The experimental modification of attitudes towards the non-medical use of drugs by hot and cool communications media.

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THE EXPERIMENTAL MODIFICATION OF ATTITUDES
TOWARDS THE NON-MEDICAL USE OF DRUGS BY
HOT AND COOL COMMUNICATIONS MEDIA

by

Thomas Joseph Boniferro
B.A., University of Western Ontario, 1969

A Thesis
Submitted to the Faculty of Graduate Studies through the
Department of Psychology in Partial Fulfillment
of the Requirements for the Degree of
Master of Arts at the University
of Windsor

Windsor, Ontario, Canada
1971
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ABSTRACT

A drug attitude questionnaire and the Multiple Affect Adjective Checklist were administered to the college S's immediately before and after the presentation of each of four experimental communication media. The experimental hypothesis, based on Marshall McLuhan's hot-cool distinction and the attitude change theory of Shaw and Wright predicted greater emotional arousal, hence a higher degree of attitude change in the movie conditions than for the TV groups.

The results indicated that there was a significant change in attitude in the direction of the negativity pole of the positivity-negativity continuum; the black and white media produced more attitude change than the colour media; the film media produced a significantly greater degree of emotional arousal than TV; there was no significant relationship between attitude change and emotional arousal. Implications of these results in terms of McLuhan's hot-cool media distinctions and Shaw and Wright's theoretical conception of attitude change were discussed.
PREFACE

My first thoughts of thanks go to Dr. W.G. Bringmann, the chairman of my thesis committee, who first suggested the topic area and whose supervision proved extremely helpful. I would also like to thank Dr. W.D.G. Balance and Mrs. Merilee Trott for their invaluable assistance. My appreciation also goes to those persons who volunteered for the study, to the personnel at the University Communication Centre and especially to Mr. John Gray, the media advisor for the Department of Psychology. Finally I wish to express my gratitude to Dr. Martin Morf and to Mr. Bill Krane for their guidance and direction.
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Chapter I

Introduction and Background

At the present time, there is a growing concern in our society about the non-medical use of drugs and substances with sedative, stimulant or hallucinogenic properties and the effect of these chemicals on individuals (LeDain, 1970). Because of the important social implications of drug taking, a great deal of research has been conducted on the psychopharmacological effects of various drugs (LeDain, 1970). However, it has been suggested that the psychological antecedents of drug taking as well as the social responses and attitudes towards the non-medical use of drugs have been relatively neglected (LeDain, 1970). The newly formed LeDain Royal Commission on drug abuses states:

"We cannot help feeling that this (study of the causes of the non-medical use of drugs) is one of the most important aspects of our task; one in which there is a compelling need for an understanding of current Canadian attitudes. To understand the factors underlying non-medical drug use and the problem for which government action may be indicated, it is necessary to consider not only the effects, extent, and causes of such use, but the range of social response and attitudes which such use has elicited from government, other institutions and individuals (p.5)."

Contemporary communication media are considered as playing an important role in the controversy about the non-medical use of drugs (LeDain, 1970) yet little information is
available on the specific effect which mass media has on drug users.

Attitudes and Drug Use

It has been suggested that attitudes play a crucial role in the non-medical use of drugs and that their modification may aid in the prevention or control of the further spreading of illegal drug use. LeDain (1970) observed that although the whole area of attitudinal and motivational factors concerned with drug abuse varies considerably, there emerge the following dominant themes:

In the case of marijuana, many users have insisted that they are able to communicate without the use of words; that they recognize and understand one another and share important assumptions and attitudes. LeDain (1970) states that the underlying motivation patterns of such users is "simple pleasure, similar to that claimed for the moderate use of alcohol or food or sex (p. 155)."

In more general terms, the desire to experiment, curiosity, the sense of adventure as well as a search for self-knowledge and self-integration and for spiritual meanings are other attitudinal factors which motivate non-medical use of drugs (LeDain, 1970).

Several investigators have postulated a number of attitudes involved in the growth of drug abuse on college campuses. Keniston (1960) suggests that student drug use
is closely related to the striving for academic achievement to the exclusion of emotional, affective and passionate forms of expression. This results in the private quest for identity and a deep search for meaning. In the same manner, college students are led to the pursuit of experience for its own sake because they have been overwhelmed by external stimulation and as a result have grown numb and unfeeling. Both of these attitudinal factors, the search for meaning and the experience for experience sake are related to the misuse of drugs by students.

Several empirical studies have dealt with the importance of attitudes towards the use of drugs. A factor analytical study by Brehm and Back (1967) has revealed two important attitudinal factors as leading to a desire for self-modification through physical agents. One was the general dissatisfaction with oneself and the other, the absence of any defences or restraints against taking drugs. The factors of "insecurity" and "curiosity" were combined to form the measure of motivation for drug abuse. "Insecurity" refers to the desire to change the self and a willingness to do this by chemical means. "Curiosity" refers to the curiosity about the effects of the hallucinogens on the self and a willingness to be stimulated. The factors of "denial of drug effects" and "fear of loss of control" were combined to obtain a measure of restraint. The first of these represents both a denial of the possible influences of drugs and an avoidance of their use. "Fear of loss of control" represents a fear of losing control, either
of one's actions under drugs or in terms of dependency.

Attitude and Attitude Measurement

It has been difficult to measure and define the attitudes toward the non-medical use of drugs in the past partly at least because of the complexity of the term "attitude" itself.

The present concept of attitude was derived from the work of Shaw and Wright (1967). An attitude is defined formally as a "relatively" enduring system of evaluative, affective reactions based upon and reflecting the evaluative concepts or beliefs which have been learned about the characteristics of a social object or a class of social objects (Shaw and Wright, p.3). This definition limits the theoretical construct of attitude to an affective component which is based upon evaluative concepts which are closely related to other cognitions and to overt behaviour (Harvery, Hunt and Schroder, 1961; Rhine, 1958).

As an affective reaction an attitude is a covert or implied drive-producing response which elicits motives and thus gives rise to overt behaviour (Shaw and Wright, 1967). The chief difference between this view of attitude and the traditional conception of attitude has to do with the relations among the conceptual, affective and action components identified by former analyses. Many former theorists have treated these components as different elements of the same system which they called attitude, and the definition used by Shaw
and Wright has treated them as separate systems or elements only one of which is labelled "attitude". It is to the positive - negative dimension of the motive-producing, affective reaction, that, according to Shaw and Wright, the term attitude applies.

One method of attitude measurement which has been widely used is called the "direct" technique (Sherif and Sherif, 1969; Thurstone, 1929, 1931; Likert, 1932; Guttman, 1944). In this approach, attitude scales are typically composed of statements of varying degrees of positivity and negativity regarding the attitudinal referent, and the endorsement of the statement serves as the basis for inferring the existence of positive or negative evaluations on the part of the endorser (Shaw and Wright, 1967). In short, the attitude scale measures the acceptance of evaluative statements about the attitude object.

Role of Mass Media and Attitude Change

Perhaps one of the major contributions which mass media can make towards the issue of non-medical drug use is its role in attitude change. Shaw and Wright (1967) postulate that one would expect attitude change to occur when the individual is induced to accept concepts in the form of propositions that incorporate new and different evaluations. A direct attack on the evaluation would be effective only to the extent that associated concepts are changed so that the evaluations reflected by existing concepts are altered. This
is the approach usually taken by investigators who attempt to change attitudes through communication (Hovland, 1959). Since an attitude is best viewed "as a set of affective and evaluative reactions toward the attitude object", a change in the affective component should consequently result in a change in the evaluation aspect of the attitude. Studies investigating the emotional arousing effects of mass media serve as evidence for the production of affective reactions which are essential in attitude change (Bringmann, 1966; Speisman, Lazarus, Mordkoff and Davison, 1964; Janis and Feshbach, 1953; Zuckerman, Vogel and Valerius, 1964; Kaiser and Roessler, 1970).

Furthermore, it has been found that laboratory studies conducted to demonstrate attitude change associated with communication from mass media reveal change occurring in 50 to 75% of the subjects (Sherif and Sherif, 1969).

Whenever mention is made of mass media in this age, the attention is naturally focused on the writings of Marshall McLuhan. Starting with the Gutenberg Galaxy: The Making of Typographic Man (1962) and followed in succession by Understanding Media: The Extensions of Man (1964) and The Medium is the Message: An Inventory of Effects (1967), McLuhan has gradually developed his ideas on communication media. The famous dictum "the medium is the message" (McLuhan, 1964, p. 13) is the central theme of his work and refers to the concept that the content, which is communicated, is much less effective than the medium by which it is communicated. Accor-
ding to McLuhan, communication media are message systems and as such, directly influence the behaviour of their receivers. Furthermore, society is structured chiefly by communication media rather than by their content. McLuhan (1964) has postulated that Western society has undergone four critical periods of cultural and social development during which predominant modes of mass communication have been abandoned in favour of other ones. The first stage was that of pre-literate man who received his information and knowledge by hearing it from other people and who was consequently forced to live with them in close tribal proximity and harmony. The introduction of written communication with the invention of the alphabet not only produced a society in which the eye exceeded the ear in importance as a sense organ but also reduced tribal unity and facilitated the growth of systematic and fragmented approaches to human problems. The third cultural revolution occurred with the invention of moveable type and printing in Europe by Gutenberg at the beginning of the fifteenth century. The mass produced, inexpensive, and portable printed book stimulated individualism, the need for privacy and a trend toward distant and increasingly impersonal human relationships. McLuhan is convinced that the recent electronic communications media, radio and television have ushered in a fourth and final stage of cultural change. In fact, he believes that the very nature of the electronic media encourages an acoustic rather than a visual environment and the world may become once again a "global village" (McLuhan and Fiore, 1967) where "everybody is profoundly involved with everybody
else" (McLuhan and Fiore, 1967, p. 69).

In his discussion of electronic media, McLuhan supplements his central idea that media are communicational messages with an important corollary—there are two distinct types of media, hot and cool, that produce two different kinds of effect. A hot medium, of which film is a primary example, extends one single sense in "high definition" (McLuhan, 1964, p. 22). It inundates the individual with information, thus participation, or filling in what is missing, is very low. The message conveyed by a hot medium is complete or near-complete, explicit, intense and aggressive. The action caused by a hot medium is one of emotional arousal or excitement. A cool medium—the most important contemporary form being television, is "low definition" (McLuhan, 1964, p. 22). It supplies the individual with only a dearth of information, participation is thus very high. The message conveyed by a cool medium is implicit, incomplete and unintense. The reaction to a cool medium is one of creative, depth involvement.

Summary

A review of the literature on the question of drug abuse indicates that several interrelated problem areas must first be dealt with before a thorough study of the non-medical use of drugs can be conducted. These problem areas are as follows:

1. There is a need to study the problem of illegal drug use
from the point of view of its psychological antecedents; one of the most useful of these psychological variables is the concept of attitude.

2. Perhaps one of the methods for controlling drug abuse is first the investigation of the nature of these attitudes and secondly, the modification of these same attitudes.

3. The actual formulation of the theoretical definition of attitude and the field of attitudinal factors related to actual drug use remain ambiguous, and must be studied.

4. The role and effects of contemporary mass media as postulated by McLuhan, in the modification of attitudes should be further investigated.
Chapter II

Statement of The Problem

Purpose of The Study

The question of the causes of the non-medical use of drugs has recently become an important social issue (LeDain, 1970). One of the more significant classifications of these causes is the positive attitudes towards the non-medical use of drugs which are held by the present generation. Attitudinal factors such as insecurity, curiosity, denial of drug effects and "the fear of loss of control" are important determinants of drug abuse (Brehm and Back, 1968). It has been postulated that perhaps one of the methods for curtailing or at least controlling this drug abuse is first of all, the investigation of the nature of these attitudes and secondly, the modification of these same attitudes.

In the past, mass media has contributed greatly, both to the formation and modification of a wide range of attitudes; to-day, mass media continues to play an even more important role due to its vast appeal and sophistication. Experiments in mass communications media have become prominent in recent years as a result of the various postulations of Marshall McLuhan such as the famous dictum "the medium is the message" and controversial speculations concerning the differential effects of "hot" and "cool" media.
Thus the present study will be concerned with two important issues—1) the modification of attitudes towards the non-medical use of drugs and 2) the differential effects of hot and cool media. In view of the fact that no previous work has been reported on the investigation of attitude change concerning attitudes towards non-medical drug use and that the differential effect of contemporary hot (film) and cool (television) on attitude change has not been fully investigated, the investigator will attempt such a study.

Experimental Design and Hypothesis

McLuhan is very precise in his discussion of the contrasting natures and effects of both film and television. The movie is a hot medium that produces "frenzied", and emotional behavioural action (McLuhan, 1964, p. 284-196). In contrast to the clear, distinct image of the movie media, there is the nebulous, poorly defined image of TV which "does not excite, agitate or arouse" (McLuhan, 1964, p. 337).

If both 1) McLuhan's postulations concerning the differential degree of affective reaction as caused by film and TV and 2) the conception of attitude change of Shaw and Wright in terms of a change in affective reaction, are to receive support, one would expect to find a significant difference between film and television; this difference measured by the degree of attitude change and emotional arousal. It is predicted that the hotter the media, the greater will be both the attitude change (indicated by a decrease of scores on the
attitude scale) and the greater the emotional arousal.

To empirically test the differential media effects posited by McLuhan, it was necessary to find content substance which could be identical for both the movie and TV media. The content used was the anti-drug film entitled, "Like It Is". This film was chosen because of its emotional arousing qualities and because of its wide use in the anti-drug campaign conducted by the local municipal police department. Therefore, the present investigation was essentially a comparison of four combinations of hot and cool media. The four experimental conditions - the independent variables were as follows: 1) movie - black and white; 2) movie - colour; 3) TV - black and white; 4) TV - colour.

As a measure of the emotional arousal and attitude change - the dependent variables, an abridged version of the Likert-type attitude scale previously used in a drug attitude study (Brehm and Back, 1968) and the Multiple Affect Adjective Checklist (Zuckerman and Lubin, 1965) were used. The attitude questionnaire consisted of a series of nineteen statements composing four attitudinal factors which were validated and tested for their reliability (Brehm, 1968). The MAACL - a self-administered test, yields valid (Winter, Fereers and Ransom, 1963) and reliable (Zuckerman, 1960) measures of anxiety which was the indicator of the affective reaction.

The predictions that can be made from the above discussion are as follows: 1) a correspondence between emotional
arousal and attitude change in a negative direction is expected. 2) The film - black and white media condition is predicted to have a greater degree of effect on the viewer than colour film. 3) The black and white television condition is predicted to have less effect than the colour film and 4) colour television is predicted to have the least effect of all.

Significance of The Problem

Since the current programmes employed in governmental anti-drug campaigns consist of communications presented mainly via film and television, it is hoped that the present study will shed some light on the effectiveness of such programmes in attempting to curtail the extensive abuse of drugs. Furthermore, there exists a paucity of research concerning McLuhan's postulations and the examiner feels that the present study will clarify some of the issues concerning hot and cool media.

Lastly, this study may provide a clearer understanding of the effects of mass media on both attitude change and affective reaction of the individual.
Chapter III

Method

Subjects

The Ss used in the experiment were 64 students enrolled in the Psychology II course at the University of Windsor. The respective students were chosen because the age level of the Ss' (18-22) was an age range in which non-medical drug use is prevalent and to which communication media attempt to aim their messages. For the experimental sessions the Ss were randomly divided into four groups, composed of 16 Ss (8 Males, 8 Females). The groups were then randomly assigned to the experimental conditions.

Apparatus

Communications Media The colour motion picture, "Like It Is" was used as the content for each experimental session. This film, lasting 19 minutes, 20 seconds, was produced and obtained from the Windsor Police Department, City of Windsor. The content of the film depicts a series of scenes in which the use of non-medical drugs results in harmful consequences for the users. A 16 mm., Bell and Howell Autoload sound projector was used to show the "Like It Is" movie. The picture on the movie screen was standard size (70 inch by 70 inch).
The production source of the television medium consisted of a 2 inch, video TV tape, black and white, and colour reproduction of the "Like It Is" movie; the reproduction was made by Film Crafts Inc. of Detroit, Michigan, and was utilized only for the length of the experimental sessions. The actual TV media was a 23 inch, closed circuit TV set.

The rooms in which the movie and TV films were shown were TV class instruction rooms, all identical in size and having the same seating arrangement. During the experimental sessions all rooms were darkened to the same degree of illumination.

**Questionnaires**

**Attitude Scale** The attitude questionnaire used to measure the Ss' attitude towards the non-medical use of drugs was an abridged version of the form employed by Brehm and Back (1968). A high score on this scale indicates a very positive attitude towards the non-medical use of drugs while a low score indicated a negative or less positive attitude. Thus the attitude was measured along a positivity-negativity continuum. This form was chosen because of its already established inter-item reliability and validity. (See Appendix A).

**The Multiple Affect Adjective Checklist (MAACL) (Appendix B)** This was employed as a measure of the Ss' emotional reaction to the experimental treatments. The MAACL furnishes measures of the negative, emotional affects of anxiety, depression and hostility. This measuring instrument was chosen because:

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1) it has adequate validity and reliability (Zuckerman and Lubin, 1965, p. 6-14); 2) it is easy to administer and to score and 3) it has previously been shown to be valid as a detector of increases in stressful emotions (Bringmann, 1966).

The "To-day" form (Zuckerman and Lubin, 1965) of the MAACL was used in the present study; this form has instructions asking Ss to indicate how they feel "right now" or "to-day". The subject is required to put a mark beside any adjective that describes a feeling he might be presently experiencing. The MAACL was hand scored with the plus and minus tallies of only the anxiety scale to yield a total score for anxiety.

The attitude questionnaire and MAACL forms and their related scoring keys and procedures are given in Appendices "A" and "B".

Procedure

Sixty-four subjects were divided randomly into four groups and then assigned to one of four experimental conditions. The four treatments were as follows: Group I: movie - black and white; Group II: movie - colour; Group III: TV - black and white; Group IV: TV - colour. All groups contained 16 Ss (8 males and 8 females). Groups I and II were run at coincident times in two different rooms; Groups III and IV were run also at coincident times but one hour after Groups I and II. Because of class scheduling it was difficult to run all four groups simultaneously. For all groups,
the Ss had approximately the same line of vision.

The instructions that were read to the Ss prior to the movie or TV viewing are presented in Appendix C.

Immediately following the viewing of the "Like It Is" film, the lights were turned on and both the questionnaire and MAACL were distributed to the Ss. After they had completed both forms, the Ss were free to leave.

Analysis

To investigate the main hypothesis of the present experiment, to determine attitude change and differential media effects, separate repeated measure analyses of variance were done for both the Questionnaire and MAACL, using 2 (black and white and colour) x 2 (Pre-test - Post-test) x 2 (TV and Film) x 2 (Male and Female) factorial design (Winer, 1962, p. 350).
Chapter IV

Results

Hypothesis I predicted a correspondence between emotional arousal and attitude change. Tables 1 and 2 summarize the data relevant to Hypothesis I.

Inspection of Tables 1 and 2 which present an analysis of variance for both the attitude questionnaire and the MAACL reveals a lack of correspondence between attitude change and emotional arousal. The significant AB interaction \( (P < .05) \) between the black and white dimension and the pre-test - post-test scores occurs only in the analysis of the scores on the attitude questionnaire. Likewise, the significant BC interaction \( (P < .05) \) between the media factor (Film and TV) and pre-test - post-test scores occurs only in the analysis of the scores on the MAACL. Furthermore, the only significant main effect was found on the pre-test - post-test conditions of the attitude questionnaire but not on the analysis of the MAACL. As a result, it was concluded that Hypothesis I was not confirmed.

Hypothesis II was concerned with the differential media effects and predicted a greater degree of attitude change and emotional arousal as produced by black and white film than colour film, a greater effect of colour film than black and white TV and colour TV being the least effective. Tables 1 and 2 also summarize the data which deals with Hypothesis II,
Figures 1 and 2 clarify this differential effect of the various media factors. The AB interaction observed on the attitude questionnaire is significant at the .05 level, in other words the colour dimension (black and white, and colour) exhibits differential effects on the subject's responses to the questionnaire. Inspection of Figure 1 reveals that both colour dimensions produce a shift in the negative direction on the attitude scale with the black and white dimension having a greater effect.

The principle finding revealed by Table 2 is the significant BC interaction at the .05 level; it is concluded from this interaction that film and TV have a differential effect on the anxiety scale of the MAACL in the pre-test post-test conditions. Figure 2 shows that the resultant effects of the film media is an increase on the anxiety scale while the TV dimension resulted in a small decrease in anxiety. The Newman-Keuls statistical method was used to test for significance between the two treatment means and the difference was found to be significant at the .05 level. It was difficult to attribute clear confirmation for Hypothesis II because of the lack of correspondence between emotional arousal and attitude change, but the significant differential effect of film over television, serves as partial confirmation for this hypothesis.
Table 1

Analysis of Variance for the Effects of Movie and TV on the Drug Attitude Questionnaire for Males and Females

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Black &amp; White - Colour)</td>
<td>745.95</td>
<td>1</td>
<td>745.95</td>
<td>3.84</td>
</tr>
<tr>
<td>C (Media - Film &amp; TV)</td>
<td>70.51</td>
<td>1</td>
<td>70.51</td>
<td>0.36</td>
</tr>
<tr>
<td>D (Sex)</td>
<td>164.26</td>
<td>1</td>
<td>164.26</td>
<td>0.85</td>
</tr>
<tr>
<td>AC</td>
<td>15.82</td>
<td>1</td>
<td>15.82</td>
<td>0.08</td>
</tr>
<tr>
<td>AD</td>
<td>228.45</td>
<td>1</td>
<td>228.45</td>
<td>0.18</td>
</tr>
<tr>
<td>CD</td>
<td>321.95</td>
<td>1</td>
<td>321.95</td>
<td>1.66</td>
</tr>
<tr>
<td>ACD</td>
<td>9.57</td>
<td>1</td>
<td>9.57</td>
<td>0.05</td>
</tr>
<tr>
<td>Within Cell</td>
<td>10878.19</td>
<td>56</td>
<td>194.25</td>
<td></td>
</tr>
<tr>
<td>B = Pre-test - Post-test</td>
<td>142.38</td>
<td>1</td>
<td>142.38</td>
<td>6.46*</td>
</tr>
<tr>
<td>AB</td>
<td>142.38</td>
<td>1</td>
<td>142.38</td>
<td>6.46*</td>
</tr>
<tr>
<td>BC</td>
<td>1.76</td>
<td>1</td>
<td>1.76</td>
<td>0.08</td>
</tr>
<tr>
<td>BD</td>
<td>39.38</td>
<td>1</td>
<td>39.38</td>
<td>1.79</td>
</tr>
<tr>
<td>ABC</td>
<td>56.45</td>
<td>1</td>
<td>56.45</td>
<td>2.56</td>
</tr>
<tr>
<td>ABD</td>
<td>43.95</td>
<td>1</td>
<td>43.95</td>
<td>1.99</td>
</tr>
<tr>
<td>BCD</td>
<td>7.51</td>
<td>1</td>
<td>7.51</td>
<td>0.34</td>
</tr>
<tr>
<td>ABCD</td>
<td>73.51</td>
<td>1</td>
<td>73.51</td>
<td>3.33</td>
</tr>
<tr>
<td>Between Cell</td>
<td>1235.18</td>
<td>56</td>
<td>22.06</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14177.18</td>
<td>127</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* P < .05

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Table 2

Analysis of Variance for the Effects of Movie and TV on the MAACL Anxiety Scale for Males and Females

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Black &amp; White - Colour)</td>
<td>.008</td>
<td>1</td>
<td>.008</td>
<td>.00</td>
</tr>
<tr>
<td>C (Media - Film &amp; TV)</td>
<td>17.26</td>
<td>1</td>
<td>17.26</td>
<td>.57</td>
</tr>
<tr>
<td>D (Sex)</td>
<td>48.76</td>
<td>1</td>
<td>48.76</td>
<td>1.62</td>
</tr>
<tr>
<td>AC</td>
<td>43.95</td>
<td>1</td>
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* P<.05
Figure 1. Mean response scores on the attitude questionnaire as a function of color dimension (black and white vs. color) and testing comparison (Pre-Test vs. Post-Test).
Figure 2. Mean response scores on the MAACL check-list as a function of communication media (Film vs. TV) and testing comparison (Pre-Test vs. Post-Test).

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Chapter V

DISCUSSION

The present study was designed to empirically investigate the modification of attitudes towards the non-medical use of drugs by the use of film and television and to study the differential effects of these media. Briefly, the following results were obtained:

1. There was a significant change in attitude as measured by the drug attitude scale with the change occurring in the direction of the negativity pole of the positivity-negativity continuum.

2. There was a lack of correspondence between attitude change and emotional arousal as measured by the MAACL.

3. The black and white dimension had a greater effect on attitude change than the colour dimension regardless of which media (i.e. TV or film) was used.

4. The movie media produced a significantly greater degree of emotional arousal than did TV.

These results appear to be relevant both to the field of attitude change and role of media.

The first finding i.e. attitude change by the media, reveals that perhaps mass communication media could serve as a valuable tool in the extensive prevention programs dealing with drug abuse. This type of attitude change is quite similar to that obtained by previous investigators of the
effects of mass media (Hovland, 1959; Klapper, 1960) and confirms the fact that mass media is indeed important in attitude change. These results also seem to refute the statements of McGuire (1969) who has stated that "the outcome of these types of (attitude change) studies has been quite embarrassing for proponents of mass media usage, since there is little evidence of attitude change (p. 167)".

The finding of the lack of relationship between attitude change and emotional arousal adds to the growing numbers of relevant experiments with inconsistent outcome concerning this issue. McGuire (1969) has put the controversy quite directly by saying that psychologists whose views lead them to expect a monotonic function must acknowledge that the results from the relevant attitude change experiments constitute a "remarkable show of impartiality on the part of Nature (p. 169)".

It is evident that perhaps the present conceptualization of the logical cause and effect relations between emotional arousal and attitude change should be expanded in order to include hidden and neglected variables that might be interacting with those under experimental conditions. Janis (1967) introduces the term "reflective fear" as one of these variables and postulates that fear or anxiety is not only strictly an affective component but is also determined by cognitive factors as well. This may be an explanation for attitude change without emotional arousal as revealed by the present study.
The observation that the black and white dimension has a greater effect on attitude change than colour appears both significant and interesting. The finding seems to be contrary to popular opinion but at the same time supports McLuhan's hypotheses regarding hot and cool media.

In an unpublished study conducted at Fordham University, McLuhan states that colour is perceived by the macula and cone area of the eye only, whereas black and white is viewed by the periphery. All colours whatever, are therefore very cool because deeply involving in the abrasive interplay of the cones. Thus the "hotness" of the black and white dimension was shown to have a profound effect on attitude change but at the same time there was no change in emotional arousal. One explanation for this is the ambiguity with which McLuhan discusses the emotional arousing properties of "hot" media. He never directly or explicitly delineates what kinds of emotion are produced by "hot" media. This lack of clarity makes it difficult to know if the degree of anxiety measured by the KAACL is the type of emotion which is relevant in attitude change.

The last finding of the present study, that movie has a greater effect on emotional arousal than television appears to contradict the finding of a recent study concerning hot and cool media. (Bringmann W.G., Balance, W.D.G., Stevens, E., and Krichev, A., 1969). In that study, it was found that there were no significant differential effects of TV and film emotional arousal.
Perhaps one of the possible explanations for the significant finding in the present study lies in the size of the actual movie medium. The movie in the present study was presented on a standard size movie screen and was not reduced to TV size as in the Eringmann et al study. It seemed therefore that the four experimental conditions appeared more like as in ordinary real life situations than did the conditions of the previous study. Boulding (1967) expresses a viewpoint which seems to explain this. He states that it is the overall content of the medium environment that determines the media effects and it is the social content that is greatly underplayed by McLuhan. Thus the full size movie screen which was used in the present study may have influenced the effectiveness of the film in producing the observed increase in emotional arousal.

Because of the controversial findings of the present study, several recommendations can be made which perhaps may aid future investigators in the field of attitude change and mass media.

First of all, if the effects of mass media on attitude change are to be shown to be long lasting, some sort of retest measure should be provided in future studies. Furthermore, if the relationship between attitude change and emotional arousal is to be investigated further, it is recommended that a self-rating scale concerned with the affective reactions along with the MAACL anxiety score be used in order to provide a more valid measure of the viewer's emotional
reaction to the media.

In terms of the differential effects of mass media, it is suggested that use be made of some form of rating scales whereby Ss' could categorize in terms of degree of difference, the various media.
APPENDIX A

Drug Attitude Scale

(Adapted from Brehm and Back, 1967)

NAME ____________________________

This questionnaire is being given to find out more about how people differ in their attitudes towards the use of medications. Please answer each item of every section. Make your responses quickly. First impressions are important.

In the following items, indicate the extent of your agreement or disagreement to each statement, as follows:—(A) Strongly Agree; (B) Moderately Agree; (C) Somewhat Agree; (D) Somewhat Disagree; (E) Moderately Disagree; (F) Strongly Disagree.

<table>
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<tr>
<th></th>
<th>(A)</th>
<th>(B)</th>
<th>(C)</th>
<th>(D)</th>
<th>(E)</th>
<th>(F)</th>
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<tr>
<td>1. I wish I could get help to achieve &quot;the real me&quot;.</td>
<td></td>
<td></td>
<td></td>
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<td>2. I get very afraid if I don't know what is happening to me.</td>
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<td>3. I am more concerned than most people about my bodily feelings.</td>
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<td>4. I would be worried if I had to take a drug whose effects I know little about.</td>
<td></td>
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<td></td>
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<td>5. People will not do anything they would not normally do when under the influence of drugs.</td>
<td></td>
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<td>6. I would not do anything I would not normally do under the influence</td>
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<td>7. Sometimes I feel I have to take something to make me relax.</td>
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<td>8. Sometimes I feel I have to take something to stimulate me.</td>
<td></td>
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9. Sometimes I feel I have to take something to make me less conscious.

10. I would avoid taking drugs, when I'm sick, for as long as I could.

11. If there were a drug which would make me feel less anxious, I would take it.

12. I wish that all my problems could be solved by taking a pill.

13. I would be afraid of losing personal control under drugs.

14. Even though a drug might not be physically habit-forming, I would be afraid of becoming dependent on it psychologically.

15. If given the choice between them, in a supervised experiment, I would prefer a drug that stimulates rather than tranquilizes.

16. In general, I tend to avoid taking medicine and drugs.

17. Most people are curious to know what effect a "mind-expanding" drug would have on them.

18. I would be curious to know what effect a "mind-expanding" drug would have on me.

19. I would be suspicious of anyone who urged me to take a drug without a prescription.
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APPENDIX C

Instructions Given to the Subjects

1. You have been asked to participate in this project and we appreciate your taking the time to come. The first thing you are asked to do is to complete the forms which will be handed out. For the purpose of identification you are asked to print the complete initials of your name and your sex on each form. Please follow the instructions which are found at the top of each form; if there are any questions, there will be someone to assist you. It is important that you do not talk when the experiment is in progress. Additional instruction will be given after everyone has completed the questionnaires. Thank you for your co-operation.

2. Now you are asked to watch the TV monitors or movie screen for a special presentation.

3. Now for the final part of the project you are asked to complete the questionnaire which will be handed out. Please remember to put your initials and sex on the top of each form; it is important to read the instructions on each form carefully. After you have completed the forms, you are free to leave. Thank you for your co-operation.
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Hovland, C.I. Reconciling conflicting results derived from experimental and survey studies of attitude change. American Psychologist, 1959, 14, 8-17.


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