47 Video stuff looks flatter and the film stuff looks like it has more depth, but you could tell me any one of those were either one and I would believe you. It's not enough of a difference that I'm really convinced of it.

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Parallel, which was which?

46 It's hard to explain but it seems like video, you could see a glare, it seems like, especially looking at dancers, on video you could see the people struggling, you could see the people breathing and panting, and it kinda looked tiring, but if you watch the film it looks more pleasant, more like, they look more graceful in the film than the video, the video looked like they were falling around, the film makes them look better, it complements them more.

47 I was trying to go by depth again, it seemed like there was more depth in the film one than the video one. It seemed like the back panels were closer to you in the video image than they were in the film image.

In general, preference?

47 Film.

46 Yea, film.

Why?

46 It just looks better, you can't help but think of those home movies people make, quickly made, it doesn't seem to have much artistic value it just seems like you know, because you can't help but think of those sitcoms like *Cosby*, and *Night Court* and these drill em out one a week, like loud obnoxious video stages. I prefer film on TV.

You prefer TV to theatre?

46 It's not so much visual, it's just more comfortable.

Adjectives, film...

47 Depth.

46 More subtle light changes and shades whereas in video it just pops out and seems bright and glarey...

47 Grainy (for video).

Culture,

47 Yea it seems like a more serious enterprise with film. The number of quality people who are working on it and the purpose for which it's made whereas

TV series, most of the stuff done in video seems to be made sort of to meet a deadline, whereas films are more often, they're made to meet a deadline also, but it seems there's more care taken with them.

The future,

47 They'll both keep going the way they are I suppose.

46 I think TV will probably increase their use of video, but I think there'll always be a couple of shows be made in film. I don't think theatres will go video.

Theatres disappear?

47 No.

46 No.

Have you heard of HDTV yet?

46 It's a new kind of VCR coming out, isn't it?

47 I've heard of it, I haven't seen it.

One more inexpensive?

47 Well, my impression is that video is...

46 Yea, video.

Does one seem more live?

46 Video seems more present, that's my impression about watching those dancers, that I was actually there watching, see that's the thing about when you're watching a movie, you kinda want to be distant from it cause when you watch a movie you're more of an observer and that's the thing...

47 I think film would seem more live to me because it seems to look more like things really look, I know what he's saying just that it seems more immediate, what's coming up in video but it doesn't really seem very natural.

48.E Δ F

49.E Δ V

48&49

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48 This is a perfect example of shooting for television, there is no image. Miami Vice is shot by heroin addicts.

49 I made my selections by trying to look for the motion portrayal but some were very obvious and some I couldn't really fix on a bit which would give it away.

48 Oh there are differences other than that, there are differences in the picture quality, there are differences in the resolution and the tone scale and the depth of color in the film, that's just not in most of the video clips, the video clips are all flatter and brighter. The film clips have rich dark areas comparatively. I like rich dark areas, the point is there are other differences besides the motion portrayal, there are differences in the tone scale, there are differences in the resolution. The video is sort of smoother but also sort of duller, less punchy in some ways, I think. And if I got these right, that's true. What's number six? yea, it was multiple camera so I just assumed it was shot in video. So I was second guessing.

49 I don't recognize the shows so I wasn't using that.

48 Multiple cameras though, that's a video technique.

48 We tried digitizing it (MV), there's no image in that film, there's no colors, there's no detail, there's no picture in MV. It's shot by heroin addicts, it has to be, they have a glaze over their eyes when they focus the camera and they fog the film deliberately I think, I mean it's really, it's a zilch presentation, if you saw that in a theatre you'd think the projector lens was filthy.

Parallel,

48 There's something wrong with this TV by the way, that was down-converted and it did look good. You need full disclosure in order to have a standard and without full disclosure, you're selling a pig in a poke. It's absurd. It's obvious which is which. You really make the motion in film look

bad when you put them next to each other.

49 Especially out of the corner of the eye.

48 Also, the way you've got the monitors set up you really treated the video well. You've got a real low contrast image there.

49 Moaning about the film motion.

48 I'll bet most people favored that one, it's like having two hi-fi's and the louder one is always thought to have better sound...

49 No, I can't believe anyone...

48 But that was a much flatter image. The one on the right. (V).

48 They're closer now (the monitors, I have the same signal running through), the output of your source is different.

Generally do you have a preference?

48 Film.

49 Under what circumstances for what? Are you talking about when I'm at home and whether it's derived from film or video? On the whole, as long as it's not been messed around too much, I prefer the video actually, sort of studio shots are usually better than film.

Adjectives...

48 Deeper and richer, sharper.

49 Jittery motion portrayal, well if we were talking about film through its own medium and then television through its own medium, both optimized in some way, then I'd certainly agree that there's a difference in the look in terms of the contrast range..but when you've gone through the television medium where and for example in those clips where there's such a wide variety of quality of transmission path and everything else, then those differences to me seem to be overridden by the others.

48 Oh, I like it better when it originates in film.

Adjectives for video...

48 Flat, soft, smooth and greasy.

49 Well, yes, I was going to say

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smooth...

48 Lard-like.

49 Not if it's set up well.

Future, do you think film will stay around?

48 Oh boy, I'll tell you though, the high definition television produced things seen in that sequence that you showed us before really looked good.

49 I think film will always be around for some application, if we're talking about entertainment as a source for television then I think in the long run it probably will go but that's quite a long way off yet. You're doing all this work with digital video, are you trying to achieve the film look?

48 No, we could, we'd just put a shutter in front of the camera and it'd really screw it up and it would look like a movie, it's been done. Put a shutter in front of the camera and it looks a lot like film, a lot closer.

49 One of the major differences between film and television in their own original medium is the way that the spatial frequency response rolls off, with film it's smooth, with television it's a bit sharp. If you've got a television system which is well within the range of what the eye can see, and is also less than what the film is presenting, then you would be adding that video cutout look onto a film if it's gone through the video system. The cutout I would have thought would tend to come from the filtering.

48 You mean overpeaked and that causes things to look like they're cut outs and assembled together.

49 I'd like to see it used with a bit more artistic care.

48 Remember, first of all it's not for a number of reasons. One of them is that the cameras that you use, they're only as good as a regular home TV camera ..when a cameraman is looking through his camera, he is looking at the picture that you are going to see at home, and that's unlike any other situation with the

exception of the cinematographer, but the people who really design the films never look through the camera, especially while they're running, the cameraman does that, the camera operator, the director doesn't by and large while it's running, but a cameraman is watching the picture that you're going to see at home, he's using a camera that's mated to that system so by and large he sets up his camera to provide the best output in his mind to what you're going to see at home. In other words he could tweak his camera to make the picture sharper or crisper or deeper, but in doing so it might provide a better signal in some regards but in terms of what you're going to see in your monitor at home would provide a worse signal. And so you do video closed loop. Nothing else is done in closed loop. Now in high definition that's not true, suddenly he's looking at a camera where his only job is to be a good cameraman and get the highest possible quality scene out of it that he can. It's going to be later converted for watching at home.

49 I saw that being made actually (Julia & Julia) in Italy. That was quite funny, it was a film set-up with an HDTV camera of course and so it was one camera shooting and film techniques all the way.

48 We have Coppola stuff, one of them was the mermaid one and the other one was a sort of western, they were just a gas, they were these gorgeous little ten minute clips.

49 Some of the video clips from that (JJ) were extremely good and there's a night scene in the docks looking at the output from the camera I was astounded at how noise free it was. I don't know how Sony does it, I still don't know how they do it.

48 You were on the set? How well lit was it?

49 Not that high lit, it was a night time dock scene as I say, actually in the van there, watching the monitor, when they, this was not actually shooting the film,

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this was in between scenes, it was so noise free, I could hardly believe it, don't know how they do it.

48 I remember the stories about Coppola's thing, they had this midnight sequence, see this was the first time the equipment came to America and there were no switchers and effects and stuff, they could fade, but they had just built a circuit to cut the video down and fade, so they brought this to the Zoetrope studios when they were shooting "One From the Heart" before they struck the set, and so all of the actors and actresses hung around because they would be in the first HDTV production and be shown widely, it's clearly a good thing to do, so they had the camera and it was all lit for one camera, even when there were two cameras in the scene only one was operating, and it's a night scene, and this guy is about to kill himself because he's so depressed and he's standing at the edge of the pier and he's got a rock around his neck that he's going to throw into the water to drag him down and he's going to drown and at that exact moment what happens is this mermaid who was also frustrated with her life decides she's going to kill herself by jumping up onto the dock, ok this is the plot, and so it's all lit with gels to simulate blue night, right, and they tape the sequence and they go down to the van, where the tape recorder is to watch the playback and it all looks like it was shot in broad daylight, and they said so what happened?, and the Japanese video engineer said, I don't know what you guys were doing in there but we had to turn the knobs all over the place to get the flesh tones right. It looks terrific.

So do you think hi def will replace film?

48 After a time, but I don't think the issue of whether high definition replaces film is quite an issue of image quality, one of the reasons why people are hyping high definition as a production medium is because it's a different union. That's not a small matter, because when

you have five people operating one camera and a lot of teamsters standing around doing nothing, there's a lot of baggage that's associated with film in terms of styles of shooting and production crews... so there's a lot of baggage, more than just the technical characteristics of the camera that are involved in changing those kinds of things.

48 Oh I don't think people will shoot feature films with high definition television equipment, not for a good long time, no, it's simply not good enough and there's no reason to because first of all the process to go from video to film for theatrical release is a bit arcane and unknown to the rest of the world. You send it to Japan, that's not really a satisfying thing to do. So I don't think that it's going to be used for the theatrical film for a long time, but TV production it could be. It's not a broadcast medium.

49 I don't know whether anyone's thought out what HDTV is really for.

50.E Δ V

Higher overall contrast(F), higher detail especially in motion(V).

Choose?

Well I found a lot of them tough. There were two of them that looked like they might be HDTV but I don't actually know. They just had a clarity that looked to me like the HDTV I've seen. A lot of it has nothing to do with aesthetics but just looking for things that I know are supposed to be part of film and video. Like when you have bright lights, look for lag in the tube and look for jaggies in video and look for sort of that hazy look that you get in film, and a couple of them had film crap on them and you could see scratches, that's a giveaway for film.. of course a lot of them I just know historically, the "Honeymooners" is a kinescope, which means it's both film and video. But that one and the "Honeymooners" had this

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sort of vertical jaggies that are I guess due to time base problems. And some of them, like the ones that were recorded off the air and looked really crappy, as I said the prominent artifacts there are due to the transmission, not due to the fact that they were originally shot in film or video.. I don't know if I'm guessing right but I just figure "Miami Vice", was that a video or was that "Miami Vice"? I figure well, that's a high budget classy operation, they're probably going to shoot film,.. I'm not very good at this judgement, I find it difficult.

About the hi def football and commercial,
Those looked nice.

Do you have this feeling about the film look or the video look?

There are things that I look at and I say, Oh that's film and oh, that's video, but there's a lot of stuff where I don't really have a strong feeling. I'd say if you can see film grain it's film, if you can see, and if there's this kind of, I don't know, I guess it's a, I would describe it as sort of a hazy look that you often get with film, roll off in the high frequencies so that everything is, the edge transitions are a little soft, of course there's also the motion artifacts you get in film when it's transferred to video to the 3-2 pulldown but I don't usually see those unless there's a pan or something, I don't see those in ordinary action. And video, again I think some of this is in the way video is lit, but video often has a sort of hard edged look to it and a real immediacy, you feel like, almost like you're looking through a window instead of more like looking at a portrayal of a scene as you would get with film.

Why do you think that is, the immediacy?

I don't know, I'm curious about that. I think part of it is that the MTF is higher, MTF on video goes out farther and then

drops off so that you have these hard edges, whereas film is more gradual. Also in video you often get ringing on the edges, ..but that can happen in a film to tape transfer also so you can't be sure that that means it's video. But I think also some of it is just the way people light for video versus light for film, like on news shows the lighting is usually really harsh and on soap operas too for some reason it's, I don't really like it, it's very unnatural looking lighting, whereas for films people seem to light things in a more natural way. But I don't really have a strong feeling about the difference between film and video... that is I would like actually sometime to sit down and watch a whole lot of film and video done in parallel shoot just so that I could understand what the differences were. I don't like going to movie theatres because of all the people talking around me and being rude and generally obnoxious, but I much prefer the experience of being in a movie theatre.

Parallel,

I found that difficult. This I thought was video. Mostly because of the motion, which was sharper, this was blurrier in motion, this was sharper in motion, but the contrast was higher here overall, but the detail seemed to be sharper here in the video. This one, has this sort of strobe look, so that you can see lots of little sharply repeated things when an arm moves you could see lots of little sharp edges but it was sharp, whereas in this one if your arm moves it would just turn into a blur. I prefer the video.

Why is that, the sharpness, the motion?

Yes, especially in pans, the blur of film really drives me nuts in pans and it's not nearly so bad in video. But I thought there was an overall difference in the contrast of the two, in the saturation which might not be attributable to the medium they were shot in but as you might have been able to adjust it out.

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The contrast was higher in the film, particularly, the blacks were blacker, the black level on the video was up. I'm actually surprised at how little difference there is when you do a parallel shoot like this. You know you could shoot film at 30 and it still wouldn't be, the frame rate of video as far as motion is concerned is really 60.

Prefer?

In the performance, I was sitting off to the side, off to the left, it seemed to me the video in that case, I seem to remember the video having a kind of a hot quality, the edges were a little overdriven and it just looked a little unpleasant and the film was somehow, the smoothness of the film looked better.

In general do you have a preference? On TV?

Well in fact I think I probably, if you asked me, showed me a bunch of shows and you said which of these do you like, I would like the film stuff, but I don't know if that's because it's film or because good stuff tends to be on film. So I think it's very confounded. The nicest stuff you showed me before was the HDTV stuff, which surprises me. Because film ought to be able to compete with HDTV, it seems to me, based on the specs, and if you're transferring down to NTSC in the end, so the signal can't support all the stuff that's in the HDTV, so I'm surprised the fact that you originated as HDTV still shows when you end up converting it to NTSC. The film look comes from some special properties the film has like the fact that it has grain, the fact that the MTF tends to be rolling off in the high frequencies, and the fact that it doesn't saturate, it saturates slowly when you have highlights and things like that, and it has a longer dynamic range. Those properties aren't true of HDTV cameras, HDTV cameras are still video cameras, ...I'm not surprised that there is a difference, I'm surprised at the amount

of the difference.

Adjectives, film look...

Filmic, I think it looks smooth and a little soft, hazy, and when things are moving a little blurry, but I feel it looks like you're looking through, you're looking at something that is a representation of the thing rather than looking at the thing itself. I feel once removed when I'm looking at film. Video is more like being there. It's sharper, the edges are harder, there's often a kind of a ringing on the edges, and funny things happen when things get too bright, saturation, blooming. When I say blurry (referring to film), I don't mean really blurry blurry, I just mean the sense that the frequency content is sort of heading downhill toward the high frequency. It's still there but it's attenuated, it's sharp but it's not of the same amplitude as it would be on video.

Culture?

My impression is that it's a real class thing, a real elitist thing, that the people with taste, the real artists shoot film and the sort of drudges, the lower class nerds and the people who can't afford anything else shoot video.

Process of film and video; differences in goals?

Obviously people who are out with an ENG camera shooting for tonight's news, they're shooting video because they need to, you can't turn around film that fast. People would choose film versus video on a made for TV movie because, either because the film look really is better or because people think the film look is better.

Do you see a difference in the made for TV movies as opposed to the made for theatrical release movies?

I don't watch made for TV movies, but I imagine that they would shoot differently, well they're shooting for a

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TV, for a 4:3 aspect ratio, they've got to shoot on the assumption that it's going to be a small screen so everything in it has to be big. You can't have a dramatic, panoramic view of a landscape, it's not going to have much impact on TV the way it would on a big screen. I don't know, so I'd assume that they shoot differently. Like Star Wars viewed on TV is, it's not going to give you much of a feel when you're flying through space, it's just on a little screen flying through space. The bottom line is I believe there's a difference in the film look and I believe it's higher quality but I really don't have a strong belief, I really only believe this because people tell me and once in awhile I can see it. Sure sometimes I see video effects that are very distressing that I don't like and I say, uck that's video or that's ugly, but I also wonder could they have shot it, given that they're shooting video, could they have lit it better or could they have used their camera better or something, so as not to have that bad effect, and when you see like in pans, with movies, sometimes I say, uck that's ugly, in film.

In reference to the 1125 commercial,
I would have thought that was film but in the rest of the stuff that came up, some of it had a sort of sharpness that I associate with video and it looked very clean, it had a kind of a clean look that I've only seen on HDTV.

Film fate,
Well film has got to go in the long run. Certainly it will be in wide use in five years, cause films are getting better, film emulsions are getting better, just as video cameras are getting better. But in ten years I think that you'll start seeing a strong displacement of film. I wouldn't be surprised in ten years to have a lot of films that are shot in video and released in film.

Why shoot in video and transfer to film,

why not shoot in film?

Because of the ease of editing, especially as things become more and more digital. That's the ideal editing studio is when it's all digital. When people can actually afford that sort of thing that's the way to go.

And why do you think film will be displaced?

You want to get control of your images, to get real control of your images you want to be processing them as an electronic signal or ideally as a digital signal and if it's going to end up as a digital signal, the notion of starting out with something that's made of silver grains, and then turning it into a digital signal is kind of crazy. It happens to be an extremely good way to do it today, because the technology of silver is so advanced and so, of such high quality but in the long run that just seems like the wrong way to do it. It's just hard to believe that it can last indefinitely.

Do you think that video will take on some of the craft that has been traditionally film?

Well, what I imagine is that the, to me it's just images, or image sequences, and the constraints on the technology that exists today, that have caused these cultures to come up and caused these certain practices to come up as they are, are accidental, I don't understand why they persist so much but, like why do people light video one way and film another way, I don't know, maybe there's a technological reason, but it doesn't seem like there has to be. Suppose there are filmmakers growing up ten years from now and people plunk video cameras in their hand, are they going to feel like, oh I have to make things as ugly as video because I'm a videographer?, I don't see why they should, I mean your goal is to make beautiful images,

Whose goal? Do videographers have that

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goal?

They should.

But do they?

Well I don't know, yea sure why not? I don't know, they should, I assume they do, why shouldn't they, don't they? What are they doing if that's not the idea? ...if you're an artist and you want to make moving sequences then that's your goal, it seems to me. Anyway so in twenty years you'll be able to sit there, at your terminal and have all kinds of control over the image. You can go tweak knobs and put all kinds of image processing on it, make it look like film if you want to make it look like film, make it look like old fashioned video if you want to do that, you'd just have total control over that and then it's up to you.

The programs that are made for television are so different than what you get in a theatre.

That's just an accident.

51.E Δ F

I'm assuming the monitors are "the same" - that is calibrated to reduce error.

Choose.

I was pretty aware right away, pretty early that some of them were really questionable calls and they were just sheer guesses, but I was looking for what I thought was film quality, and style of what film looked like.

Which is?

Texture, I know on the screen here some of the real tip offs, some of these are several generations down the line and the resolution wasn't as good a tip off anymore as it might have been. I was looking for what I thought, what I perceived to be film quality, which were how edges were treated or how the resolution held up, some were a lot clearer to me than others. I know some of the old TV sequences, like the Jackie Gleason" sequence, I'm not sure if it

was shot in film or video, but it sure looked to me like video and it may have been shot in film because I know they shoot a lot of TV on film so, but it had that quality of video that I just have a perception of, it's just a fixed mental image. Some I thought, for instance, I think it was the Miami Vice one, that just seemed so much like film to me, I'm just pretty sure they probably shoot that on film, it had all the qualities of what I thought film was.. the ability to handle high resolution and color saturation.

When you think of the film and the video look...

I think the video look to me always requires a lot of light to have the clarity, still, that's probably changing more and more, but usually when I see alot of light, when I see darkness portrayed very well with a lot of depth and crispness I make some assumptions, that's probably film cause knowing video just can't read that very well, now, it's just not able to handle blacks and high contrast like film can, so whenever I see high contrast and lots of darks that work well, I just make an assumption that it's, the origination was on film, and whenever I see loads of light everywhere, and the thing is evened out I know it's trying to meet the video levels. That's just on a technical kind of thing and basically whenever I see a lot of hard edges where there's not an ability to soften up edges very well, and video I expect that to smear more and to break down rather than.. so when I see real high light levels and it's generally crisp all the way throughout, I think some of the early ones were video, that I picked out. First of all I don't perceive video as being able to have those soft edges in low light situations, that's almost a tip off to me right away and high contrast. The last one I just thought for sure was film just because of that rich contrast where the color held up, but I know these things are changing and high def is coming and it's probably

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sprinkled throughout here and is it? (laughter) I'm probably wrong on half of these things.

Does it ever strike you blatantly that something you're watching on TV is film or video?

Mostly it's on the video side of things when something is so, when I see a really hard edge in a high lit situation, I'm assuming that's video.

Are there feelings for each that you can describe?

I assume that film is a higher budget and there's more production values. Even film's going to start to be shot in video. HDTV, hi def will be the new.

Parallel. Did you notice any motion difference in the two?

No, I thought they were remarkably similar, I couldn't sense any at all, I wasn't quite sure how you were doing this...

Adjectives,

Film to me is lush, video is precise, film is soft, liquid, I feel liquid about film, film is moody, video is crisp, it's electric, video is hard edged, has a hardness, a coolness to it and film has a softness and a warmth. Even though I've seen all the opposites for both, but that's how I feel about.. I think that's how they're used often. I've seen video mimic film very well to a point where I say I don't know and vice verse. Video just can't handle certain demands.

Did you have a preference here?

I preferred the film look, I was looking for it, I ended up looking for at reflections on the floor, that's really where I was finding my preferences, I mean it was an exercise, I wasn't just caught up.

Culture,

Quantity drives video, it's a medium set up for quantity. People, deadlines are

incredible, people are under a great deal of pressure in video to produce quantity of product within a deadline, more so than film so I think it attracts a different, I tend to, my perception of the film culture is there's a lot more time spent surely per minute, the amount of production time per minute of product, my perception, most of the time, the vast majority of the time is much higher in film than it is in video. And that video is attractive as a medium to people who really have to do something quickly, and under a tight budget, and tight time and everything else, so it's sort of, and television accelerates that whole product, that whole thing, cause it really eats up, most of the stuff that's done on video is for television, where you just pump the stuff out, so I think people or projects and the people involved are attracted to the craft end of things on film more, they pay a lot more attention to it. Mostly because when someone makes a decision to go into film they include that in their budget and in their expectations.

So you think films are more expensive?

Yea, I do. It doesn't always have to be but it often is. It's more expensive for the stock and for the treatment of the film and the time from the beginning to the end, I think is spent more time in film than in video.

What if people took the same time per minute in video that they took in film?

I think the product would be much, much better, even though some of the stuff done on TV now is very high quality, the production values are very, very high, in some cases much better on some of those than on some films. But some of the current series out now, there's a tremendous amount of attention paid to lighting and to sound, and to set design and the whole business, they're still doing it very quickly. And some film is just badly done. But I think in general, the film group puts more into that, because film also can accept it, can

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deal with those values much better. Think when they go to the big trouble of producing like a "Dallas", which I think is shot on film still, with all those production values they have on that, that's shown on TV, a good deal of those are still shot on film, even though that's changing more and more it's, still they are taking tremendous time out to pay attention to production values. Film shot for theatrical release pay tremendous attention to scripts and quality of the acting, take lots of time to shoot the thing, much more than they traditionally give video, it's almost like you choose video because you're under constraints.

Where does that difference come from?

I think it came from economics, the economics of it. Most of video is shot live and it's event oriented and it's sports, or concerts or public affairs or something like that, where they have to switch, where it calls for switching, there's no script involved, the script that's there is really the event, it's uncontrolled. I think that's where video is head and shoulders above film in it's immediacy of quick, you know, the edit's done, it's over with, it's ready to air, boom, as you shoot it, it's already edited done. And they can pour vast resources into making that look wonderful but it's still a very, I think that's where it began, and it just sort of kept going from there so it still, I think that's where it began but also the technology is just now starting to catch up with film, it's always been inferior to film in terms of technology and just now recently with hi def, and just the cameras, capability of the cameras, computerization, one inch, and now beta and all these, the technology's catching up with film and it's now getting mighty close. All along I think whenever they had the chance they were using film style technique and film style or film skills to enhance video wherever it made sense. Early days of video, you needed so

much light that you didn't pay attention to quality lighting cause you just threw every bit of light you could find at the thing, and still were wishing you had more. Now that's changing, but it has this history that it's dealing with. It's still the medium of choice for high speed stuff and cutting, anytime you need to do multiple camera event...

Film future?

I don't know if it will ever be replaced, but I think film is being replaced...there never used to be a question when you wanted to do quality work but now video is good quality, there's still certain things you don't like to do in video but that's being wiped out all the time, more and more. If that's hi def I'm sold, I would shoot hi def in a minute cause that was really spectacular. To me that was clearly a film quality.

When you're watching TV do you have a preference?

I don't really care, on TV the stuff that film does really well sometimes gets lost on TV. The real impact is still in the theatre.

Likes Omnimax.

By and large I would prefer film to video on TV. One of the things I really like about video is the clarity, I mean there are certain things that I don't want to see on film. Sports to me is ridiculous to see on film, why bother, you want to see that hard edged clarity, you don't want to see subtleties in sports you want to see precision and that's where video really to me is, hi def will be wonderful, but dramatic stuff I still like film.

52.M Δ F

Screen A (F): colors are warmer, contrast is better.

53.M Δ F

As mentioned on the tape recording, my main criterion for film vs. video falls upon the "texture" of an image. Video,

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if it could be broken up into dots, has a much tighter spacing of these dots, then the image is tighter and perhaps more lifelike. Again, for some reason the slightly grainier appearance to film appeals to me more. Maybe it's just that I expect film to be like older films, grainy.

54.M Δ F

The color of the dancers clothing was more accurate on screen B (in video) {not true - K.F.}. I felt more comfortable watching screen A because I am more accustomed to watching film than video.

55.M Δ V

There are clearly programs where I find it hard to be sure but generally I find a different visual feeling to film than video. It's tough, screen B looks like many old technicolor movies transferred to video. A (V) looks like it could have originally been shot in video and doesn't suffer the degradation.

56.M X V

Recognition of the film/video clip tends to color one's perception as to its origin- i.e. if you know something originated on video, it is hard to imagine it could have been shot on film. Snow is a giveaway for video. Harsher colors on the video. Also a tendency for color saturation in the video (esp. strongly lit flesh tones).

57.M Δ F

For me, it doesn't make much difference if the program is made with film or video. My guess is that video gives a better image than film. If my assumption is correct, the video is sharper but it is harder on my eyes.