

## MOVIES AND MOOD: AN EXPLORATION OF THE CRITICAL VARIABLES RELATED TO MOOD STATES

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**Abstract:** The purpose of this study was to examine the relationship between movie viewing and mood, and to test the Pleasure Arousal Dominance (PAD) mood theory in a theater setting. The results of this exploratory study are presented here, challenging the PAD model, and providing suggestions for future research regarding the leisure and mood relationship.

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### Introduction

Mood is defined by Hull (1990) as a specific set of subjective feelings which occur as a consequence of everyday leisure experiences. Kamins, Marks, and Skinner (1991) asserted that moods are sub-categories of feeling states that are subjectively perceived by individuals and are more transient than feelings.

Among leisure researchers, mood is a relatively new area to be studied. As Hull (1990) pointed out, researching specific moods rather than the general phenomena of "feeling good" or "having fun" may lead to a better understanding of leisure. Furthermore, it has been suggested that one's mood may impact an individual's behavior, cognitive skills, and even health (Hull, 1990; Forgas & Moylan, 1987).

Several researchers have used film as a stimulus to test the effects of mood on attitudes and behavior (Hubert & Dejong-Meyer, 1990; Cools, Schotte, & McNally, 1992; Forgas & Moylan, 1987). Hubert and Dejong-Meyer conducted a study in which they exposed two matched groups of participants to films with contrasting themes: *Raiders of the Lost Ark* (an action/adventure) and *The Peanuts* (a comedy). Self-assessment mood scales, perception of bodily sensations, salivary cortisol tests, respiration, and facial electromyogram (EMG) were used to collect data. Analysis revealed viewing film stimuli influenced the moods of the participants. In a similar study, Cools, Schotte, and McNally (1992) exposed three groups of women to film segments with contrasting themes: a

travelogue (neutral affect), a comedy (positive affect), and a horror film (negative affect). Results indicated that food intake for subjects who viewed the horror film decreased, whereas food intake for subjects exposed to either the neutral film or positive film increased following viewing these films. Although these studies took place in a controlled setting, it suggests that mood may be manipulated in certain environments and that mood is a powerful force that influences behavior.

Forgas and Moylan (1987) also used film stimuli to test the effects of mood on attitudes and behaviors. However, their data collection was completed in a more natural environment: a movie theater. Over 900 movie-goers were interviewed immediately following happy, sad, and aggressive films. The interview schedule contained 13 questions which were designed to assess political judgments (satisfaction with aspects of government, etc.), the likelihood of future events (e.g., future performance of economy or likelihood of a nuclear war, etc.), an examination of attitudes toward punishment and responsibility (e.g., appropriateness of punishment for crimes), and questions about satisfaction with their private, social, and working lives. The last question asked respondents to rate their mood on a 7-point scale from bad to good. In order to determine pre-movie attitudes, 120 individuals were interviewed before the movie. Analysis revealed significant changes in attitudes and mood after viewing the movies. Those who viewed the happy movie reported being in a significantly better mood than those who viewed the sad or aggressive movies. Further analysis suggested that all of the films significantly influenced political, social, and quality of life judgments among respondents. Although it was found that attitudes were influenced through this study, the researchers didn't examine the long term effect (if any) of mood on behavior. For instance, do post movie attitudes and judgments carry over into everyday life and behaviors such as voting in an election? In addition, those interviewed before the film were not matched with those interviewed after the movie. Therefore, the results don't reveal individual changes in mood before and after viewing the films.

Although the link between film and mood seems to be well established, some leisure researchers have also examined mood in relation to its effect on the leisure experience. For example, Godbey and Blazey (1983) explored the leisure behavior of older adults in urban parks. They used a questionnaire to examine several social psychological constructs including mood. Results indicated that about 47% of respondents reported that park use had a positive effect on mood. In other words, using parks contributed to improving people's moods. In a similar study, Mannell, Zuzanek, and Larson (1988) used the experience sampling method with 92 retired adults to investigate the antecedents and consequences of leisure (e.g., perceived freedom, intrinsic motivation, mood states, flow, etc.). Results indicated that perceived freedom was significantly related to mood. Participants who indicated higher levels of perceived freedom in leisure reported being in better moods than those with lower levels of perceived freedom. These results demonstrate how mood might influence the leisure

experience or perhaps how the leisure experience might impact mood.

Hull (1990) asserted that mood reflects attributes of the leisure experience and that mood is a product of leisure. In a review of literature on mood, Hull (1990) posited that mood is a “predictable, measurable and a theoretically grounded product of leisure activities” (p. 99). Furthermore, he asserted that managers may be able to control factors which influence mood. Hull and Michael (1995) tested Hull’s assertions of mood by conducting an empirical examination of mood in which approximately 100 people completed a series of questionnaires before, during, and after engaging in activity at a park. Results indicated that anxiety and tiredness decreased significantly as a result of park use. Moreover, Hull and Michael asserted that results suggested that measures of mood reflect attributes of the leisure experience.

These studies demonstrate that mood is a powerful psychological force which may affect attitudes, cognitions, and behaviors among recreationists. Hull’s notion that mood is a characteristic of the leisure experience seems logical and relevant to the study of the antecedents and consequences of leisure. Further examination of mood may help managers learn how to produce positive moods or reduce negative moods during leisure. For instance, a leisure produced mood may influence levels of enjoyment and satisfaction. Therefore, learning more about the determinants and consequences of mood could help managers to positively impact enjoyment and satisfaction in an outdoor recreation setting. In future studies we might ask if there are common attributes of an activity or setting that are essential to improving mood.

#### The Pleasure Arousal Dominance Theory of Mood

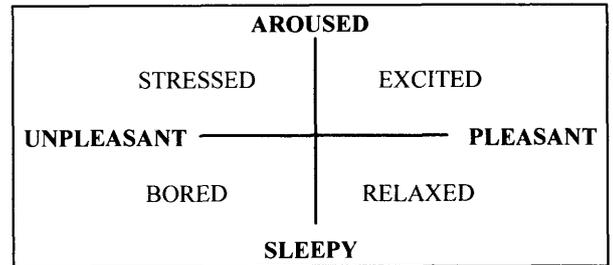
Although the importance of studying mood has been demonstrated, it is more difficult to identify a theory from which to base an investigation on mood. Hull (1990) suggests using a multi-dimensional model to examine the effects of mood on attitudes and behavior. One such theory is the Pleasure Arousal Dominance (PAD) theory of mood which was developed by Berlyne (1960) and further refined by Russell and Snodgrass (1987). PAD consists of three bi-polar dimensions which range from very aroused to very sleepy, very pleasant to very unpleasant, and very dominant to very submissive (see Figure 1). Mood is then described according to where an individual falls in the three dimensional space. For instance, someone who is unpleasant, but aroused, may be in a stressed mood, whereas pleasant and aroused feelings may lead to an excited mood. Dominance and submission refer to the amount of control the individual has in a situation. This dimension differentiates between anger and fear. For instance, someone experiencing arousal, unpleasant, and submissive feeling states would result in anger.

Although this model was suggested to investigate the impact of leisure on mood, it has not been thoroughly tested in a leisure setting. The primary purpose of this paper was to examine the validity of the PAD mood theory. A secondary purpose of this paper was to determine the effects of a movie induced mood on behavior.

Therefore the research questions for this study were as follows:

1. Is the PAD mood theory supported in a movie setting?
2. Does a mood induced by movie viewing affect the intention to perform specific behaviors?

Figure 1: Two of three dimensions of the PAD mood theory are shown here. The third dimension, dominance/submission is not pictured and runs orthogonal to the other two dimensions. It runs straight out from where the two dimensions intercept.



#### Methods

A comprehensive list of current movies was compiled by the research team. They were then viewed and categorized into themes on the basis of media film reviews and personal reports. From that list, two movies were chosen for the study: Celtic Pride and Fargo. These movies were chosen because they elicited distinctly different responses in mood among the research team. Celtic Pride was labeled as a comedy, and Fargo was labeled as a psycho-drama. A self-administered questionnaire was used, representing five categories including (1) gender, (2) group size, (3) how quickly time passed, (4) intention to perform activities post movie viewing, and (5) mood. Non-identifying demographic characteristics were also obtained. Perceived time duration was measured by a 5-point response scale with 1 being slowly, and 5 being quickly. Plans for after the movie were measured by a nominally scaled list of activities and included such items as dining out, shopping, studying, and going home. Two questions were asked to assess specific changes in plans caused by the movie induced mood.

The dependent variable of mood was measured with eight mood states: aroused, relaxed, unpleasant, sleepy, excited, bored, pleasant, and stressed. This was done with a 5-point Likert type scale where 1= definitely do not feel, and 5= definitely do feel. While the PAD Mood Theory is a three dimensional model, this study was limited to the two dimensions pictured in the model in Figure 1: pleasure and arousal.

Members of the research team convened in the theater lobby on two different evenings. Data were collected on individuals immediately following the viewing of either film. All subjects were approached yielding a response rate of 86%. Willingness to participate and refusal rates were equal between the two films, and the overall refusal rate for this sampling was 14%.

## Description of Sample

The sample (n=96) included 36% (n=35) females and 64% (n=61) males; 40 viewed the comedy (Celtic Pride) and 56 viewed the psycho-drama (Fargo). Of the total sample, 37.9% (n=36) were between the ages of 18-22, 17.9% (n=18) were between 23-27, 6.3% (n=6) were between 28-32, 7.4% (n=7) were between 33-39 years, 20% (n=19) were between 40-49, and 10.5% (n=10) were 50-59. Minors were not selected for this sample, and there was an under representation of senior citizens in the population surveyed. Group sizes were as follows: 10 individuals saw the movie alone, while the remaining were with the following number of people; 56 were among pairs, 16 were with 2 other people, 3 were with 3 others, 6 were with 4 other individuals, 3 were among a group of 6, and there were 2 people who were in a group size of 7-8.

## Analysis

Single item variables were used to test the constructs of interest in this study and bivariate parametric tests of significance were used. A significance level of .05 was used to determine the significance of the relationships tested during the analysis. The following represents the description of the analysis and results of the testing as related to each research question.

In order to examine the validity of the PAD mood theory, the researchers first had to establish that the movies produced significantly different moods. A series of t-tests revealed that the two films produced significantly different moods for five mood variables: unpleasant (t=3.63; p<.05), relaxed (t=2.60; p<.05); sleepy (t=2.97; p<.01); pleasant (t=3.65; p<.001); and stressed (t=2.17; p<.05). Table 1 provides a summary of these results.

Table 1. Relationship Between Movie Type and Mood

Mood	Celtic Pride mean (n) Std. Dev	Fargo Mean (n) Std. Dev.	t-value
Aroused	2.19 (37) 1.29	1.71 (56) 1.20	1.79
Unpleasant	1.53(38) .86	2.38 (55) 1.41	3.63**
Relaxed	3.28 (39) 1.45	2.52 (56) 1.34	2.60*
Sleepy	2.54 (39) 1.41	1.70 (55) 1.21	2.97**
Excited	2.85 (40) 1.21	2.50 (54) 1.49	1.26
Bored	1.87 (38) 1.16	1.49 (55) 1.09	1.58
Pleasant	3.38 (39) 1.23	2.40 (55) 1.37	3.65**
Stressed	1.36 (39) .81	1.80 (56) 1.18	2.17*

Since it was determined that the two movies produced significantly different moods, the researchers performed a series of two-way ANOVAS to examine the interactive effect of gender and movie type on mood for the five mood variables that produced significantly different moods

during the two movies. Because men and women differ in terms of the meaning of leisure (e.g., Henderson & Rannels, 1988), this analysis accounted for gender. Results indicated that there was one gender by movie interaction of note. Among females, Fargo produced a much less pleasant mood than Celtic Pride. However, Fargo produced only a slightly less pleasant mood among males than Celtic Pride (f=5.09; p<.05). Results also indicated that there was a significant main effect of movie type for the following mood variables: Fargo produced a more unpleasant, more stressed, less relaxed and less sleepy mood than Celtic Pride.

A correlation matrix was produced for each gender by movie type combination in order to examine the validity of the PAD mood theory. For females who viewed Fargo, it was found that bored and unpleasant (r=.43; p<.05), relaxed and pleasant (r=.46; p<.05), bored and sleepy (r=.52; p<.01, and stressed and unpleasant (r=.41; p<.05) were positively and significantly related. It was also found that relaxed and unpleasant (r=-.61; p<.01) and pleasant and unpleasant (r=-.53;p<.01) were negatively and significantly related. For females who viewed Celtic Pride, results suggested that sleepy and relaxed moods (r=.75; p<.01) were positively and significantly related. For males who viewed Celtic Pride, results indicated that relaxed and aroused (r=.471; p<.05), excited and relaxed (r=.35; p<.05), and stressed and unpleasant moods (.57; p<.05) were positively and significantly related. Males who viewed Fargo were found to be relaxed and aroused (r=.52; p<.01), aroused and stressed (r=.40; p<.015), unpleasant and stressed (r=.63; p<.001), relaxed and excited (r=.72; p<.001), sleepy and bored (r=.68; p<.001), and excited and pleasant (r=.53; p<.01).

It is interesting to note, that for males the intercorrelations of aroused and excited, relaxed and excited, and aroused and relaxed were statistically significant and moderate. However, according to the PAD mood theory, these moods are not supposed to occur simultaneously. These mood variables appear in different quadrants of the model suggesting that they are independent of each other. However, results of this study suggests that for males, two theoretically opposed moods may co-exist. The PAD mood theory does not account for simultaneous moods. Therefore, researchers should consider further testing this model and perhaps it should be refined to represent true mood states that occur during leisure experiences.

A secondary purpose of this paper was to examine the effects of a movie induced mood on behavior. The relationship was examined with a series of chi-squares. Results indicated that a movie induced mood does not affect movie-goers' intentions to perform behaviors following viewing the movie. In other words, a movie induced mood has no statistically significant effect on changing plans for after viewing the movie.

## Conclusion

According to the Pleasure Arousal Dominance (PAD) mood theory, excited, relaxed, and aroused moods are theoretically opposed and cannot occur at the same time.

However, according to the results of this study, two opposing moods can exist simultaneously. The leisure-mood connection needs further attention before this conclusion can be made and the investigators of this study propose testing the PAD mood theory in other leisure settings such as outdoor recreation. Outdoor recreation activities may produce significantly different and perhaps heightened mood states than other types of recreation providing for unique research. We suggest modifying the PAD model if future studies also support simultaneous moods. These modifications may make the model more flexible and representative of true mood states that exist during a leisure experience. It is important to conduct more research in this area. Theories of mood and methods of studying mood may provide fruitful research approaches to traditional leisure problems. In addition, the effects of mood have implications for improved health and wellness, as well as marketing and commercial recreation (Hull, 1990).

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