



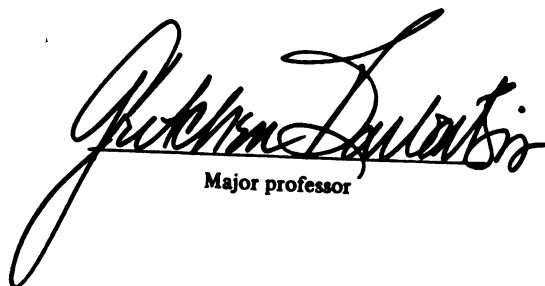
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**Pictorial Language:
A Cross-National Study of
Television News**
presented by

Lori Suzanne Owen

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PICTORIAL LANGUAGE: A CROSS-NATIONAL
STUDY OF TELEVISION NEWS

by

Lori Suzanne Owen

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

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ABSTRACT

PICTORIAL LANGUAGE: A CROSS-NATIONAL STUDY OF TELEVISION NEWS

By

Lori Suzanne Owen

This study examines television news cross-nationally for patterns in the visual compositions.

News story content was kept constant by finding one story covered by all seven sample countries. Each story was broken down frame by frame and the underlying structure coded for certain characteristics. Exploratory in nature, the search was to find patterns of similarities or differences, and not to attribute these patterns to any particular factors (political, economic or otherwise). However, support for the notion of universality was anticipated--that is, finding a high degree of similarity in the visual composition.

Definite compositional patterns were found in nearly 80 percent of the categories. This confirms that television pictorial elements are used similarly cross-nationally to a high degree.

Accepted by the faculty of the Department of
Telecommunication, College of Communication Arts and
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degree.

Director of Thesis

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To the many other friends and folk who put up with me during this effort.

And to my family who took great pains to keep in touch while my nose was in my books; and supported me in my goal.

TABLE OF CONTENTS

	Page
List of Tables	v
List of Figures	vi
CHAPTER	
I INTRODUCTION.....	1
Overview and Definition.....	1
Purpose.....	3
Scenarios.....	4
Summary.....	5
Notes--Chapter I.....	7
II THEORETIC RATIONALE.....	8
Overview.....	8
Brief Historical Review.....	8
Previous Research.....	11
Multiple Frame Media.....	12
Single Frame Media.....	13
Summary.....	16
Notes--Chapter II.....	17
III METHODS.....	19
Overview.....	19
Sample.....	19
Unit of Analysis.....	21
Instrumentation.....	22
Coding Procedure.....	29

TABLE OF CONTENTS (CONTINUED)

III (continued)	
Judges.....	32
Analysis.....	32
Summary.....	33
Notes--Chapter III.....	34
IV RESULTS.....	35
Overview.....	35
Introduction.....	35
Findings.....	36
Underlying Structure	
Field Forces.....	43
Image.....	44
Keys/Titles.....	47
Multiple Frame Characteristics.....	48
Meaning.....	49
Pictorial Language Refinements.....	52
Summary.....	53
V DISCUSSION.....	59
Overview.....	59
Discussion of Early Assumptions.....	59
Design Limitations.....	60
Suggested Directions for Further Research.....	61
Summary.....	64
APPENDIX A: Original Coding Instrument.....	66
APPENDIX B: Revised Coding Instrument.....	74
APPENDIX C: Code Book for Revised Coding Instrument..	75
LIST OF REFERENCES.....	76

LIST OF TABLES

	Page
Table 1: Total Story Lengths, Number of Camera Shots, and Average Shot Length.....	37
Table 2: Underlying Structure: Field Forces.....	39
Table 3: Underlying Structure: Image.....	40
Table 4: Underlying Structure: Titles.....	42
Table 5: Underlying Structure: Multiple Frame Characteristics.....	50
Table 6: Surface Pictorial Content Information.....	55
Table 7: Dominant Elements for Each Coding Category.....	56

LIST OF FIGURES

	Page
Figure 1: Characters.....	24
Figure 2: Operations.....	26
Figure 3: Transformations.....	28
Figure 4: Field Forces.....	30

CHAPTER I

INTRODUCTION

Overview and Definition

Filmmakers, graphic designers and photographers work within various pictorial media. Television message creators are included among these pictorial communicators.

According to Barbatsis,

as pictorial communicators, television message makers use a pictorial language to create their messages. A pan does not occur at random, nor is a zoom merely a way to break up a static shot. Similarly, the choice of a long shot or a close-up is a deliberate one, and the cut from one to the other is not just an attempt to provide visual diversity. Each of these choices reflects an intentional structuring of information based on the properties of a pictorial language. To be sure, some pictorial communicators are more effective in using the language than others, and most could probably not articulate the grammar of their language in any systematic way. Few would deny, however, that the meaning of their messages is primarily in the pictorial organization of information.¹

A familiar notion is the idea that pictures are universally understood. For this study the visual compositions of television news images is first broken into their most basic formal elements. From this one can look for and analyze the patterns of similarities or differences between the sample countries. This also allows for comparisons between countries of the pictorial structures and their constructed meanings.

In an attempt to understand the way pictures construct meaning, a theoretical framework was developed by Barbatsis,² which defined the coding instrument (See Appendix A).³ It is based on the works of Worth,⁴ Goodman,⁵ Donis,⁶ and Zettl. Initially developed in the early 80's, it was tested in the fall of 1984 to determine its applicability for finding patterns in the visual composition of single frame television images (TV program logos).⁷

At the same time, the opportunity to utilize videotapes of television news broadcasts from around the world (provided by the United States Information Agency) presented the unique chance to search for differences between countries in their use of this pictorial language.

A familiar notion is the idea that pictures are universally understood. By analyzing the visual

compositions from various countries, the pictorial structures can be compared.

In our age of live news coverage from anywhere in the world, of satellite transmissions and massive news gathering agencies, we are moving in the direction of Marshall McLuhan's "global village." We realize that our spoken and written languages are different around the world, so we translate them in order to communicate. At this point, however, it is not even known if our pictorial languages differ. If they are found to be different enough, then perhaps we will need to learn to translate our pictorial language as well. At this time we are already exchanging video images, without knowing if we are conveying or receiving the intended meanings.

Purpose

The primary purpose of the research is to begin to test cross-nationally for patterns within the visual composition of TV news images in an attempt to lay the groundwork for answering some of the previously asked questions. This study is exploratory in nature. Instead of answering all of the previously asked questions, the results should answer some of the questions and perhaps ask many more. This study is not an attempt to create the definitive study of the visual

composition of television news images from country to country. Such an effort would be overwhelming at best, and ludicrous at the worst. Admittedly, some images must transcend national borders, how else can the television and film import/export markets be explained? Yet there has been no definitive study of the visual composition of television news images from country to country.

A secondary purpose of this study is to take the next logical step to test the theoretical framework to determine its validity for multiple frame images. Initially developed in the early 80's, the framework was tested in the fall of 1984 to determine its applicability for finding patterns in the visual composition of single frame television images (television program logos). This framework (and resulting coding instrument) showed its validity for the description of pictorial language associated with single frame media. This study provided the opportunity to test its use for multiple frame images.

Scenarios

One possible result of this study might include finding support for the notion of "universality," that

is finding a high degree of similarity in the visual compositions between the sample countries.

This could be a result of the technical constraints of the medium, or from the education/training of the message creators. Another possible result could be finding great differences between the compositional structures. These differences could perhaps be attributed to differing economic constraints or cultural differences which may dictate visual structures. Perhaps the training of the message creators would create diversity instead of similarities between countries.

The predicted finding of this study is that there won't be many major differences in the patterns between countries. Since this study is exploratory, where ever there are differences found, there is no intent to attribute them to a cause, merely to present them.

Summary

This chapter has set the background for looking at television as a form of pictorial communication. Utilizing the theoretical framework developed by Barbatsis, and tested by Barbatsis, Kenney and Owen for single frame television images, this study proposes to test the framework for validity with multiple frame

images (television news stories) and search for patterns of visual composition among the countries sampled.

NOTES--CHAPTER I

- 1 Barbatsis, Gretchen, "Pictorial Language Structure:
Theoretical Framework and Description." Paper
presented at the Speech Communication Association,
Washington, D.C., 1983, p. 1.
- 2 Ibid.
- 3 Worth, S. Studying Visual Communication. Phila-
delphia, PA: University of Pennsylvania Press,
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- 4 Goodman, N. Languages of Art: An Approach to the
Theory of Symbols. Indianapolis, IN: Hackett
Publishing Co., 1976.
- 5 Dondis, D. A Primer of Visual Literacy. Englewood
Cliffs, NJ: Prentice Hall, 1973.
- 6 Zettl, H. Sight, Sound, Motion: Applied Media
Aesthetics. Blemont, CA: Wadsworth Publishing
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- 7 Barbatsis, G., K. Kenney and L. Owen. "Television
Program Logos: Pictorially Encoding Storytelling
Themes." Paper presented at the Speech Communica-
tion Association, Chicago, IL, 1986.

CHAPTER II

THEORETICAL RATIONALE

Overview

The following chapter will summarize the findings of the general literature review of pictorial language studies. It will primarily focus on television as the visual medium.

Brief Historical Review of the Theoretical Framework for this Study

As mentioned earlier, this study is based on the theoretical framework developed by Barbatsis, which in turn is based on the theoretic principles of Dondis, Goodman, Worth and Zettl.

Researchers have concerned themselves with the structure (Schramm & Roberts, 1972), aesthetics (Zettl, 1968) and linguistics of the visual image (Gombrick, 1960). Initial efforts have been inadequate as they try

to create a structure for analyzing visual images based on principles of visual perception (Arnheim, 1965, Dondis, 1973, Zettl, 1973) or on accepted ideas of languages and linguistics (Worth, 1981).

Nelson Goodman describes properties of a symbol as encompassing all communication modes and media. The idea of characters, operations and transformations as part of a symbol system comes from Larry Gross, an idea¹ he developed from Piaget.

Nelson Goodman created a theoretical framework which provides for the description of a symbol system according to its characters, operations and transformations.

Denotative reference with a picture indicates what the image represents; for example, if the picture is of a car, it is a label for the object "car." While the picture denotes the object to be a car, it will also be a certain kind of representation of that car, due to its intentional construction. The meaning of the information in the picture depends not only on what is represented (the object) but also what kind of representation it is. For example, the picture denotes a car. What kind of representation it is depends on the labels applied. If it is interpreted as "red" and "hot," these labels will be applied to it. The label

"red" is the literal exemplification. The label "hot" is the metaphorical exemplification. For this study, the metaphorical exemplification is the expressed meaning of what is represented.

According to Barbatsis,

this theoretical distinction of denotative and non-denotative reference elaborated by Goodman provides the final piece of the framework for describing pictorial language. Because the structure of information in a picture is in the labels it possesses and refers to, pictorial properties may be identified according to exemplifications by identifying the labels which apply to the characters, operations and transformations of pictorial language. In the cast of literal exemplification, these labels will include only pictorial qualities (e.g. diagonalness) (Goodman, 1976). In the case of metaphorical exemplification (expression) the labels will include only properties that are constant relative to pictorial qualities (e.g. with diagonalness, instability) (Goodman, 1976). In both cases, the labels will relate to the potential of a medium to give form to pictorial qualities.²

The meanings utilized for this study are conventions expressed in production textbooks and criticism literature of film, television, photography and graphic design.

It is realized that different media will potentially have different forms. The pictorial language is structured to allow for single frame media (photographs, paintings), or multiple frame media (film, video). Any analysis of multiple frame assumes the

properties to be continuous, including all the properties of the single frame media.

Previous Research

There was not a single specific body of research upon which to build. Instead a multidisciplinary approach was taken, researching areas of television, film, photography and pictorial literacy.

Giving credence to the notion that television images are carefully constructed is John Hartley's article "Watch Your Language." He cautions television viewers that TV is not as realistic as the images may seem, "A televised tree, for example, could come across in all sorts of ways. It could be a spreading oak accompanied by gentle birdsong, or it could have the wind whistling through its leaves on a dark night. The same tree can prompt completely different meanings.³

He goes on the idea that TV has its own techniques and conventions and that the viewer is encouraged to remain ignorant of them. "The television picture is not the real world. It is a form of language, as arbitrarily chosen as any other--and it actively creates meaning."⁴

Other research was found which was tangentially related to this study; that is they used some similar

coding categories, focused in detail on the use of one formal element (in either photography, film or TV) which was used in the coding instrument for this study, or examined the uses of pictures cross-nationally.

Multiple Frame Media

Previous research drawn from both TV and film support the categories of formal elements used in this study.

Janice Wilson, in her thesis, "An Analysis of Film Pace," uses a framework measuring shot duration, lighting, camera angle, distance, movement, action within and across shots, sound, transitional devices and narrative complexity. Some of these categories correspond to the framework established for this study.

Also utilizing similar categories is Richard Lewis' thesis, "Differences in the Formal Structure of Televised Commercials in Great Britain and the United States." He coded each shot for camera movement, scale, use of zoom lenses, use of titles, transitions and juxtaposition. He found some basic patterns between the two sample groups.

Rayburn Beale's thesis, "Composition as an Element of Photographic Style," is completely based upon the theoretical categories presented in Denis Dondis' A Primer of Visual Literacy.

Some studies focused on areas which, in this study, may comprise as little as a single coding category. For example, Scott Shamp, in his thesis entitled, "Temporal Perceptions of Different Length Transitions in Screen Media," tests how transitions affect viewer perceptions of time.

Stephen Aker, in his dissertation, "Viewers Perception of Velocity and Distance in Televised Events," compared how camera lens lengths influence the representation of distance and velocity on the television screen. Results of his study were presented as evidence that "the form of the televised message⁵ deserves as much attention as television's content."

Paul Burrows' thesis, "An Instructional Television Program in Visual Communication: 'Vector Field Forces,'" produced an instructional video focusing on the principles of vectors as they occur in two-dimensional pictorial representations of the three-dimensional world. This supports the theory that field forces are to be considered when examining the visual structure of an image.

Single Frame Media

Other researchers were concerned with pictures or photographs; their significance, perception and interpretation.

Stuart Hall has defined levels of significance for news photographs, based on the assumptions that (1) all photos signify meanings at several different levels, (2) each level has its own rules and (3) the "meaning" of the photo is produced by a complex interweaving of the different levels. Levels defined by Hall include technical constraints, denotative codes, compositional codes, expressive codes, the news-value itself, manipulations within the frame (of display), the integration of the photo into the news story and then the captions given the photo. Many of these categories theoretically support the notions of intentionality, exemplified meanings and expressed meanings. Also there is support for the study of the context of the photo, the juxtaposition of image with image, or image with text.

Hall also addresses the role of the photographer in this process. "Depending on their level of expertise, the photographer not only transposes real-life subjects into two-dimensional images, but does it using subtle compositional rules derived from the historically and culturally imprinted codes of the visual culture of his/her profession as a learned practice."⁶

"Perception of Formal Elements in Photographs: Differences Between Trained and Untrained Viewers," by

Meyers, examines the difference in sensitivity to formal elements, dependent upon training in visual media. Of interest was the finding that people with training in art history or photography are more perceptive of the formal elements of the photographs, and the untrained viewers tended to focus on the content of the photographs.

A thesis by Kauffman, "Conventions of Picturing: An Exploration of the Social Context of Photographic Interpretation," explored the acquisition of conventions of pictorial structure as a strategy of interpreting news and advertising photographs. The main finding of interest here is that pictorial conventions of advertising seem to facilitate attention to pictorial structure, while the pictorial conventions of news seem to promote picture content as the primary source of meaning.

Two studies examine the use of pictures in non-literate cultures. Sikandra Spain asks, "which pictures are understood by which people under which circumstances?" He deals not with television, but with printed materials, specifically, a pictorial flyer designed to teach mothers how to mix a simple rehydration solution of water, sugar and salt. He found that if the population has a low level of pictorial

ability, continued exposure and training may be necessary for comprehension of pictorial materials.

Spain's findings are supported by John Kennedy's article, "Ancient and Modern Picture Perception Abilities in Africa." Kennedy concluded that "some ethnic groups are better than others at pictorial perception" and that at times remedial training is necessary.⁷ This article also mentions a study conducted by Duncan, Goulay and Hudson, using basic black and white outline pictures. Mentioned is potential problem of egocentric interpretations... what is a good or bad likeness to begin with? Investigators rely on thier own standards which may or may not bias the pictorial materials, and thus the entire study right from the start. This study and the previous one are of interest in the light of questions left at the conclusion of this study.

Summary

The preceeding chapter has presented a historical background for the theories used in this study, as well as other studies tangentially related. The theories have best been tested by Barbatsis, Kenney and Owen in their study of single frame TV images, which serves as a foundation for this research.⁷

NOTES--CHAPTER II

- 1 Goodman, N, Languages of Art: An Approach to the Theory of Symbols. Indianapolis, IN: Hackett Publishing Co., 1976.
- 2 Barbatsis, G. "Pictorial Language Structure: Theoretical Framework and Description." Paper presented to Speech Communication Association, Washington, D.C., 1983.
- 3 Hartley, J. "Watch Your Language," New Internationalist, January, 1983, p. 21.
- 4 Ibid.
- 5 Aker, S. "Viewers Perceptions of Velocity and Distance in Televised Events," Ph.D. Dissertation, University of Utah, 1981.
- 6 Hall, S. "The Determinations of Newsphotographs," Working Papers in Cultural Studies, 3, Autumn, 1972, p. 62.
- 7 Kennedy, J. "Ancient and Modern Picture-Perception Abilities in Africa," Journal of Aesthetics and Art Criticism. Spring, 1976, p. 293.

8

Barbatsis, G., K. Kenney and L. Owen. "Television Program Logos: Pictorially Encliding Storytelling Themes," Paper presented to the Speech Communication Association, Chicago, 1986.

CHAPTER III

METHODS

Overview

This section describes the techniques of data collection used in this study. Attention is given to the research design, and kinds of data collected. Other information includes definitions of sample units, the methods of selecting the sample, measurements made for each sample unit, instruments used and any special problems found in the data collection.

Sample

The sample for this study consists of television news broadcasts from seven countries: China, France, Germany, India, Italy, West Germany, the USA, and the USSR. Over a two-week period in June of 1984 all regularly televised news broadcasts were videotaped in the sample countries.

Originally, one news story was to be chosen from each of the sample countries on the same date. However, no one single story was covered by all the countries on any one date. By "allowing" several days on either side of the first intended date (June 9, 1984) the same news story subject was found for each country, keeping the story content relatively constant across the sample. June 6 through 13 was so determined as the time period for this study.

News stories from all seven countries within this period included the Pope's visit to Geneva, Switzerland, the EEC summit meetings in London, England, the 40th anniversary celebration of D-Day in France and the conflict between Sikhs and Indian military personnel at the Golden Temple complex in India.

The Golden Temple story was chosen for several reasons. First, it was an historical event in a geographic place. This allowed TV camera operators more options in visually covering the story, rather than merely photographing a parade of dignitaries or delegates from a vantage point to which all photographers may have been relegated. Secondly, the story seemed more newsworthy worldwide than a story primarily of interest to (and broadcast only by) the participant countries. Finally, this story had

recurring coverage. Daily developments kept it a major global headline for over a week. Some countries in the sample covered the original action and other picked up the subsequent developments. Among them, all covered some aspect of the news story the week of June 6-13, 1984.

Unit of Analysis

The unit of analysis for this study of visual composition is the single frame. The term frame here denotes the length of time between transitions. According to the definition at the outset of the study, transitions were identified as takes, wipes, dissolves¹ and fades. However, during practice coding sessions it was realized that these are not the only ones, but that camera movement serves as a transition as well (pans, tilts, zooms, etc.). Often in television production the shots are structured in the pre-production stages. They are sketched out on storyboards which show what the camera will see. When a camera movement is planned, it is included in this storyboard. This is an industry standard in which both the opening of a shot (where the camera begins) and the close (where the camera movement ends) are indicated. Such a practice supports the notion of camera movement as a transition. This

determination created a greater number of frames to be coded, since a shot which included camera movement needed to be coded at the start and end of each movement. Frames were numbered consecutively. When a shot had one or more camera movements, the frames were labeled with a letter in addition to the number (e.g. 1, 2a, 3, 4a, 4b, etc.).

Instrumentation

The theoretical framework defining the coding instrument was developed by Barbatsis (See Figures 1, 2, and 3), and is based on the works of Dondis, Goodman,² Worth and Zettl.

This framework identifies three categories of components found in the compositional structure of a pictorial image; characters, operations and transformations. Characters are inscriptions, which, taken together, make up the symbol scheme of a language. Characters serve the same function as letters of the alphabet. An operation is a process of deriving one expression from others according to a rule. For pictorial structures it is the process of ordering pictorial elements within a frame (for single frame media). For example if we order the elements according to the process of scale we will have either the

expression of a close-up, medium shot, or a long shot (or something in between). For multiple frame media, operations include the processes which order the frames. For instance, a multiple frame operation could be the transition between frames, either a take, fade, wipe, dissolve, or camera movement. A transformation is an operation of changing one configuration into another according to a rule. For pictorial structures they are operations which change surface characteristics, but not the underlying structure of the picture. Transformations are operational. A transformation of chroma, (the presence of color, for example, alters the surface characteristics but not the underlying structure of the image.

There are three basic characters for single frame media (See Figure 1). Each has a field of reference. For example, line allows a direction, so direction is the referent of line. Shape is a fundamental, planal figure which allows a form. Therefore, form is the referent of shape. Tone is the juxtaposition of lightness and darkness to reinforce the appearance of reality through the sensation of reflected light and cast shadows. It allows the illusion of dimension and texture. Therefore the referent for tone is dimension.

Character		Field of Reference		
	Pictorial Quality	Exemplifies	Expresses	
single frame medium	line	direction	horizontal	stability, balance serenity, repose
		vertical	strength, aspiration, impending activity	
		diagonal	instability, action, threat, excitement	
		curve	encompassment, warmth repetition	
	shape	form	square	dull, honest, work-like, straight
			triangle	action, conflict, tension
			circle	endlessness, warmth, protection
	tone	dimension	continuous	naturalness
			light dark	purity, translucence ominous, heaviness, strength, poacity

multiple frame medium	sequence	time/space	change	movement

FIGURE 1. CHARACTERS

This is especially important in a two dimensional medium such as television.

There is one additional character which is for multiple frame medium. Sequence is the order and arrangement of images (or in this study, frames). This allows a sense of time and space. Therefore the referent for sequence is time/space.

There are five operations for single frame media (See Figure 2). The first, scale, is the relative size of the object in relationship to the field or environment (in this case, the screen size). Angle means the physical angle from which an object is viewed. Lighting is the illumination of objects to provide form and dimension. Perspective concerns the relationship of the camera to the action. Field of view means the relative vista, how much and in what way objects appear in focus and magnitude.

Multiple frame operations include movement, transition, pace and juxtaposition. Movement makes use of camera movements and focal length changes. Transitions are devices for connecting two shots so that they are perceived to relate to one another. Pace concerns the duration of the segment, the subjective or psychological time. Juxtaposition is the placing of one

Operation		Principle of Ordering	
single frame medium	scale	field-of-view close medium far	intimacy, internal naturalness context, external
	angle	level-of-view slight high low	naturalness diminished importance increased importance
	perspective	depth-of-view normal narrow wide	naturalness compression exaggeration
	light	contrast natural below above side front	naturalness sinister, evil angelic, spiritual disfigurement, tension flat

multiple frame medium	movement		pan/truck length, expanse tilt/ped height, depth zoom/dolly-in increased intensity, involvement zoom/dolly-out decreased intensity, involvement arc changing perspective
	transition		fade break in time take simultaneity, no break dissolve transition in time/space wipe extraordinary change in time/space
	pace		rapid activity, authority excitement slow passivity, softness, calm, tranquility
	juxtaposition		narrative progressing time flash-back change to past time flash-forward change to future time cross-cut correlation of multiple times

FIGURE 2. OPERATIONS

image next to another image. It controls the structure, meaning and effect of the images.

There are three transformations for single frames (See Figure 3). Chroma is the use of color. Hue denotes the color itself, satuation the relative purity of a color from the hue to gray. Pattern utilizes special effects separated into substitution, subtraction, addition and multiplication. Size concerns the vertical and horizontal measure of the image.

Transformations for multiple frames include speed, which is the number of frames per second projected (slow-motion, normal or fast motion) and rotation, which involves revolving an image around one of three axes.

Using this framework identifying characters, operations and transformations the principle coding³ instrument was adapted from an earlier study. Adaptation included the addition of categories identifying the structure of field forces in a pictorial⁴ image. Field forces influence our perception of the image as a manageable whole or as random fragments. Field forces lead our eyes within the frame, establish balance or imbalance, and concern the amount and complexity of the visual information within the frame. When coding these field forces, one must take into

Principle of Ordering				
		Pictorial Quality	Exemplifies	Expresses
single frame medium	chroma	hue	yellow	light, warmth, vitality expansion, well-being
			red	emotion, activity warmth, stimulation
			blue	cool, contraction, passive, soft
			violet	subdued emotion, enigma, subdued activity
			orange	activated emotion, activity
			green	mellow, abated excitement
		saturation	high	uncomplicated, heavy, overstated
			medium	natural
			low	subtle, restful, light
	pattern	addition	super- imposition	complexity
montage			complexity	

multiple frame medium	frame speed	slow motion	dignity, solemnity mechanicalness	
		fast motion		
	rotation	y-axis	flipping tumbling spinning	
		x-axis		
		z-axis		

FIGURE 3. TRANSFORMATIONS

account the entire image, not focus only on singular, autonomous elements.

Field forces included in the instrument are vectors, balance, field density and field complexity (Figure 4).

The most powerful of these forces are vectors. "They lead our eyes from one point to another. Vectors have both direction and magnitude; they may continue in the same direction, changing slowly, or they may converge and change directions quickly."⁵

The frame of the picture yields another strong force, pulling masses outward. Together with the directions present in the frame already, this magnetism⁶ serves to create an image's state of balance.

Field density concerns the amount of visual information and the number of elements in the frame. Field complexity is the variation of the visual information, the simplicity or diversity of the patterns or figures within the frame.

Coding Procedures

The coding form on which the information was initially intended to be recorded is found in Appendix A. It was adapted from a previous study of visual

<u>Field Force</u>	<u>Principle of Ordering</u>		
	<u>Pictorial Quality</u>	<u>Exemplifies</u>	<u>Expresses</u>
balance	degree of structural stability	stable	authority, low tension, permanence
		neutral	controlled tension
		labile	extreme excitement, instability, tension
density	amount of information	low	episodicity, loose connections
		high	repetition, proximity, continuity
complexity	variation in information	low	direct, uniform
		high	discontinuity, intricacy
dominant vector	degree of directional force	motion index	strong, definite, decisive, guiding, supportive, pointing, aiming, gentle
		graphic	weak, ambivalent, static, calm, vague
vector type	rate of vector change	continuing	smooth, soothing, renewing, additive
		converging	opposing, abrupt colliding, conflicting
vector change	change in direction of energy	fast	excitement, confusion
		slow	smooth, gentle, progress
		no change	stability

FIGURE 4. FIELD FORCES

composition of single frame TV images. However, in the interests of money management an alternative, more efficient single-page coding form was developed to replace this long form. The revised coding instrument (Appendix B) was capable of recording a total of 20 shots, often more than was necessary. This new sheet required a code book (Appendix C).

Newscasts were selected for coding in random order. Coding the stories was a two-part process. First, as in previous studies,⁷ the characters, operations and transformations were identified. For each frame the underlying structure was coded for the dominant line, shape and time. Operations, the underlying arrangement of characters, were coded for dominant scale, angle, perspective and lighting. Thirdly, transformations present within each frame were coded according to the ones dominating in the composition.

The second part of the process involved watching the entire shot and coding it as a single unit, including the field forces of field density and complexity, balance within the frame, and vectors (dominant vector, vector type, and vector change).

Coding of the stories took place over a two-week time period.

Judges

Judges included graduate students and experienced single frame image coders. Prior to coding, judges received approximately ten hours of training and practice in single frame image coding. For this study, practice with multiple frame images was provided, along with discussion and definition of coding categories. For the final practice session, two news stories similar to those selected were coded.

8

As in previous research, the two judges viewed the tapes together. After each had coded it separately, they compared codes and negotiated the differences until an agreement could be reached. The choice of this methodology has been defended thus:

Pictorial images do not consist of discrete units of singular meaning; they are both syntactically and semantically dense. An image, therefore, may contain both horizontal and vertical line elements and judges would discuss the dominance of one line form in an image's abstract understructure.⁹

Analysis

The analysis of data is descriptive, with nominal level data. The primary thrust is to identify patterns of visual composition for the sample news stories. Most

instructive are frequency analyses of the patterns found.

Tables include information concerning basic patterns found in the visual composition of each news story. These included length of the story, number of frames, average length of each frame, overall percentages across the sample for each coding category, and percentages for the dominant response to each category.

Summary

This chapter has addressed the questions brought out in Chapter II, including how these patterns of pictorial composition would be determined and categorized. The sample, units of analysis and refinement of the coding instrument were discussed. Coding procedures and data analysis procedures to be performed on the data gathered were outlined.

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- 9
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CHAPTER IV

RESULTS

Overview

The following chapter discusses results of the present study of visual composition between sample countries. It details frequencies of various responses to the coding categories, provides an overview of the data analysis techniques used, and provides the results of the analysis.

Introduction

The primary focus of the analysis was to identify the formal pictorial qualities occurring with high or low frequency patterns across the sample. Other interests included exploring any methodological patterns found in the results which would refine future coding procedures.

Not really a focus of this study, but an interesting aside is a comparison of the surface pictorial content (the actual subject/object action in the picture) patterns occurring across the sample.

Within the underlying structure, the pictorial elements of field forces, images, key/titles, and multiple-frame categories were compared between countries.

Findings

It is important to have a thorough knowledge of the sample. Each country spent a different length of time on this story, each used a sequence of different numbers of frames to visually "tell" the story. The average frame length differences are not a primary focus, but are provided to give the reader additional information found in the course of this study. (Table 1)

Two country's stories were (in relation to the other stories) relatively short, France and West Germany. These were included in the study because (1) the stories were chosen for presenting the "best" coverage -- i.e. some form of pictorial information in addition to the news presenter, and (2) the coverage of this story is in line with the country's general style of news coverage; i.e., it is not the only story with or without remote footage. or the only one with a map, etc.

TABLE 1. TOTAL STORY LENGTHS, NUMBER OF CAMERA SHOTS, AND
AVERAGE SHOT LENGTHS

Country	Total Length	# of Frames	Average Frame Length -
China	:45	10	04.5 seconds
France	:41	1	41
India	8:00	33	14.5
Italy	1:10	12	05.8
W. Germany	:27	2	13.5
U.S.	1:55	20	05.8
USSR	:48	8	06
Total	13:46	86	13.0

The result is a lesser amount of pictorial information about which generalizations can be made.

India's coverage of the story is considerably longer than other countries, logically, since that is where the event occurred, and potentially involves a large part of the population. The result is a greater amount of pictorial information about which statements may be made. While differing lengths of the stories may seemingly skew the raw numbers, they do not affect the percentages by which the comparisons are made.

Results of pictorial content analysis are discussed according to the meanings conveyed by the individual structures of images, title and sequence, and by their synthesis into an overall pictorial gestalt (Zettl, 1983). This discussion pattern is modeled upon earlier studies of visual composition (Barbatsis, Kenney, and Owen, 1986).

Patterns created by the synthesis of image, motion and title are identified in the underlying structure of field forces (Table 2). Structures associated with image (Table 3) and title (Table 4) reflect the meaning contributed to this gestalt by the elements it consumes. Patterns found will be discussed both in terms of compositional elements and the meanings associated with time, as indicated in the coding instruments (Figures 1-3).

TABLE 2. UNDERLYING STRUCTURE: FIELD FORCES

	Total (N=108)	China (N=16)	France (N=2)	India (N=59)	Italy (N=16)	W. Germany (N=2)	U.S.S.R. (N=13)	U.S. (N=30)
<u>Placement in Frame</u>								
neutral	79%	94%	100%	78%	88%	--	62%	100%
labile	7	--	--	7	--	50%	23	--
stable	14	6	--	15	12	50	15	--
<u>Field Density</u>								
high	59%	63%	--	64%	69%	--	38%	47%
low	41	37	100%	36	31	100%	62	53
<u>Field Complexity</u>								
high	60%	88%	50%	49%	75%	100%	54%	47%
low	40	12	50	51	25	--	46	53
<u>Dominant Vector</u>								
motion	77%	88%	100%	73%	81%	50%	69%	91%
index	15	6	--	19	13	50	15.5	3
graphic	8	6	--	9	6	--	15.5	6
<u>Vector Type</u>								
converging	71%	88%	100%	73%	50%	100%	69%	87%
continuing	29	12	--	37	50	--	31	13
<u>Vector Change</u>								
fast	53%	50%	100%	52%	44%	--	69%	25%
slow	24	38	--	24	25	50%	23	52
none	23	12	--	24	31	50	8	3

TABLE 3. UNDERLYING STRUCTURE: IMAGE

	Total	China	France	India	Italy	W. Germany	U.S.S.R.	U.S.
<u>Line</u>								
horizontal	17%	12.5%	100%	13.5%	19%	50%	15.4%	40%
vertical	41	37.5	--	42.5	50	50	30.7	43
diagonal	32	25	--	35.5	25	--	46.2	17
curve	10	25	--	8.5	6	--	7.7	--
<u>Shape</u>								
rectangle	87%	69%	100%	91.5%	94%	100%	77%	94%
triangle	6.5	--	--	5	6	--	23	3
circle	6.5	31	--	3.5	--	--	--	3
<u>Tone</u>								
light	5%	--	--	3.5%	19%	--	7%	3%
dark	1	--	--	--	6	--	--	--
continuous	94	100%	100%	96.5	75	100%	93	97
<u>Scale</u>								
long shot	20%	25%	--	17%	38%	--	15.5%	23%
medium shot	64	44	100%	72.5	56	100%	46	63
close-up	16	31	--	10.5	6	--	38.5	14
<u>Angle</u>								
high	51%	63%	--	49%	37.5%	--	77%	10%
slight	40	31	100%	41	50	100%	15	80
low	9	6	--	10	12.5	--	8	10
<u>Lighting</u>								
natural	95%	100%	100%	96.5%	81%	100%	100%	100%
below	--	--	--	--	--	--	--	--
behind	3	--	--	3.5	6	--	--	--
above	--	--	--	--	--	--	--	--
side	2	--	--	--	13	--	--	--
front	--	--	--	--	--	--	--	--
<u>Perspective</u>								
reportive	12%	--	100%	13%	12.5%	100%	8%	6%
objective	85	87.5%	--	86	87.5	--	92	94
subjective	3	12.5	--	1	--	--	--	--

TABLE 3 -Continued

	Total	China	France	India	Italy	W. German	U.S.S.R.	U.S.
<u>Field of View</u>								
normal	69%	37.5%	100%	78%	75%	100%	54%	80%
narrow	31	62.5	...	22	25	...	46	20
wide	...	...	...	...	...	...	...	...
<u>Hue</u>								
warm hues	65%	62	100%	71.5%	69%	...	38.5%	53.5%
cool hues	21	19	...	23.5	19	50%	15.5	43.5
monochrome	14	19	...	5	12	50	46	3
<u>Saturation</u>								
high	7%	...	...	8.5%	12.5%	...	8%	18%
medium	36	19%	...	47.5	44	50%	...	55
low	43	62.5	100%	39	31	...	46	18
none (monochrome)	14	19	...	5	12.5	50	46	9

TABLE 4. UNDERLYING STRUCTURE: TITLES

	Total	China	France	India	Italy	W. Germany	U.S.S.R.	U.S.
<u>Key - Line</u>								
horizontal	75%	...	50%	...	100%	100%	...	100%
vertical	...	...	...	...	...	...	...	...
diagonal	25	...	50	...	...	...	...	...
curve	...	...	...	...	...	...	...	...
<u>Key - Shape</u>								
rectangle	75%	...	50%	...	100%	100%	...	100%
triangle	25	...	50	...	...	...	...	...
circle	...	...	...	...	...	...	...	...
<u>Key - Hue</u>								
warm hues	50%	...	50%	...	100%	...	...	50%
cool hues	25	...	50	...	...	...	...	50
monochrome	25	...	...	...	...	100%	...	...
<u>Key - Saturation</u>								
high	50%	...	50%	...	100%	...	...	50%
medium	25	...	50	...	...	...	...	50
low	...	...	...	...	...	...	...	...
none (mc)	25	...	...	...	...	100%	...	...

Underlying Structure: Field Forces

Field forces influence our perception of the image as a manageable whole or as random fragments. They lead our eyes within the frame, give a sense of balance or imbalance, and deal with the complexity and amount of visual information within the frame.

The dominant state of balance for the sample was primarily neutral. West Germany was the only exception (See Table 2) The two frames there were split between stabile and labile, 50/50. Otherwise it held at least 62 percent in any one country.

Field density (See Table 2) was split evenly between high and low across the sample. France and West Germany had 100 percent low density, followed by a distant 62 percent from the U.S.S.R. and 53 percent from the U.S. The remaining countries demonstrated a high level of field density; Italy with 69 percent; India, 64 percent; and China, 63 percent.

Field complexity, similarly, was spread relatively evenly (see Table 2), West Germany had 100 percent high complexity, followed by China with 88 percent; Italy, 75 percent; U.S.S.R., 54 percent; and France 50/50 percent. Only India and the U.S. had dominant patterns of low complexity, with 49 and 47 percent respectively.

The dominant vector throughout the sample was motion (see Table 2). In the composition represented by France, motion vector accounted for 100 percent, for the U.S., 91 percent; for China, 88 percent; for Italy, 81 percent; India, 73 percent; the U.S.S.R., 69 percent, and finally, West Germany with a split of 50 percent, motion and 50 percent, index. The secondary dominant vector was index, with 15 percent overall.

The dominant vector type was converging, with percentages from 50 (Italy) to 100 (France and West Germany).

Vector change was primarily fast; France, 100 percent; the U.S.S.R., 69 percent; India, 52 percent, and China, 50 percent. Only Italy, the U.S. and West Germany had a dominance of a slow vector change, with percentages of 44, 25 and 0 respectively. West Germany split 50/50 percent between slow and no vector change (Table 2).

Underlying Structure: Image

To analyze the underlying structure: image one must first identify all the elements (characters, operations, transformations) found in the compositional structure of a pictorial image (refer to Chapter III).

The dominant line across the sample was vertical (Table 3). Horizontal was secondary. The figures for

line varied widely among countries. Vertical lines dominated in Italy (50%), the U.S. (43%), India (42%), and China (37.5%). France had a dominant horizontal line (100%), West Germany had a 50/50 split, of horizontal and vertical; and the U.S.S.R. had a dominant diagonal line (46.2%).

The dominant shape was rectangle across all the sample countries, with percentages ranging from 69 to 100 percent (Table 3).

Dominant tone was continuous throughout, with percentages ranging between 75 and 100 (Table 3).

The dominant scale in all the sample countries was medium shot (Table 3). France and West Germany had 100 percent, then India (72.5%), the U.S. (63%), Italy (56%), the U.S.S.R. (46%), and China (44%).

Dominant angle varied throughout the sample (Table 3). France and West Germany each had 100 percent slight angle. The U.S. had 80 percent slight; and Italy 50 percent. The U.S.S.R. had 77 percent high angle shots; China, 63 percent; and India, 49 percent.

Lighting was almost exclusively natural throughout the sample (Table 3). The only deviations were India with 3.5 percent behind lighting and Italy with 13 percent side lighting and 6 percent behind lighting.

Perspective (not broken down in the data reported) was dominated by reportive when the news presenter was speaking (100%). When "on remote" the dominant perspective was objective (Table 3). Overall, objective perspective were found in the newscasts, with occasional subjective perspectives used by China (12.5%), and India (19%).

Field of view was primarily normal (Table 3). France and West Germany each had 100 percent normal, followed by the U.S. (80%), India (78%), Italy (75%), and the U.S.S.R. (54%). China had a dominance of narrow field of view with 62.9 percent.

Chroma was coded for each individual color, but for the sake of analysis, they were grouped according to warm and cool hues. Overall warm hues dominated (Table 3). France had 100 percent warm hues, followed by India (71.5%), Italy (69%), China (62%), and the U.S. (53.5%). West Germany split 50/50 between cool and monochrome; the U.S.S.R. had a dominance of monochrome (46%).

The saturation of these hues was low to medium (Table 3). France had 100 percent low saturation; China had 62.5 percent low, and the U.S.S.R. had a 46/46 percent split between low and none (monochrome). West Germany had 50 percent monochrome and 50 percent medium saturation. The U.S. had 55 percent medium saturation;

India had 47.5 percent medium; and Italy had 44 percent medium saturation.

Underlying Structure: Keys/Titles

Keys and titles were coded separately from the rest of the image. When a key or title was present, it was coded for line, shape and chroma (hue and saturation). When no chroma was used in the key or title, it was coded for tone.

Less than four percent of the frames contained a title or key (Table 4). When a key did occur, (China, India and the U.S.S.R. did not have any), the dominant line was primarily horizontal. Italy, West Germany and the U.S. had 100 percent horizontal lines in the keys. France's two keys were split 50/50 between horizontal and diagonal.

The shape of the key was dominated by rectangular (Table 4). Italy, West Germany and the U.S. had 100 percent rectangular shapes. France split 50/50 percent between rectangular and triangle.

Key hue was primarily warm; with Italy (100%), the U.S. (50/50%, warm and cool), France (50/50%, warm and cool), and West Germany, 100 percent monochrome (Table 4).

The key saturation was primarily high (Table 4). Italy had 100 percent high saturation; followed by the

U.S. and France with a 50/50 split between high and medium; and West Germany 100 percent monochrome (therefore not applicable).

Underlying Structure: Multiple Frame Characteristics

Multiple frame characteristics deal with the linkage of the single frames to become multiple frame images. These include camera movements, transitions, pace and juxtaposition.

France and West Germany had no camera movements present in their news stories (Table 5). Italy had movements in 25 of the frames; followed by the U.S. with 30 percent; 38 percent for both the U.S.S.R. and China, and lastly India with movement in 45 percent of the frames. Several types of movement, pedestals, arcs, or trucks were not displayed in the sample at all. Zooms (in and out) were the most frequently used camera movements, followed closely by tilts (up and down). Pans were demonstrated with the third highest frequency, and least frequent were trucks.

Transitions were relatively consistent across the sample, with takes dominant (Table 5). Camera movement was secondary as a transition with approximately 30 percent of the frequency. There were two wipes in the entire sample, and one dissolve present.

The pace overall was dominantly rapid (Table 5) with 100 percent for France, 87 percent for the U.S., 69 percent for the U.S.S.R., 57 percent for India, 56 percent for China and 50 percent for West Germany.

Juxtaposition was all narrative; however it was further broken down into narrative-narrative, or narrative-cross-cut. The narrative-cross-cuts occurred at the end of a given story, when there was a shift from progressing time to a correlation of multiple times (Figure 4). The dominant one was narrative-narrative with 100 percent, India; 96 percent, the U.S.; 94 percent, China; 92 percent, the U.S.S.R.; and a 50/50 percent split for Italy, West Germany and France.

Meaning

At this point it is possible to take the dominant elements already found for each category, determine it's expressed meanings and understand what is encoded within the news stories.

As a general pattern, TV news stories encode a sense of controlled tension, continuity and intricacy (field forces). These encoded meanings come from the instrument in the conventionalized meanings as defined by the message makers. This gestalt comes from an

TABLE 5. UNDERLYING STRUCTURE: MULTIPLE FRAME CHARACTERISTICS

	Total	China	France	India	Italy	W. Germany	U.S.S.R.	U.S.
<u>Movement</u>								
pans	9%	6%	5%	11.5%	6%	0.	7.5%	10%
tilts	12.5	13	...	20	...	...	...	...
zoom in	3.5	...	...	...	19	...	6	3.5
zoomout	13	19	...	13.5	...	...	12.5	13
truck	...	...	...	...	...	...	...	...
dolly	...	...	...	...	...	...	...	3.5
arc	...	...	...	...	...	...	...	...
pedestal	...	...	...	...	...	...	...	...
none	62	62	100%	55	75	100%	62	70
<u>Transition</u>								
fade	...	...	...	...	...	...	...	...
take	61%	62.5%	100%	56%	75%	50%	62%	66.5%
dissolve	...	...	...	...	...	...	...	3.5
wipe	1	...	...	...	...	50	...	...
movement	38	37.5	...	44	25	...	38	30
<u>Pace</u>								
rapid	57%	56%	100%	57%	63%	50% *	69%	87%
slow	42	44	...	43	37	...	31	13
<u>Juxtaposition</u>								
narrative-nar.	89%	94%	50%	100%	50%	50%	92%	96%
narrative-x.	7	6	50	...	50	50	8	3.5
not applic.	4	...	...	...	...	...	...	...

* W. Germany had one still photograph with a voice-over therefore there was no pace in the image.

impendingly active, straight, emotional and light (image), simultaneous, exciting, progressing (movement), naturalness (image). As indicated in Table 2, a predominant pattern in the compositional structure of field forces is a neutral placement in frame (state of balance), high field density, and a high field complexity. The underlying structure of images (Table 3) shows a dominance of pictorial design choices which communicate naturalness through continuous tone, medium scale, slight angle, natural lighting, objective perspective, normal field of view and medium saturation.

At the same time, the visual composition of television news stories tend to avoid encoding a sense of low tension, loose connections, uniformity (field forces) which may result from a combination of enigma or mellowness (title and image), as well as distortion, flatness, exaggeration or evilness (image), with other meanings. As indicated in Table 2, a labile state of balance occurs with low frequency. There is also a similar infrequency of violet or green (although not broken down in the data reported for hue). Thirdly, Table 3 shows the infrequency of wide angle perspectives, as well as lighting designs characterized by side, front or below source exaggerations.

Pictorial Language Refinements

The coding instrument and categories were found to be very well suited to this study.

There was only one minor refinement in the coding categories. During the actual coding, "camera movement" was a separate category from transitions. However, it was realized from looking at the results that if there was a transition at the end of a frame, there was no camera movement coded, and vice versa. So it was concluded that a camera movement serves as a transition, just as takes, fades or dissolves do. This idea is supported by the TV industry standard; when in the pre-production stage they sketch storyboards of what will be seen by the camera at each point in the show. A different sketch is needed for each separate shot change or at the beginning and end of each camera movement.

Summary

This chapter has presented results of the current investigation into visual composition of international television news images. Definite major patterns dominated the formal structure. Most of the compositional patterns emphasized naturalness, action, balance, rapid pace and warmth.

Major patterns dominating the underlying structure; field forces were neutral state of balance; motion as dominant vector; converging vectors; and fast vector changes.

Patterns dominating the underlying structure: image were vertical lines; rectangular shapes; continuous tone; medium scale; natural lighting; objective perspectives; normal field of view; and warm hues with medium to low saturation.

Major patterns dominating the underlying structure: keys/titles were horizontal line; rectangular shape; and a high saturation level.

Dominating the underlying structure: multiple frame characteristics were zooms as camera movements, takes as transitions, rapid pace, and narrative-narrative juxtaposition. Surface pictorial content information was not dominated by any one subject; each country chose its own angle (excuse the pun) of covering the story. Recovered arms/contraband; buildings and architecture; dignitaries visiting the temple, ceremonies inside the temple and the military presence were all primary subjects. The presence of news presenters varied among the sample.

Also presented in this chapter were meanings expressed by the above patterns of visual composition.

Further research needs to be done in determining various factors which may influence these patterns of visual composition. Questions concern the news photographers themselves, countries' participation in international news gathering agencies, and cultural uses of pictures before the advent of TV. These and many other questions will be addressed in the next chapter.

TABLE 6. SURFACE PICTORIAL CONTENT INFORMATION

	Total	China	France	India	Italy	W. Germany	U.S.S.R.	U.S.
Subject								
Arms/money/ contraband	22%	43%	...	24%	...	...	25%	...
Buildings/ architecture	16.5	13	...	20	13%	...	12.5	5%
Ceremonies	15.5	...	...	20	25	...	...	...
Recovery action	7	18	...	...	...	...	50	...
Sikhs	1	...	...	...	...	50%	...	5
Vandalism	1	...	...	...	6	...	...	...
Rowdy crowds	5	...	...	...	31	...	...	...
Guards/enforcers	4	13	...	...	13	...	...	50
Street Scenes	3	13	...	...	6	...	...	5
Dignitaries	13.5	...	...	22	6	...	...	10
People stranded by curfews	...	...	...	...	...	...	...	15

TABLE 6 - Continued

	Total	China	France	India	Italy	W. Germany	U.S.S.R.	U.S.
News presenter	7.5%	...	...	14%	...	...	...	...
News presenter/ map	2	...	50%	...	...	...	12.5%	10%
News presenter/ map/graphic	1	...	...	...	...	50%	...	...
News presenter/ graphic	1	...	50	...	...	...	...	...

TABLE 7. DOMINANT ELEMENTS IN EACH CODING CATEGORY

(Refer to code book in Appendix for codes used in this table.)							
	China	France	India	Italy	W. Germany	U.S.S.R.	U.S.
f=	16	2	59	16	2	13	30
line %	V 37.5	H 100	V 42.5	V 50	H/V 50/50	D 46.2	V 43
shape %	R 69	R 100	R 92	R 94	R 100	R 77	R 94
tone %	C 100	C 100	C 96.5	C 75	C 100	C 98	C 97
scale %	M 44	M 100	M 73	M 56	M 100	M 46	M 63
angle %	H 63	S 100	H 49	H 38	S 100	H 77	S 80
light %	N 100	N 100	N 97	N 81	N 100	N 100	N 100
perspective %	O 88	R 100	O 86	O 88	R/O 50/50	O 92	O 94
field of view %	NA 63	NO 100	NO 78	NO 75	NO 100	NO 54	NO 80
hue %	Y 50	R 100	Y 31	R/O 25/25	B/MC 50/50	MC 46	Y 37
saturation %	L 63	L 100	M 48	M 44	M/NONE 50/50	L/NONE 46/46	M 55
key %	0	100	0	6	50	0	10
key-line %	...	H/D 50/50	...	H 100	H 100	...	H 100
key-shape %	...	R/T 50/50	...	R 100	R 100	...	R 100
key-hue %	...	Y/B 50/50	...	R 100	MC 100	...	B/O/G 33/33/33
Key-saturation %	...	H/M 50/50	...	H 100	MC 100	...	H 100

TABLE 7 - ContinuedDominant Elements for Each Coding Catagory

	China	France	India	Italy	W. Germany	U.S.S.R.	U.S.
placement in field %	N 94	N 100	N 78	N 88	L/S 50/50	N 62	N 100
field density %	H 63	L 100	H 64	H 69	L 100	L 62	L 53
field complex. %	H 88	H/L 50/50	L 51	H 75	H 100	H 54	L 53
# of cam moves	6	0	27	4	0	5	30
movement #1 %	NA 63	NA 100	NA 55	NA 75	NA 100	NA 62	NA 70
movement #2 %	ZO 19	... TD/ZO 13.5/13.5	ZO 12.5	... 7.5/7.5	P/ZO 13	ZO 13	
transition %	T 63	T 100	T 56	T 75	T/W 50/50	T 68	T 66.5
if no moves %	T 100	T 100	T 100	T 100	T/W 50/50	T 100	T 95
pace %	R 56	R 100	R 57	R 63	R/NA 50/50	R 69	R 87
juxtaposition %	NN 94	NN/NC 50/50	NN 100	NN 50	NN/NC 50/50	NN 92	NN 96.6
dominant vec. %	M 88	M 100	M 73	M 81	I/M 50/50	M 69	M 91
vector type %	CV 88	CV 100	CV 73	CV/CT 50/50	CV/CT 50/50	CV 69	CV 87
vector change %	F 50	F 100	F 52	F 44	S/N 50/50	F 69	F 83
subject %	A 4	PG/PM 50/50	A 24	X 31	K/PMG 50/50	R 50	G 50

CHAPTER V

DISCUSSION

Overview

This thesis has explored visual composition of television news images in a cross-natural study of seven countries. It has been particularly concerned with the patterns found in the visual composition between the sample countries.

Discussion of Early Assumptions

It has long been assumed that pictures are universally understood. For this study that assumption was translated to mean that the structure of pictorial images would have certain similarities (or patterns) among different countries. By analyzing visual composition of material from various countries, the pictorial language used to compose visual messages could be described. Television news stories were the

"material" chosen for this study. Following is a discussion of the results of the analyses from Chapter IV.

Definite compositional patterns were found in 23 of 29 categories (nearly 80 percent), between the sample countries (Table 7). The fact that there are major patterns to be found among the sample countries confirms the notion that TV pictures are universal (or at least, that they contain compositional patterns which are relatively consistent across countries). The degree to which the patterns are consistent across the countries in this sample is additional support of this prediction.

There are, of course, compositional categories in which no patterns are found. These differences could be attributed to a variety of constraints; political, technical, economic, etc. These differences are not, however, the focus of this study.

Design Limitations

This study was exploratory, to generate hypotheses for future study, rather than serving as the definitive test.

Early in the study one potential problem was discussed, that of all the countries (or some) using taped material provided by either the Indian government

or by a wire service. This fear was unfounded as only two countries had one single duplicate show between them.

Suggested Directions for Further Study

One major drawback is that there isn't a "larger picture" or historical context to fit this study into. Was picture composition different across cultures when it was less technologically dependent? Is television a change in terms of pictorial conventions?

Other areas for further study include seeing how these patterns may change over time. For instance, now, two years after the initial Sikh/military conflict, there are the same incidents occurring at the Golden Temple in Amritsar, India. Will most countries use file tapes from the previous occurrence? Will there be new images to analyze? At this moment, however, there is no on-going videotaped record of the television news coverage in the countries studied previously. Perhaps there are no changes in the pictorial conventions once developed; perhaps they take a very long time to evolve. But to study to find where the conventions may shift, in which countries, etc. could be fascinating.

A long-term study of the two-dimensional visual imagery, and of single culture before the advent of television, during its inception, and after its

acceptance might show the progressive changes (if any) that the medium imposes upon the imagery would also be of significance to sociologists, anthropologists, and all visual communicators.

These pictorial conventions are by no means limited to televised news programs. Different patterns may emerge from each of the television genres. That would be another study to be undertaken.

The compositional patterns discovered in this study suggest a powerful influence of technical and perceptual characteristics of the television medium on the composition of television news pictorial messages. Technically, the shape and size of the television screen exerts a pressure toward the rectangular and horizontal lines (Zettl, 1983). However, horizontals in this study were secondary to the presence of vertical lines. The size of the screen also creates the argument for close-ups being dominant, though again this is not shown to dominate in television news pictorial composition. The fact that television is a rather low-definition medium causes further pressure toward continuous tone, natural lighting, normal perspective, medium to low saturation of colors, high field density and low complexity for the perception of visual information.

Further research needs to be done in determining

other factors which may influence these patterns of visual composition. Preliminary questions concern the news photographers themselves; where do they receive their education; The U.S.? Europe? Who pays for it; individuals? The government? Are the "artists" of the culture equally likely to work in this capacity; or is it primarily the financially well-off, the educated, the English-speaking who hold these positions?

Other preliminary questions center on various countries' participation/membership in international news gathering agencies such as Eurovision, Nordvision, and Intervision. The mere existence of these cross-national agencies, lead one to believe there are few, if any, major differences in the ways different countries cover news events. Or do different countries participate with separate groups because there are differences? The separations between Eurovision, Nordvision, etc., are they only geographic, or political, or economic? Or do they find major (or subtle) differences in the visual coverage of news events?

Also we are left with the age old question, "which came first, the chicken or the egg?" Does the existence of these agencies, and their use of technologies such as satellites, promote a set of cross-national, cross-

cultural pictorial standards (do they shape the message?); or did the fact that the images were not culture-bound allow the existence of these news agencies and their exchanges of video information (does the message shape/allow the technology/organizations)?

Summary

The notion that pictures are similarly constructed was strongly supported by this study, based on the number of patterns in the visual composition of the television images discovered between the sample countries.

The small sample size may reduce the generalizability of the results, and differing story lengths may have skewed the results slightly.

Suggestions for further research include determining other factors influencing the patterns of visual composition found in this study. These could include researching the backgrounds of the message composers (in this case the news photographers); organizations coordinating the processing of messages (for this study, news gathering agencies; and the use of various technologies and their particular impacts of the message. Other tangents could include the timelessness

of these patterns, or the evolutionary processes of the patterns of visual composition.

Specifically, now that these patterns of visual composition are recognized as existing cross-nationally, there are issues to be addressed and questions to be answered. It will take the coordinated efforts of sociologists, anthropologists, and media reseachers.

APPENDIX A
ORIGINAL CODING INSTRUMENT

CODING FORM
 "PICTORIAL LANGUAGE: A CROSS-CULTURAL ANALYSIS"

COUNTRY: _____
 FRAME #: _____
 CODE: _____

66

BASIC CHARACTERS

CHARACTER	FORM	DESCRIPTION
SEQUENCE	SINGLE FRAME	TIME/SPACE:
	FRAME # ()	TIME/SPACE:
LINE	HORIZONTAL	
	VERTICAL	
	DIAGONAL	
	CURVE	
	RECTANGLE	
SHAPE	TRIANGLE	
	CIRCLE	
	LIGHT	
TONE	DARK	
	CONTINUOUS	

COUNTRY: _____

FRAME #: _____

COVER: _____

67

OPERATIONS - SINGLE FRAME

OPERATION	FORM		DESCRIPTION
SCALE		LONG SHOT	
		CLOSE-UP	
		MEDIUM-SHOT	
ANGLE		HIGH ANGLE	
		SLIGHT ANGLE	
		LOW ANGLE	
LIGHTING		NATURAL	
		BELOW	
		BEHIND	
		ABOVE	
		SIDE	
PERSPECTIVE		FRONT	
		REPORTIVE	
		OBJECTIVE	
		SUBJECTIVE	
FIELD OF VIEW		NORMAL	
		NARROW	
		WIDE	

COUNTRY: _____

FRAME #: _____

ORDER: _____

OPERATIONS - MULTIPLE FRAME

OPERATION	FORM	DESCRIPTION
MOVEMENT		PAN
		TILT
		Zoom-IN
		Zoom-OUT
		TRUCK
		DOLLY-IN
		DOLLY-OUT
		ARC
		PEDISTAL-UP
		PEDISTAL-DOWN
TRANSITION		FADE
		TAKE (CUT)
		DISSOLVE
		WIPE
PACE		RAPID
		SLOW
Juxtaposition		NARRATIVE
		FLASH-BACK
		FLASH-FORWARD
		CROSS-CUT

COUNTRY: _____
 FRAME #: _____
 COORD: _____

CONTINUED		DESCRIPTION	
OPERATION	Juxtaposition (cont)	FORM	
INTELLECTUAL			METAPHORICAL CUT
			CONTRAST CUT
			PARALLEL CUT
			RHYTHMIC CUT
			TOPE CUT
			FORM CUT
EMOTIONAL			DIRECTIONAL CUT

COLONY: _____
 FRAME #: _____
 ORDER: _____

TRANSFORMATIONS—SINGLE FRAME		DESCRIPTION
CHROMA	FORM	YELLOW
		RED
	HUE	BULE
		PURPLE (R/B)
		ORANGE (R/Y)
		GREEN (Y/B)
		HIGH
Saturation		MEDIUM
		LOW
		REVERSAL
		COLORIZATION
Substitution		SOLARIZATION
		DISINTIGRATION
		FILTER
PATTERN		DEFOCUS
		SUPERIMPOSITION
		KEY
		PHOTOMONTAGE
Multiplication		PRISM
		ECHO
		SPLIT SCREEN
		ENLARGEMENT
		REDUCTION
SIZE		RATIO STRETCH
		RATIO SQUEEZE

COUNTRY: _____
 FRAME #: _____
 CODER: _____

TRANSFORMATIONS - MULTIPLE FRAME					DESCRIPTION
TRANSFORMATION	FORM				
			SLOW MOTION		
SPEED			FAST MOTION		
ROTATION			FLIP (Y-AXIS)		
			TUMBLE (X-AXIS)		
			SPIN (Z-AXIS)		

COUNTRY: _____

FRAME #: _____

CODER: _____

KEY - CHARACTERS AND TRANSFORMATIONS

CHAR./TRAN.	FORM	DESCRIPTION
LINE	HORIZONTAL	
	VERTICAL	
	DIAGONAL	
	CURVE	
SHAPE	RECTANGLE	
	TRIANGLE	
	CIRCLE	
	YELLOW	
COLOR	RED	
	BLUE	
	VIOLET (R/B)	
	ORANGE (R/Y)	
	GREEN (B/Y)	
	HIGH	
Saturation	MEDIUM	
	LOW	

COUNTRY: _____
 FRAME #: _____
 CODER: _____

MISCELLANEOUS		FORM	DESCRIPTION
PLACEMENT IN FRAME		NEUTRAL	
		LABILE	
		STABILE	
FIELD DENSITY		HIGH	
		LOW	
FIELD COMPLEXITY		HIGH	
		LOW	
VECTOR CHANGE		FAST	
		SLOW	
		NONE	

APPENDIX B
REVISED CODING INSTRUMENT

APPENDIX C
CODE BOOK FOR REVISED CODING INSTRUMENT

CODE BOOK

<u>LINE</u>	<u>CHROMA-HUE</u>	<u>TRANSITION</u>	<u>KEY-LINE</u>
H-horizontal	Y-yellow	F-fade	H-horizontal
V-vertical	R-red	T-take	V-vertical
D-diagonal	B-blue	D-dissolve	D-diagonal
C-curve	P-purple	W-wipe	C-curve
SHAPE	O-orange	(M-movement)or -	KEY-SHAPE
R-rectangle	G-green	PACE	R-rectangle
T-triangle	CHROMA-SAT.	R-rapid	T-triangle
C-circle	H-high	S-slow	C-curve
ZONE	M-medium	JUXTAPOSITION	KEY-HUE
L-light	L-low	NN-narrative-narrative	Y-yellow
D-dark	PATTERN-ADD.	NC-narrative-crosscut	R-red
C-continuous	K-key	SPEED	B-blue
SCALE	SIZE	S-slow motion	P-purple
L-long shot	E-enlargement	F-fast motion	O-orange
M-medium shot	R-reduction	ROTATION	G-green
C-close-up	RST-tario stretch	F-flip	KEY-SAT.
ANGLE	RSQ-ratio squeeze	T-tumble	H-high
H-high	PLACEMENT IN FRAME	S-spin	M-medium
S-slight	N-neutral	DOMINANT VECTOR	L-low
L-low	L-labile	M-motion	SUBJECT
LIGHTING	S-stabile	I-index	A-arms/contraband
N-natural	FIELD DENSITY	G-graphic	B-buildings/architecture
BL-below	H-high	VECTOR TYPE	C-ceremonies
BH-behind	L-low	CV-converging	D-dignitaries
A-above	FIELD COMPLEX.	CT-continuing	G-guards/military
S-side	H-high	VECTOR CHANGE	K-Sikhs
F-front	L-low	F-fast	P-news presenter
PERSPECTIVE	MOVEMENT	S-slow	PG-n.presenter w/graphic
R-reportive	P-pan	N-none	PM-n.presenter w/map
O-objective	TU-tilt up		PMG-n. presenter w/map & graphic
S-subjective	TD-tilt down		R-recovery action (of arms)
FIELD OF VIEW	ZI-zoom in		S-street scene
NO-normal	ZO-zoom out		T-people stranded due to curfews
NA-narrow	TR-truck		V-vandalism
W-wide	DI-dolly in		X-rowdy/protesting crowds
	DO-dolly out		
	A-arc		
	PU-ped. up		
	PD-ped. down		

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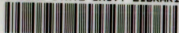
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