

AN ABSTRACT OF THE THESIS OF

Robert A. Harty for the degree of Master of Arts in Interdisciplinary Studies in the co-departments of Physical Education, College Student Services, & Sociology presented on May 1, 1987.

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Dow P. Poling

As an increase in Americans seek their leisure experience in rationalized forms of play, certain symptoms of non-enjoyment, non-flow achievement are present; i.e., aggression. This relationship between aggression and rationalized play has widely manifested in university intramural sports settings. The review of literature provides the logical development for this relationship and indicates the need for research pertaining to this phenomena.

The present research study is the initial investigation designed to compare the highly rationalized intramural sports setting with the more ludus oriented university open recreational sports setting in regard to aggression. It was necessary for the investigator to design a method and instrument that would be used to collect the data required

for the investigation. An observation form, to be employed by two trained observers, was developed to obtain the extent of verbal, physical, and combined verbal and physical aggression directed towards officials, opponents, spectators, and team members.

The research method and data gathering instrument were randomly imposed upon 15 minute intervals of 25 different intramural "B" level men's basketball games (10 in 1986 and 15 in 1987) and 15 minute intervals of 25 different open recreational basketball games (10 in 1986 and 15 in 1987) at Oregon State University. All subjects were male students at Oregon State University who actively participated on a team in either intramural basketball at the "B" level, or open recreation basketball. The data were subjected to mean and percentage comparisons.

One hypothesis was stated for testing. The stated hypothesis was directed toward obtaining objectives set by the investigator for the present study.

The number of aggressive acts observed in each setting was analyzed by comparing means and percentages. Investigation of the results indicated a higher number of aggressive acts per active participant in the intramural sports setting than in the open recreational sports setting. In 1986, 58 acts of aggression were observed in the intramural basketball games compared to 11 aggressive acts in the open recreation basketball games. Additionally, there were an average of .58 aggressive acts per active participant in the intramural basketball games and an average of .11 aggressive acts per active

participant in the open recreational basketball games. A more extensive analysis of the 1986 data revealed that of the 58 aggressive acts observed in the intramural basketball games, 81% were directed towards the officials, 19% were directed towards the opponents, and 0% were directed towards team members and spectators. In comparison, of the 11 aggressive acts observed in the open recreation basketball games, 100% were directed towards opponents and 0% were directed towards team members and spectators.

The results of the 1987 data are consistent with the results in 1986. In 1987, 69 aggressive acts were observed in the intramural basketball games involving 52 active participants or 35% of the total amount of active participants observed in this setting. Of these 69 aggressive acts, 82% were directed towards officials; 15.9% were directed towards opponents; 1.5% were directed towards team members; and 0% were directed towards spectators. In comparison, of the three aggressive acts observed in the open recreation basketball games, 100% were directed towards the opponents involving only 1.3% of all participating in this setting. Zero percent of the aggressive acts were directed towards team members and spectators.

In summary, the results of this study are consistent with Rokosz's (1979) results that there is a higher amount of aggression in intramural basketball games that use officials than in basketball games where no officials are present. The results of this study indicated that the high number of intramural basketball games that had aggression and the large number of aggressive acts in them were due to the high number of games and aggressive acts that involved officials.

A COMPARATIVE ANALYSIS OF AGGRESSION BY ACTIVE MALE
PARTICIPANTS IN INTRAMURAL AND OPEN RECREATION BASKETBALL
AT OREGON STATE UNIVERSITY

by

Robert A. Harty, Jr.

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Associate Professor of Physical Education in charge of major

Redacted for Privacy

Associate Professor of Education in charge of co-field

Redacted for Privacy

Assistant Professor of Sociology in charge of co-field

Redacted for Privacy

Chairman of department of Physical Education

Redacted for Privacy

Dean of Graduate School

Date thesis is presented May 1, 1987

Typed by researcher for Ann Hawkins

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**A COMPARATIVE ANALYSIS OF AGGRESSION BY ACTIVE MALE PARTICIPANTS
IN INTRAMURAL AND OPEN RECREATIONAL BASKETBALL AT OREGON STATE
UNIVERSITY**

INTRODUCTION

Background

From a historical viewpoint of Western Civilization, "America is now in the throes of a great realignment of social, economic, and intellectual patterning" (Mitchell, 1986). This realignment is referred to by Max Weber as rationalization or the infusion of technological knowledge, control, and impersonality into all human endeavors. Rationalization is symbolized in external structures of capitalism, bureaucratic administration, and legal formalism. These external structures are the development of an "underlying value urging measurement, calculation, and order throughout social life" (Schlucter, 1979: 14-15). Brubaker notes that:

Modern capitalism presupposed an inner organization and rationalization of the personality. Capitalism in external form of organization . . . could not develop without a transformation of attitudes . . . Traditionalist attitudes towards work - the greatest inner obstacle to the development of modern capitalism - were decisively overcome only through the inner reorientation of ethical attitudes that was accomplished by ascetic protestantism. (1984; 27)

The ultimate negative consequence of rationalization, as noted by Weber, is the "disenchantment of the world." These disenchantments, according to Mitchell, are two sorts, "The alienating oppressions of lock-step life in a rationally over-ordered society, and the anomic uncertainty of a deanimated universe, bereft of holistic meaning and purpose" (1986). As natural human rhythm is likened to that of the

animated machine and the external world is demystified, the human's search for meaning in life becomes impervious. The human's disenchantment of the world is the ultimate negative consequence of this American realignment called rationalization.

Statement of Problem

Aggression in sport is a symptom of a more comprehensive problem found in contemporary American society. The problem is that Americans seek their leisure experiences in the form of rationalized play or play that is structured, ordered and rule governed. Arguably, the ultimate goal of all leisure pursuits is the flow experience or that "holistic sensation present when one acts with total involvement; it is the kind of feeling after which one nostalgically says: 'that was fun,' or 'that was enjoyable.'" (Csikszentmihalyi, 1974). This leisure experience is obtainable only when the characteristics of intrinsic motivation, internal locus of control, and suspension of reality are ascribed to and present within the leisure activity (Levy, 1978). Leisure experience is not obtainable to most active participants in rationalized play. As a result, certain symptoms of non-enjoyment, non-flow achievement such as aggression are present.

This relationship between aggression and rationalized play has become widely manifested in university intramural sports programs. The goal of most intramural sports programs is to ensure that the leisure values of fun, enjoyment, and flow should always be pursued by the active participants. This phenomena clearly represents a contradiction between philosophy and reality. A problem certainly exists in any

university intramural sports program whose philosophy strives for these idealistic leisure values and yet is supported by rationalized play. As a result of this problem, the symptom of aggression increases among the active participants in epidemic proportions.

Significance of Study

Although aggression has been a prolonged topic of sociological research, an extensive search of existing literature revealed a serious lack of data that focused upon the social structural conditions which increase the potential for aggression in play. A comparison of the incidents of aggression in officiated and non-officiated basketball games will identify what aggression really is, a symptom to a much larger problem in American Society. The data and conclusions resulting from the proposed investigative project will facilitate the development of a theoretical and practical model of aggression in play which may be employed for future research.

Limitations

The study is subject to the following limitations:

- 1) This study is limited to male participants in "B" level intramural basketball games at Oregon State University during the fifth week of Winter Term of 1986 and 1987.
- 2) This study is limited to male participants who actively participate in open-recreation basketball at Oregon State University during Winter Term of 1986 and 1987.

Hypothesis

Hypothesis:

There will be a higher amount of aggressive acts by the active male participants in the "B" level intramural basketball games than by the active male participants in the open recreational basketball games at Oregon State University.

Definitions

The following definitions are intended to provide the reader with a clearer understanding of commonly employed terms.

Aggression

Any verbal or physical act that is intended to inflict pain or injury on another person (Bredemeier, Shields, 1985).

Agon

A form of play in which individuals are pitted against one another for the purpose of having their superiority in a given area recognized (Callois, 1961).

Assertiveness

The use of legitimate verbal or physical force to achieve one's purpose (Silva, 1980).

Field Study

"An exploratory study undertaken in a natural social setting that is not controlled and only minimally influenced by the presence of the researcher." (Guy, 1987: 449)

Flow

"Holistic sensation present when we act with total involvement... It is the state in which action follows upon action according to an internal logic which seems to need no conscious intervention on our part" (Csikszentmihalyi, 1984).

Hostile Aggression

The intent to injure another person where the reinforcement is the pain and suffering that is caused (Cox, 1985), (Silva, Husman, 1984).

Internal Locus of Control

The degree to which an individual perceives he is in control of his actions and outcomes (Levy, 1978).

Intramural Sports

"Structured contents where participation is limited to the setting within which the total recreational sport system is located."
(Mull, 1983: 6)

Intrinsic Motivation

The emission of behavior for rewards associated with the process of its emission rather than with the result (Ellis, 1973).

Instrumental Aggression

The intent to receive an external reward via the act of inflicting pain and injury on another person (Silva, Husman, 1984).

Leisure

An experience found in achievement of flow.

Ludus

The structured and ordered qualities of play (Caillois, 1961).

Official

"Theoretically unbiased specialists that are charged with the duty of detecting rule transgressions, noting legitimate accomplishments, and assigning appropriate rewards" (Mitchell, 1983: 219).

Officiated Basketball

Basketball game in which officials are employed.

Paidia

Spontaneous and impulsive qualities of play (Caillois, 1961).

Play

"Voluntary activity executed within fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy, and the consciousness that it is different from ordinary life" (Huizinga, 1955: 28).

Rationalization

The infusion of technological knowledge, control, and impersonality into all human endeavors (Mitchell, 1986).

Rationalized Play

Structured, ordered, and rule governed forms of agon.

Recreational Sports

"Programming sport activity for the sake of participation and fun." (Mull, 1983: 5)

Unofficial Basketball

Basketball game in which officials are not present.

CHAPTER II

LITERATURE REVIEW

The review of literature is divided into the following sections to provide a logical development of the concepts of this study.

- 1) Leisure; 2) Play; 3) Rationalization and Play; 4) Aggression;
- 5) Aggression in Recreational Sport.

Leisure

Leisure is the quality of experience found in the achievement of flow. Flow represents complete involvement by the individual in the leisure activity. Csikszentmihalyi interviewed a number of participants in many different leisure activities ranging from music composing to basketball. These interviews enabled him to define flow as:

. . . the holistic sensation present when we act with total involvement. It is a kind of feeling after which one nostalgically says: "that was fun," or "that was enjoyable." It is the state in which action follows upon action according to an internal logic which seems to need no conscious intervention on our part. We experience it as a unified flowing from one moment to the next in which we are in control of our actions, and in which there is little distinction between self and environment; between stimulus and response; or between past, present, and future. (Csikszentmihalyi, 1974).

There are three elements which constitute and potentiate the flow experience. One of these elements is that the leisure activity must be intrinsically motivating. Leisure activities are undertaken for the intrinsic rewards they offer and not for some extrinsic rewards gained or because of some exterior constraint. A second element is the internal locus of control, or as Levy (1978) notes, the degree to which

participants perceive they are controlling their actions and outcomes. Thirdly, the holistic sensation created when action and awareness merge must be present and capable of achievement within the leisure activity. When these three elements are present in the leisure activity, the flow experience is maximized.

Play

There are a variety of leisure activities that Americans can undertake in pursuit of the flow experience. One of these activities is play. Johan Huizinga, in his book Homo Ludens, defines play as:

. . . a voluntary activity executed within fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy, and the consciousness that it is different from ordinary life. (1955: 28)

Roger Callois separates play into four fundamental categories. Alea, the Latin name for the game of dice, includes "all games that are based upon a decision independent of the player, an outcome over which he has no control, and in which winning is the result of fate rather than triumphing over adversary"; i.e., dominoes, backgammon, dice, roulette, a lottery (1961: 17). A second category of play, mimicry, presupposes the acceptance of an illusory character or, in other words, the individual "disguises or temporarily sheds his personality in order to feign another" (1961: 19); i.e., an actor in a theatrical presenta-

tion. Llinx, a third category of play,

"consists of an attempt to momentarily destroy the stability of perception and inflict a kind of voluptuous panic upon an otherwise lucid mind . . . it is a question of surrendering to a kind of spasm, seizure, or shock which destroys reality with sovereign brusqueness";

i.e., a child creating a rapid whirling movement to create a state of dizziness and disorder (1961: 23). The last category of play, agon, provides the researcher with the primary focus of the present investigation. Agon includes games and sports in which individuals are competing against one another. The ultimate goal of agon is for each player to have his superiority in a given area recognized. According to Callois:

Agon presupposes sustained attention, appropriate training, assiduous application, and the desire to win. It implies discipline and perseverance. It leaves the champion to his own devices, to evoke the best possible game of which he is capable, and it obliges him to play the game within the fixed limits, and according to the rules applied equally to all, as that in return the victor's superiority will be beyond dispute (1961: 15).

Basketball, football, checkers, and chess are examples of the agon category of play.

Agon may be placed on a continuum between paidia and ludus.

Paidia represents spontaneity and impulsiveness where free improvisation and carefree gaiety are dominant. The quality of paidia, for the purposes of the investigator's research, is represented in the agon game of pick-up basketball at the university level.

At the opposite extreme of this continuum is the quality of ludus. Ludus represents the rationalized aspects of play. To understand this structured and ordered quality of play, the phenomena of

rationalization in American society and its effects upon play must be evaluated.

Rationalized Play

Rationalized play is representative of the current status of American culture. The micro/macro relationship between play and culture in America may be explained from a historical viewpoint of Western Civilization:

Civilization is now in the throes of a great realignment of social, economic, and intellectual patterning. Prescribed method, technological monitoring and control, and rational management are being infused into all areas of human endeavor. Rationalized society is characterized by increasing capacity to predict and control natural phenomenon in the external world. It is also accompanied by a rejection of the impractical and spontaneous in favor of the purposeful and pragmatic (Mitchell, 1986).

This realignment of social, economic, and intellectual patterning has affected play by making the qualities of ludus more desirable in agon than the qualities of paidia. These structured, ordered, and rule-governed forms of agon are referred to in this paper as rationalized play and is represented by intramural basketball games at the university level.

The representatives of rationalized play are the theoretically unbiased specialists called officials. "The officials are charged with the duty of detecting rule transgressions, noting legitimate accomplishments, and assigning appropriate rewards" (Mitchell, 1983: 219). These individuals assure fairness and legitimate competition.

To the participant, however, the official represents a barrier which prohibits the qualities of paidia in agon. Spontaneity is replaced by regimentation and strict enforcement of rules. "As soon as the rules are transgressed the whole playworld collapses . . . the umpire's whistle breaks the spell and sets real life going again" (Huizinga, 1950: 11).

Aggression

"The word aggression is derived from the Latin root *aggredi* (to attack), *ad* (to or toward) and *gradior* (walk). Literally, the word means to walk towards or approach, to move against or to move with intent to hurt or harm" (May, 1972: 125).

Aggressive behavior, therefore, may be identified as any verbal or physical act that is intended to inflict pain or injury on another person (Bredemeier, Shields, 1985).

Sociologists have identified two basic types of aggression: hostile aggression and instrumental aggression. These two types of aggression are distinguished in terms of their primary reinforcers, or in terms of the goals being sought (Cox, 1985). In both cases, the intent is to harm another human being.

The intent of individuals involved in hostile aggression is to injure the other person. The reinforcement is the pain and suffering that is caused (Cox, 1985), (Silva, Husman, 1984).

The intent of individuals involved in instrumental aggression is to receive an external reward via the act of inflicting pain and injury on another person. In rationalized play, this goal could range from money to victory or even prestige. The aggressor views the act as

instrumental in obtaining the primary goal (Cox, 1985), (Silva, Husman, 1984).

A third category of behavior closely associated with aggression is assertiveness. Assertive behavior employs legitimate verbal or physical force to achieve one's purpose (Silva, 1980). "These assertive behaviors must be exhibited with no intent to harm or injure another person, nor may they violate the constitutively agreed upon rules of the sport being played." (Silva, Husman, 1984: 248)

Several theories have been proposed to explain aggressive behavior. The instinct theory, based upon the writings of Sigmund Freud and the ethologist Konrad Lorenz, implies that aggression results in the release of the drive to be aggressive and that once this aggression is released, the drive no longer remains. Freud (1950) viewed aggression as an inborn drive similar to sex or hunger that could be regulated through discharge while Lorenz (1966) supported the theory of similarity between aggression of humans and animals. According to Lorenz (1966), humans are born with the instinct to defend territory and to fight for survival. This theory, sometimes called the catharsis theory, refers to the release or purging of aggression.

The original frustration-aggression theory stated that aggression was always the response to frustration or interference with a personal objective. Because punishment sometimes inhibits aggressive behavior, the aggressive behavior is displaced to another activity; e.g. sport. Having aggressed against the source of frustration either directly or indirectly, the individual experiences a reduction in the drive to aggress (Ress, Miracle, 1986). Berkowitz (1973) reformulates the

theory by stating that frustration does not have to lead to aggression. It only heightens the predisposition to aggress.

The social learning theory, proposed by Bandura and Walters (1963), states that aggressive responses are learned through observing and imitating others, particularly those of high status to the individual, e.g., parents, peers. Bandura (1973) has also argued that aggression has a circular effect where one act of aggression will lead to further acts of aggression. This pattern will continue until the circle is broken by some form of positive or negative reinforcement.

Aggression in Recreational Sport

Aggression in university intramural basketball has become a serious social problem and is of great concern to recreation administrators. Francis Rokosz (1981) attributes this phenomena to the injection of officials and extrinsic forces into basketball at the "recreational" level. In 1979, Rokosz researched ten groups of male college students assigned to play four-on-four, half-court, basketball games. All groups played four separate games of eight minutes duration. Different environmental variables were presented in each game: officiated games which excluded external incentive; officiated games which provided five dollar rewards to each player on the winning team; non-officiated games without external incentive; non-officiated games which provided five dollar rewards to each member on the winning team. According to Rokosz's study, the largest negative effects occurred when an official was present and a monetary reward was offered to the winners of a game. On the other hand, the highest amount of

positive effects resulted where no official was present and no external reward was offered (1979).

Rokosz attributes the increase in "negative effects" such as aggression, to the injection of officials and extrinsic rewards upon the play environment. While aggression represents only one of the negative results that Rokosz's study revealed, his results must be viewed with caution. According to Husman and Silva (1984), behavioral research that is conducted in artificial settings can inhibit accurate results. Their recommendation for future studies on aggression imply the use of field research:

Field research is more difficult to control, but it provides more realistic situations for analyzing aggressive behavior. Future field research must be theoretically structured and the variables controlled in such a manner that it becomes possible to repeat the research study and compare results (1984: 266).

These recommendations for the study of aggression will be utilized in the design of the research methods for this paper.

Summary of the Review of Literature

To summarize the review of literature, the following statements are directly related to the present investigation.

1. Leisure is the quality of experience found in the achievement of flow and is potentiated when the elements of intrinsic motivation, internal locus of control, and suspension of reality are capable of being achieved.
2. The agon category of play can be put on a continuum between paidia and ludus. These extremes will be represented in the

study by open-recreation basketball and intramural basketball at the university level.

3. Rationalized play is a microcosm of American society and can be represented in agon by the officials.
4. Aggression can be categorized by the primary reinforcers. Hostile aggression is reinforced by the pain and suffering caused, and instrumental aggression is reinforced by the achievement of an external reward via the act of aggression.
5. Rokosz (1979) found that an increase in negative effects, such as aggression, are caused by the injection of officials and extrinsic rewards into the play environment.

The current investigation was motivated by the lack of literature and knowledge in the area of aggression in recreational sports. It is anticipated that this initial study will prompt further investigation into the effects of rationalized play on the active participant.

CHAPTER III

METHODOLOGY

Overview of Design

For purposes of the investigation, the design of the field study employed the participant observation method for recording aggressive behaviors among male participants playing basketball in their natural recreational sports setting at Oregon State University. Specific recreational basketball settings which represent the two extremes of Callois's paidia to ludus continuum were observed. Open-recreational basketball represents the paidia qualities of play, and intramural basketball represents rationalized play. The independent variable will be the presence (or absence) of the official in the basketball game. The dependent variable is the amount of aggression. A comparison of the amounts of aggression in each setting will conclude the study.

Subjects

Male students at Oregon State University who actively participate on a team in either intramural basketball at the "B" level, or open recreation basketball were observed. The male students in each setting represent members of many different teams. In each setting, a single game of basketball is played by two teams representing not less than five players on each team.

Oregon State University is Oregon's land grant and sea grant institution. It offers a variety of programs in scientific, technolog-

ical, professional, and liberal arts fields. Approximately 16,000 students enroll each year in undergraduate and graduate programs. According to the Oregon State University Admissions Office, 56% of those enrolled are male and 44% are female. Furthermore, 83% are White, 1% are Black, 2% are American Indian, 5% are Asian, and 1% are Hispanic.

In the intramural basketball setting, there are fifteen "B" leagues. Each league has six teams. During the intramural basketball season, which lasts five weeks, fifteen total games are played in each league. Three games are played each week by each league and no team plays the same team twice (round-robin competition). One game, consisting of two teams and representing not less than a total of ten players, was randomly selected from 10 leagues in 1986 during the third week of play and from all 15 leagues during the fifth week of play in 1987.

In the open recreation setting, games are played by two teams representing not less than ten total male players throughout the ten week school term. There are no formally assigned times or leagues for these teams, but these teams play during the same time and same day each week against different teams. It is because of this similarity between the two settings that the open-recreation basketball games were randomly chosen using the same method that was employed in the intramural basketball setting. The study results were determined through analysis of 100 active participants from each setting in 1986 and from 150 active participants from each setting in 1987.

Procedures

Two trained observers observed fifteen minute portions of each of the games randomly selected in each setting. In 1986, the observers were located at opposite ends of the court to assure a complete coverage of the play area. In 1987, the observers were located at the same end of the basketball court but were screened from one another to assure independent observations. An observation form was employed to record the results of the observers (Appendix A). At the end of each observational period, the observation forms were collected and the results were tabulated.

The observers were trained by the researcher prior to gathering study data. The operational definitions of aggression and assertiveness were reviewed with the observers, and the proper usage of the "observation form" (Appendix A) was explained. Lastly, the observers were assigned to observe and gather data on a pilot study game.

The fifteen minute observation time period was selected to equate the difference in playing time between each recreational basketball setting. In the intramural basketball setting, a single game is divided into two halves. The first half is fifteen minutes in length (the clock does not stop during the first half). The second half is thirteen minutes running time (the clock does not stop) plus two minutes in which the clock is stopped for all violations. In this setting, the second half of play was observed.

In the open-recreation basketball setting the games are not played according to a specific time allotment. In this setting, the game is played until a team scores a prescribed amount of points. The pre-

scribed amount of points in this setting is thirty or a total of fifteen baskets (worth two points each) scored by a single team. These games, as noted in pre-testing, are consistently seventeen to twenty minutes in length. The first fifteen minutes of each game in the open-recreation setting were observed.

An observation form was employed to record the results of the observers during each fifteen minute period in each setting. The observation form consists of a "key" designating the symbols which were used to represent the different forms of aggression and to whom the aggression is directed and columns where the observations may be recorded.

At the end of each time sample, the two observation forms were collected and recorded on a summary sheet. An aggressive act that was identified by both observers was recorded as a single aggressive act. All other observed aggressive acts were recorded. The aggressive acts were then tallied to form the score for that observation period.

Treatment of Data

The hypothesis was tested by comparing the means of the two settings in relation to the amount of observed acts of aggression. Furthermore, percentages representing the amount of different forms of aggression observed in each setting was compared.

CHAPTER IV

RESULTS

The purpose of this chapter is to examine the proposed hypothesis through an analysis of the data recorded by trained observers. At Oregon State University in 1986, a total of 20 basketball games were observed, 10 being in the intramural sports setting, and the remaining 10 in the open recreational sports setting. In 1987, a total of 30 basketball games were observed, 15 being in the intramural sports setting, and the remaining 15 in the open recreational sports setting. Analysis employed in reporting the data includes means and percentages related to the amount of aggression observed in each setting.

The results computed for Part One are designed to enable the investigator to analyze data pertaining to the number of aggressive acts observed in each setting.

Part One

Table 1 reveals that in the intramural basketball games observed during 1986, 58 total acts of aggression were observed compared to 11 total acts of aggression in the open recreational basketball games. An analysis of the total acts of aggression reveals that there were an average of 5.8 aggressive acts per basketball game in the intramural sports setting and 1.1 aggressive acts per basketball game in the open recreational sports setting. Furthermore, there were an average .58 acts of aggression per player in the intramural basketball games and .11 acts of aggression per player in the open recreation basketball games.

TABLE 1

Number of Aggressive Acts Observed in the
Intramural and Open Recreational Basketball Games During 1986

INTRAMURAL BASKETBALL		OPEN RECREATIONAL BASKETBALL	
Game Title	Amount of Aggression	Game Title	Amount of Aggression
A	11	A	2
B	8	B	2
C	6	C	0
D	9	D	4
E	6	E	0
F	4	F	3
G	4	G	0
H	7	H	0
I	3	I	0
J	0	J	0

100 participants

100 participants

TOTAL: 58
AVERAGE PER GAME: 5.8
AVERAGE PER PLAYER: .58

TOTAL: 11
AVERAGE PER GAME: 1.1
AVERAGE PER PLAYER: .11

Table 2 reveals that in the intramural basketball games observed in 1987, 69 total acts of aggression were observed compared to 3 total acts of aggression in the open recreational basketball games. An analysis of the total acts of aggression reveals that there were an average of 4.6 aggressive acts per basketball game in the intramural sports setting and .2 aggressive acts per basketball game in the open recreational sports setting. Furthermore, 52 different players committed the 69 total acts of aggression representing 35% of the total 150 players observed in the intramural basketball games. There were also an average of .46 acts of aggression per participant in this setting. Comparatively, two different players committed the three

total acts of aggression in the open recreation setting representing 1.3% of the total 150 players observed in this setting. There were also an average of .02 acts of aggression per participant in this setting.

TABLE 2

Number of Aggressive Acts Observed in
Intramural and Open Recreational Basketball Games During 1987

INTRAMURAL SPORTS			OPEN RECREATIONAL SPORTS		
Game Title	Amount of Aggression	Amount of Different Participants	Game Title	Amount of Aggression	Amount of Different Participants
A	1	1	P	0	0
B	4	3	Q	0	0
C	1	1	R	0	0
D	4	3	S	0	0
E	2	2	T	0	0
F	7	6	U	0	0
G	5	4	V	0	0
H	6	2	W	0	0
I	7	6	X	0	0
J	8	6	Y	1	1
K	8	5	Z	2	2
L	3	2	AA	0	0
M	4	3	BB	0	0
N	3	3	CC	0	0
O	6	5	DD	0	0

150 participants

TOTAL 69 TOTAL 52
 AVERAGE PER GAME 4.6
 SD = 1.05
 AVERAGE PER PLAYER .46
 % OF TOTAL PLAYERS 35%

150 participants

TOTAL 3 TOTAL 3
 AVERAGE PER GAME .2
 SD = .086044
 AVERAGE PER PLAYER .02
 % OF TOTAL PLAYERS 1.3%

Part Two

The results computed for Part Two are designed to enable the investigator to analyze data pertaining to aggression directed towards officials, opponents, team members, and spectators.

Table 3 indicates that in 1986 there were 47 acts of aggression directed towards the officials in the intramural basketball games representing 81% of the total amount of aggressive acts observed in this setting. Furthermore, there were .47 acts of aggression directed towards officials per active participant in this setting. A more extensive analysis of the data revealed that there were 46 verbal and 1 physical act of aggression directed towards the officials.

TABLE 3

Number of Aggressive Acts Directed Towards
Officials by Active Participants in the
Intramural Basketball Games during 1986

Game	Verbal Aggression	Physical Aggression	Combined Verbal and Physical Aggression	Row Total
A	7	0	0	7
B	6	0	0	6
C	5	0	0	5
D	8	0	0	8
E	6	0	0	6
F	2	0	0	2
G	2	1	0	3
H	7	0	0	7
I	3	0	0	3
J	0	0	0	0
Column Total:	46	1	0	47
% of Total Aggressive Acts:	79.3%	1.7%	0%	81%
Mean:	4.6%	.1	0%	4.7%
Ave. per Player:	.46%	.01	0%	.47

Table 4 reveals that in 1987, there were 57 aggressive acts directed towards the officials in the intramural basketball games representing 82% of the total amount of aggressive acts observed in this setting. Furthermore, there were 38 aggressive acts directed towards officials per active participant in this setting. Lastly, Table 4 reveals that there were 52 verbal and 5 physical acts of aggression directed towards officials in this setting.

TABLE 4

Number of Aggressive Acts Directed Towards
Officials by Active Basketball Participants
In the Intramural Sports Setting During 1987

Game	Verbal Aggression	Physical Aggression	Combined Verbal & Physical Aggression	Row Total
A	0	0	0	0
B	4	0	0	4
C	1	0	0	1
D	4	0	0	4
E	2	0	0	2
F	6	1	0	7
G	3	0	0	3
H	4	1	0	5
I	6	0	0	6
J	5	0	0	5
K	7	1	0	8
L	3	0	0	3
M	3	0	0	3
N	1	1	0	2
O	3	1	0	4
COLUMN TOTAL	52	5	0	57
% OF TOTAL AGGRESSIVE ACTS	75%	7%	0%	82%
MEAN:	3.5	.33	0	3.8
AVE. PER PLAYER	.35	.033	0	.38

Data pertaining to aggression directed towards an opponent revealed 11 aggressive acts (6 verbal and 5 physical) observed in the 1986 intramural basketball games representing 19% of the total aggressive acts observed in this setting and an average of .19 per active participant. In 1987, there were also 11 aggressive acts (2 verbal, 8 physical, 1 combination) directed towards opponents representing 15.9% of the total acts of aggression observed in the intramural basketball games and representing an average of .73 aggressive acts per active participant in this setting.

Comparatively, in 1986 there were 11 (all verbal) aggressive acts directed towards opponents in the open recreation basketball games representing 100% of the aggressive acts observed in this setting and representing .11 acts of aggression per active participant in this setting. Furthermore, in 1987 there were 3 (1 verbal, 2 physical) aggressive acts directed towards opponents in the open recreational basketball games representing 100% of the aggressive acts observed in this setting and an average of .02 acts of aggression per participant.

The data pertaining to aggressive acts directed towards team members and spectators reveals that there was only one aggressive act (in intramural basketball during 1987) which involved a team member, and there were no aggressive acts directed towards spectators in either setting during 1986 and 1987.

CHAPTER V

SUMMARY

As an increase in Americans seek their leisure experience in rationalized forms of play, certain symptoms of non-enjoyment, non-flow achievement are present; i.e., aggression. This relationship between aggression and rationalized play has widely manifested in university intramural sports settings. The review of literature provides the logical development for this relationship and indicates the need for research pertaining to this phenomena.

The present research study is the initial investigation designed to compare the highly rationalized intramural sports setting with the more ludus oriented university open recreational sports setting in regard to aggression. It was necessary for the investigator to design a method and instrument that would be used to collect the data required for the investigation. An observation form, to be employed by two trained observers, was developed to obtain the extent of verbal, physical, and combined verbal and physical aggression directed towards officials, opponents, spectators, and team members.

The research method and data gathering instrument were randomly imposed upon 15 minute intervals of 25 different intramural "B" level men's basketball games (10 in 1986 and 15 in 1987) and 15 minute intervals of 25 different open recreational basketball games (10 in 1986 and 15 in 1987) at Oregon State University. All subjects were male students at Oregon State University who actively participated on a team in either intramural basketball at the "B" level, or open recreation basketball. The data were subjected to mean and percentage

comparisons.

One hypothesis was stated for testing. The stated hypothesis was directed toward obtaining objectives set by the investigator for the present study.

The number of aggressive acts observed in each setting was analyzed by comparing means and percentages. Investigation of the results indicated a higher number of aggressive acts per active participant in the intramural sports setting than in the open recreational sports setting. In 1986, 58 acts of aggression were observed in the intramural basketball games compared to 11 aggressive acts in the open recreation basketball games. Additionally, there were an average of .58 aggressive acts per active participant in the intramural basketball games and an average of .11 aggressive acts per active participant in the open recreational basketball games. A more extensive analysis of the 1986 data revealed that of the 58 aggressive acts observed in the intramural basketball games, 81% were directed towards the officials, 19% were directed towards the opponents, and 0% were directed towards team members and spectators. In comparison, of the 11 aggressive acts observed in the open recreation basketball games, 100% were directed towards opponents and 0% were directed towards team members and spectators.

The results of the 1987 data are consistent with the results in 1986. In 1987, 69 aggressive acts were observed in the intramural basketball games involving 52 active participants or 35% of the total amount of active participants observed in this setting. Of these 69 aggressive acts, 82% were directed towards officials; 15.9% were

directed towards opponents; 1.5% were directed towards team members; and 0% were directed towards spectators. In comparison, of the three aggressive acts observed in the open recreation basketball games, 100% were directed towards the opponents involving only 1.3% of all participating in this setting. Zero percent of the aggressive acts were directed towards team members and spectators.

In summary, the results of this study are consistent with Rokosz's (1979) results that there is a higher amount of aggression in intramural basketball games that use officials than in basketball games where no officials are present. The results of this study indicated that the high number of intramural basketball games that had aggression and the large number of aggressive acts in them were due to the high number of games and aggressive acts that involved officials.

Conclusions

Within the limitations of this study and to the extent the sample population is representative of the men participating in intramural basketball and open recreation basketball at Oregon State University, the following conclusions have been derived from the results of the research.

1. There were a higher number of aggressive acts observed in the intramural basketball games than in the open recreation basketball games.
2. There were a higher percentage of participants committing aggressive acts in the intramural basketball game than in the open recreation basketball games.

3. There was a higher average of aggressive acts per participant in the intramural sports setting than in the open recreational sports setting.
4. Verbal aggression towards officials represented the largest form of aggression in this study.

Researcher's Observations

Aggression in sport has been considered to be a serious social problem. However, to this investigator, aggression in sport is a symptom of a more comprehensive problem found in American society. The problem is that Americans seek their leisure experiences in rationalized forms of play. From the macro of rationalized society to the micro of rationalized play, the individual is oppressed into the lock-step life of a rationally over-ordered society. As a result of this problem, aggression has increased among the active participants in sport.

In an analysis of this problem-symptom relationship and in accordance with the review of literature, aggression must be divided into two distinct categories distinguished in terms of their primary reinforcers (Cox, 1985). The intent of individuals involved in the category of hostile aggression is to injure the other person while being reinforced by the pain and suffering that is caused. In the category of instrumental aggression, the intent of the individual is to receive an external reward via the act of inflicting pain and injury on another person. These differing primary reinforcers have lead the researcher to analyze them separately but within the premise that an

act of aggression, no matter what goal is being sought, is a symptom of a more comprehensive problem found in American society.

Hostile Aggression

Hostile aggression in rationalized play is representative of the individual's disenchantment with rationalized society. This statement implies more than a temporary outburst by an individual due to frustration with some product inherent in the rationalized play setting. It implies that the individual is disenchanted or disillusioned with American society as represented in the highly rationalized play settings.

As an increase in Americans seek their leisure experiences in agonistic forms of rationalized play, they oppress themselves into a play setting bereft of any holistic meaning and more structured than the society in which they live. As a result of this oppression, the individual becomes disenchanted and can react either directly or indirectly against the source of the problem. This study revealed that the negative reaction of aggression was usually directed towards the representative of rationalized play or, in other words, towards the official. To the active participant, the official represents more than an individual in a uniform that assures fairness and assigns appropriate rewards. The official represents the structure, regimentation, and calculation found in the external structures of society and assures that they will be enforced throughout the game being played. As a result, the disenchanted individual acts directly upon this representative of rationalized play in a hostile aggressive manner.

Instrumental Aggression

An act of instrumental aggression in rationalized play is the result of a participant casting away the pursuit of a leisure experience in favor of the extrinsic rewards offered. Rationalized play in accordance with rationalized society puts an emphasis on such extrinsic rewards as money, prestige, and winning. When these extrinsic rewards are sought by the participant, a highly value-neutral attitude replaces the highly value-oriented attitude found in a participant pursuing a leisure experience. Caillois (1961) has stated that:

"Transposed to reality, the only goal of agon is success. The rules of courteous rivalry are forgotten and scorned. They seem merely irksome and hypocritical conventions. Implacable competition becomes the rule. Winning even justifies foul blows" (54).

As Callois (1961) notes, aggression is used by the participant to gain these extrinsic rewards. This study revealed that in the highly rationalized intramural basketball games where extrinsic rewards are most often sought, there is a substantially higher amount of aggression than in the open-recreation basketball games where the pursuits toward a leisure experience are maintained.

Recommendations for Future Study

From the review of literature and its relationship to the present study, the following topics are recommended for further investigation:

1. A study on the specific structural components which cause aggression in sport.

2. A study on the specific qualities which an official has which cause aggression in sport.
3. A comparison of the amounts of aggression in female and male officiated games.
4. A study on the amount of hostile aggression vs. instrumental aggression in officiated basketball games.
5. A study comparing the amount of aggression to the team's win/loss record.
6. A study on the effects of rationalization on the group, i.e., the team, game, league.

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APPENDIX

