Relationship Among Factors Which Contribute to the Probability of Spectator Violence at Aggressive-Competitive Sporting Events

> Alison Ösinski 1981

### DISSERTATION SUMMARY

A Predictive Equation for Determining the Probability of Spectator

Violence at Aggressive-Competitve Sporting Events

The purpose of this study is to show that the overt aggressive behavior of sport spectators can be predicted and therefore controlled. The interrelationships of contributing factors which lead to spectator violence will be examined, and from this correlation, an equation for determining the probability of the occurrence of violent behavior at an aggressive competitve sporting event (in this case, ice hockey) will be developed.

It is hypothesized that aggressive behavior is learned through visual and auditory social contact, and is a function of the correlation among a covert aggressive personality and various contributory hostility provoking factors.

#### ABSTRACT

Alison Osinski, Doctor of Philosophy, 1981

Title of Dissertation:

Relationship Among Factors Which Contribute to the Probability of Spectator Violence at Aggressive-

Competitive Sporting Events

Dr. Burris F. Husman Dissertation directed by:

Professor

Dept. of Physical Education

University of Maryland

In order to identify interrelationships among contributing factors which lead to the occurrence of sport spectator violence, a field study was conducted using professional ice hockey fans. Subjects were 105 paying spectators attending a regular season National Hockey League game between the Washington Capitals and Hartford Whalers.

After being seated, subjects were approached by trained research assistants and asked to participate in the study. Volunteers were then given a pre game packet to complete, consisting of the Zuckerman and Lubin Multiple Affect Adjective Check List (MAACL), the Buss-Durkee Hostility-Guilt Inventory, an author designed demographic informational questionnaire, an identification number, direction sheet, and consent form.

During the competition, research assistants observing five subjects each, recorded displays of overt aggressive behavior using Sysler's Spectator Activity Rating Scale (adapted for ice hockey). Observed behaviors for which points were awarded included: clapping hands, cheering or yelling, standing up, jumping up and down, forceful arm movements, fighting, using a noise maker, and throwing objects toward the rink.

Frequency scores were tabulated for each of the three periods and for twelve, five minute, intervals.

Immediately following the game, the MAACL was readministered, along with a second short questionnaire.

In order to determine the extent of competitive violence, the hockey game was filmed. The game film was later divided into twelve, five minute, segments corresponding to the observed spectator behavior time intervals. Five judges watching the videotaped TV replay recorded the frequency of predetermined aggressive game behaviors.

In all, 187 informational variables were collected on each subject. The relationship of personality traits and states, demographic information, level of interest or degree of involvement, and game violence to spectator aggression was assesses. Data was coded and analyzed using BMD computer programs P1D--Simple Data Decsription, P2V--ANOVA, and P6M--Canonical Correlation.

Significant finding at the .05 level suggested the following relationships among factors:

1. The higher the observed aggressive behavior of spectators: the higher their predicted attendance at '80-'81 season NHL hockey games, the closer they sat to the ice during the game, the higher their attendance at '79-'80 season NHL games, the more likely they were to be rooting for the home team, the shorter the distance they traveled from home to attend the game, the more acquaintances they attended the game with, and, the lower their guilt resulting from the display

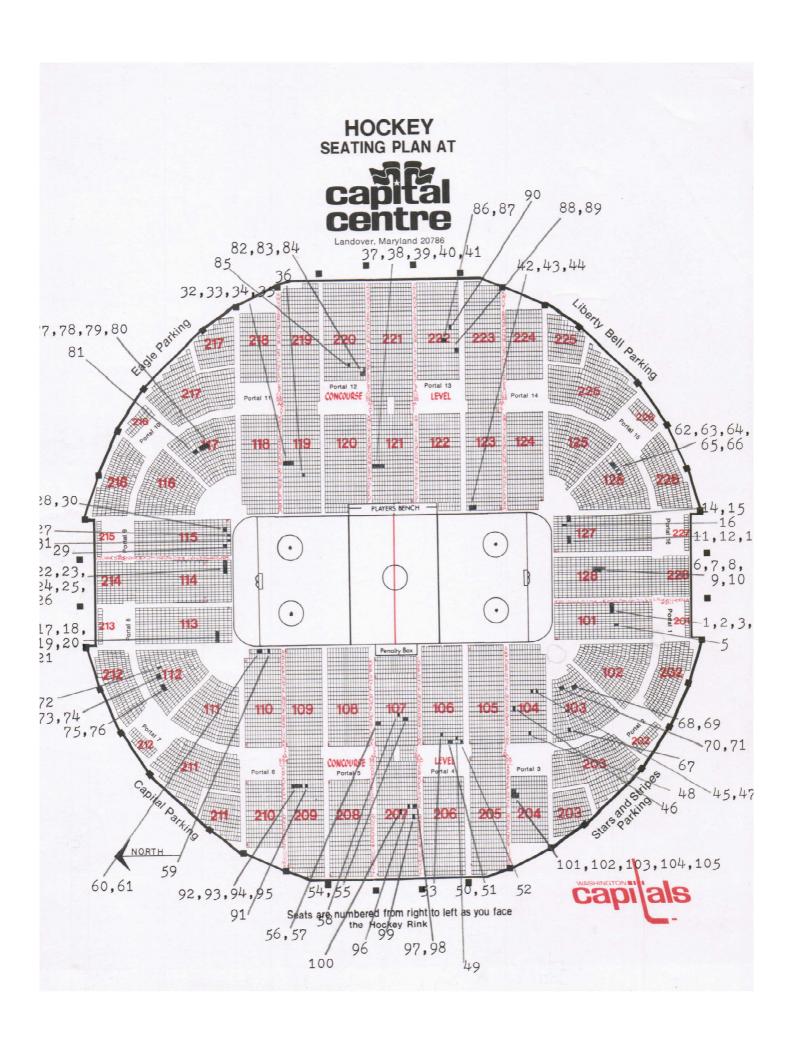
of aggression.

- 2. Male subjects, subjects attending the game with a number of acquaintences, and subjects with lower educational levels: traveled farther to attend the game, were more likely to be rooting for the visiting team, and were sitting a greater distance from the ice.
- 3. Male subjects and those who snacked a great deal during the game: participate regularly in both aggressive and nonaggressive team and individual/dual sports, had a lower level of attendance during the '79-'80 season and lower predicted level of attendance at '80-'81 NHL hockey games, watched nonaggressive sporting events on TV, and were sitting a greater distance from the ice.
- 4. Older subjects and those with higher income levels: were more likely to be attending the game because of having free, discount, group or season tickets; did not have a bet placed on the outcome of the game, and were less likely to participate regularly in aggressive sports.
- 5. Subjects with low assaultive behavior scores, low suspicion scores, and high post game anxiety: participated regularly in nonaggressive and individual/dual sports, preferred the uniforms of the visiting team, and were more likely to have played hockey themselves.
- 6. Within periods, spectator aggression reflected game violence, but from beginning to end of the game, violence increased while displays of spectator aggression decreased.

It was concluded that the aggressive behavior of sport

spectators is a learned response to auditory and visual stimuli, and a function of the correlation among covert aggressive personality traits, a number of demographic factors, and level of interest and involvement in sport. Serious incidents of sport spectator violence result when aggressive behavioral responses influenced by factors identified in this study get out of control. Aggressive behavior combined with panic or amplified by mob behavior may result in personal injury, destruction of property, or mortal danger.

Based on findings of this study, recommendations and techniques of spectator control are suggested. It was determined however, that spectator violence will continue to occur as long as the display of aggressive behavior is allowed and encouraged as an acceptable normative response in the relaxed and less inhibitive atmosphere of the arena.





## APPROVAL SHEET

Title of Dissertion:

Relationship Among Factors Which Contribute to the Probability of Spectator Violence at Aggressive-Competitive Sporting Events

Name of Candidate:

Alison Osinski

Doctor of Philosophy, 1981

Dissertion and Abstract Approved:

Burris F. Husman

Professor

Dept. of Physical Education

Date Approved: \_\_

Dec. 9, 1981

#### ABSTRACT

Alison Osinski, Doctor of Philosophy, 1981

Title of Dissertation:

Relationship Among Factors Which Contribute to the Probability of Spectator Violence at Aggressive-Competitive Sporting Events

Dissertation directed by: Dr. Burris F. Husman

Dr. Burris F. Husman Professor Dept. of Physical Education University of Maryland

In order to identify interrelationships among factors which contribute to the occurrence of spectator violence, a field study was conducted using NHL hockey fans.

Subjects completed pre and post game inventories, including the Zuckerman and Lubin Multiple Affect Adjective Check List (MAACL), the Buss-Durkee Hostility-Guilt Inventory, and author-designed demographic informational questionnaires.

During the competition, trained research assistants recorded displays of overt aggressive behavior using Sysler's Spectator Activity Rating Scale (adapted for ice hockey). A videotaped replay of the contest was also judged for frequency of game violence.

The relationship of spectator aggression to personality states and traits, demographic information, sport interest and involvement, and game violence was assessed. Descriptive statistics, ANOVA tables, and canonical correlations were generated.

RELATIONSHIP AMONG FACTORS WHICH CONTRIBUTE

TO THE PROBABILITY OF SPECTATOR VIOLENCE AT

AGGRESSIVE-COMPETITIVE SPORTING EVENTS

by Alison Osinski

Dissertation submitted to the Faculty of the Graduate School of the University of Maryland in partial fulfillment of the requirements for the degree of Doctor of Philosophy

"I went to a fight the other night and a hockey game broke out."

Rodney Dangerfield

#### ACKNOWLEDGMENTS

The author wishes to express her appreciation to Dr. Burris F. Husman for his advisement and guidance while conducting this research.

Thanks is extended to Dr. Charles O. Dotson for his invaluable assistance with the development of the statistical research design, and his subsequent help in the interpretation and analysis of the data.

Acknowledgment is also extended to Drs. Anne G. Ingram, Donald Steel, and Nancy Anderson for their encouragement and suggestions in steering the direction of the research.

A very special thanks is given to the Washington Capitals Professional Hockey Organization, especially,—Mr. Abe Pollin, team president and owner, for his generous support and permission in allowing the author to conduct research in the Capital Centre during league competition, and, Mr. Steve Hines, Assistant to the Marketing Director, for his and his staff's help with the technical details and logistics involved in the actual collection of data.

A.M.O. College Park, Maryland 1981

# TABLE OF CONTENTS

																						PAG
ACKNO	WLE	EDGMEN	TS	•	١.				•													ii
LIST	OF	TABLE	S														•					vii
LIST	OF	FIGUR	ES																			x
CHAPT	ER																					
1	[	INTR	O DU	CI	CIC	N																1
			St	at	en	er	nt	oi	f 1	the	F	ro	bl	.em	1							2
			Ну	pc	th	es	ses	5														2
					F	les	sea	arc	ch	Ну	rpc	th	es	sis	3							2
					2	ta	ti	is	tio	eal	F	[y]	ot	the	esi	İs						2
							1	Vu.	11	Ну	rpc	th	ies	sis	5							. 2
							A	Al	te	rna	ti	ve	e F	Iyi	00	the	es:	is				3
			Li	imi	Lta	ati	Lor	ns														3
			De	eli	Lmi	ta	at:	ioi	ns													5
			Te	ern	nir	10]	Loa	gv														6
I	Т	RELA																				8
										ggı												8
										s I												10
										ion												13
										ear												17
			Si	noi						et												23
										f S												
										Me								_			i	
			Pi	5 y (			•															27
			••							on								•	•			29
			٧.	10	Lei	700	=	In	3	DO.	1											2

			PAGE
Sport Spectator Aggression			32
Relationship Between Various Factors and Spectator Aggression	s ·		39
Relationship between Demographics and Spectator Aggression			39
Relationship Between Personality and Spectator Aggression			40
Relationship Between Level of Interest and Involvement in Sport and Spectator Violence		•	43
Relationship Between Game Violence and Spectator Aggression			47
Summary			48
III METHODS OF PROCEDURE			51
Field vs. Laboratory Research			51
Selection of Subjects			53
Procedure of Data Collection			54
Trait Aggression			59
State Aggression			62
Demographic Information			65
Level of Interest or Involvement in Sport	,		65
Game Violence			66
Spectator Aggression			66
Treatment of the Data			66
Summary			68

												PAGE
IA	RESULTS .											70
	Desc	riptive Sta	tisti	cs								70
		Demographi	cs .									70
		Level of S										72
		Personalit	y Var	riat	les							74
	Cano	nical Corre	latio	ons								75
		Demographi Level of Involvem	Inte	eres	st	or					•	77
		Personalit Level of Involvem	Inte	eres	st c	or	nd					83
		Level of I Involvem Observed Aggressi	ent :	in S	Spor tor				•	•		87
		Level of I Involvem Demograp and Pers and Obse Aggressi	ent hic onal rved	in S Info ity Spe	Sporma Vai	ati ria ato	ble r	es				90
		Level of I Involvem Demograp and Pers and Obse Aggressi	ent hic sonal erved	in Single	Spo: orm: Va:	ati ria ato	blor					95
	Anov											96
	Ano	Spectator Interval	Aggr	ess 12	ion					/		96
		Spectator Periods			ion							106
		Affect of Violence Behavior	on									108

														PAGE
		Summar	у											111
V	CONC	CLUSIONS	AND F	RECO	MME	ND	AT	IO	NS					117
		Conclu	sions											119
		Recomm	endati rol											121
		Discus												
BIBLIC	GRAPI	HY												171
APPENI	XIC													
	Α.	INVENTO	RIES A	AND	QUE	SI	IO	NN	AI	RE	S			129
	В.	VARIABL STATI	ES AN	D DE	SCF.	RIF	TI.	VE						140
	C.	CODED D	ATA .	٠										154

## LIST OF TABLES

TAE	BLE		PAGE
	1	Effects of Sport on Aggression	11
	2	Field vs. Laboratory Research	52
	3	Spectator Seating Location Representative Sections	55
	4	Norm Buss-Durkee Scores	61
	5	Squared Multiple Correlations of Each Variable in the Set with all other Variables in the Set (Demographic Information)	71
	6	Squared Multiple Correlations of Each Variable in the Set with all other Variables in the Set (Level of Interest)	73
	7	Comparison of Norm Population and NHL Spectators and Buss-Durkee Scores	74
	8	Squared Multiple Correlations of Each Variable in the Set with all other Variables in the Set (Personality Variables)	75
	9	Significant Canonical Results Demographics/Sport Interest and Involvement	77
	10	Canonical Correlation Demographic Information/Level of Interest	81
	11	Canonical Variable Loadings  Demographic Information/Level of Interest	82
	12	Significant Canonical Results Personality Variables/Sport Interest and Involvement	83
	13	Canonical Correlation Personality Variables/Level of Interest	85

ABLE		PAGE
14	Canonical Variable Loadings Personality Variables/Level of Interest	86
15	Significant Canonical Results Sport Interest/Spectator Aggression- Intervals 1-12	87
16	Canonical Correlation Spectator Aggression Intervals 1-12/Level of Interest	88
17	Canonical Variable Loadings Spectator Aggression Intervals 1-12/ Level of Interest	89
18	Significant Canonical Results Sport Interest/Demographics, Personality Variables/Spectator Aggression- Intervals 1-12	91
19	Canonical Correlation Spectator Aggression Interval 1-12/Demographic Information, Level of Interest, and Personality Variables	92
20	Canonical Variable Loadings Spectator Aggression Intervals 1-12/Level of Interest, Demographic Information, and Personality Variables	93
21	Canonical Correlation Spectator Aggression Periods 1-3/Level of Interest, Demographic Information, and Personality Variables	95
22	R Error Spectator Aggression Intervals 1-12	96
23	Cell Means and Standard Deviations for Spectator Aggression Intervals 1-12	97
24	BMD P2V - Anova Spectator Aggression Intervals 1-12	97
25	S Error Spectator Aggression Intervals 1-12	99
26	RS Interaction Spectator Aggression	100

TABLE		PAGE
27	Game Statistics Period 1	100
28	Game Statistics Period 2	102
29	Game Statistics Period 3	103
30	Game Statistics	105
31	R Error Periods 1-3	106
32	Cell Means and Standard Deviations for Spectator Aggression Periods 1-3	107
33	BMD P2V - Anova Spectator Aggression Periods 1-3	107

# LIST OF FIGURES

FIGURE		PAGE
1	Typology of Sport Crowd Violence	38
2	Spectator Seating Location	56
3	Spectator Activity Rating Scale Frequency Chart	58
4	Game Violence Frequency Chart	60
5	R Error Spectator Aggression Intervals 1-12	98
6	S Error Spectator Aggression Intervals 1-12	99
7	Game Violence Period 1	101
8	Game Violence Period 2	102
9	Game Violence Period 3	104
10	R Error Spectator Aggression Periods 1-3	106
11	Game Violence/Spectator Aggression Intervals 1-12	109
12	Game Violence/Spectator Aggression Periods 1-3	110
13	Game Violence Intervals 1-12	113
14	Game Violence Periods 1-3	114
15	Observed Aggressive Behavior of Spectators Intervals 1-12	115
16	Observed Aggressive Behavior of Spectators Periods 1-3	116