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PHYSICAL ACTIVITY, GAMES, AND SPORT:
A SYSTEM OF CLASSIFICATION AND AN INVESTIGATION
OF SOCIAL INFLUENCES AMONG STUDENTS OF MICHIGAN
STATE UNIVERSITY

By
Brian Malcolm Petrie

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ABSTRACT

PHYSICAL ACTIVITY, GAMES AND SPORT:
A SYSTEM OF CLASSIFICATION AND AN INVESTIGATION
OF SOCIAL INFLUENCES AMONG STUDENTS OF MICHIGAN
STATE UNIVERSITY

By

Brian Malcolm Petrie

The purpose of this study was to develop a system of classification of play, games, and sports to evaluate the motivations for involvement in these activities. Of equal importance was the use of the model as the basis for determining the influence of social background factors on the motivations for involvement with physical activities.

Data were collected through a mailed questionnaire. A sample of 988 students was selected at random from the undergraduate population registered for the 1969 Spring Term at Michigan State University. Sixty three per cent, 624 students, returned the questionnaire. The data were analyzed using non-parametric statistical procedures.

Data analysis supported the following conclusions;

1. The system of classification of the motivations for participation in physical activity comprised ten sub-domains which pre-testing had indicated to be

appropriate to the student group. The most important motivations were those concerned with fun and excitement, health and fitness, competition with skill the predominant element, and social interaction.

2. Sex had the greatest influence on the response patterns. Men provided significantly higher rankings for risk and danger, the demonstration of skill with a weapon, competition with skill predominant, competition with combat predominant, and competition against the natural environment as motivators of their participation patterns. Women gave significantly greater support for social interaction, fun and excitement, and aesthetic expression as motivators for their participation in physical activities.
3. The most important motivators for spectator involvement with physical activity were the desire for excitement, to see competition with skill predominant, to watch dangerous activities, and to observe aesthetic expression.
4. Sex also discriminated most on spectator involvement. Men gave higher rankings for watching dangerous activities and for competition with combat predominant, as motivators for their spectator involvement, while women gave significantly greater support for the social interaction, health, and aesthetic motivations.
5. Analysis of additional questions revealed that the male respondents showed a significant preference for physical

activities as leisure, and consistently indicated the desire to achieve success, prestige, competition, and the development of skill in play, games, and sports.

The women preferred social and cultural activities in their leisure and stressed responses associated with the intrinsic forms of satisfaction present in physical activity situations.

6. The men listed football, tennis, basketball, and baseball as their preferred participant sports and strongly preferred football as a spectator sport. The women favored swimming and tennis as participant sports but preferred football and basketball as spectator sports.
7. The respondents had little difficulty in associating particular participant sports with specific social class groups.

The most consistent result was the strong support provided by the men for attitudinal and motivational statements expressive of the extrinsic satisfactions to be achieved in play, games, and sports. They strongly endorsed motivations which allowed for ready evaluation using achievement criteria appropriate to their adult occupational role. The women consistently gave their support for motivations and attitudes appropriate to an emphasis upon the intrinsic satisfactions of play, games, and sports.

DEDICATION

For Ann

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CHAPTER I

INTRODUCTION

The philosophical and theoretical discussion of the role of play, games and sports has occupied the attention of many philosophers and social scientists over the centuries.

Social philosophers have been concerned with the meaning of play, games, and sports in the life of man, and many theories have been advanced that attempt to discover the reasons behind man's play, and the relationships between play and other aspects of life.

Psychologists began by attempting to determine the role of play in the development of personality and then shifted the focus of their inquiry to the area of game theory.

North American sociologists have largely neglected the function of play in social life, but the interest evidenced by European sociologists has led to the development of various classificatory theories of play, games and sports. These focus, not so much on the categorization of various sports as means of fulfilling particular functions in society, but on the analysis of the motivations people have for participation in such activities.

Unfortunately, little concern has been given to the empirical test of such theories, and their applicability to

explain the function of play in society has remained largely conjectural.

The neglect of the analysis of play, games, and sports as important elements in social life can generally be blamed upon the strong orientation towards work, and the negation of leisure activities as frivolous and, therefore, unworthy of scientific attention. This tradition, of course, is part of the ideological structure of the Protestant Ethic which affected the behaviour of the majority of the members of the American society for several centuries, and has certainly played a part in determining the selection of topics worthy of scientific investigation.

The newer emphasis on the application of automation to all aspects of occupational life, and the prospect of a diminished stress upon the necessity to work, has made the study of play, games, and sports an essential pre-condition to the solution of the problems that may occur with the advent of a leisure-based society upon a culture whose members have little preparation for such an eventuality.

The aim of this study was the fulfillment of two essentially inter-related tasks. First, a system of classification of play, games, and sports had to be developed to serve as the basic instrument to be employed in the evaluation of the motivations for involvement with such activities. The second objective was the determination of the influences of social background factors upon the degree of support

provided by the respondents for the particular motivations expressed in the classification model.

The development of the model focussed specifically on the classification of play developed by Caillois. He classified play and games on two dimensions: the first grouped games into four categories (competition, chance, pretense, and vertigo), while the second dimension posited the existence of a continuum of increasing complexity of the rule structure and a concomitant diminishment in the capacity for improvization.¹

The Caillois model was criticized by McIntosh on the basis of an inadequate definition of the different components involved in the conceptualization of competition. He believed that this category should be broken down into three parts: competition on the basis of skill, competition on the basis of combat, and competition against the natural environment. He also criticized the distinction between games of skill and games of chance as being contrived distinctions based upon the consideration of extreme examples. To McIntosh, the most important consideration in the classification of games and sports was "the motive and the nature of the satisfaction which the sport gives, not upon the activity itself".²

¹Roger Caillois, "The structure and classification of games," Diogenes, vol. 12 (1955), 62-75.

²Peter C. McIntosh, Sport in Society (London: C.A. Watts and Co. Ltd., 1963), pp. 116-133, 128.

In an attempt to investigate the joint models of Caillois and McIntosh, Kenyon developed a group of attitude scales and applied these measures to a sample of college undergraduate students. He concluded that a model incorporating six dimensions could more appropriately be employed for investigating attitudes toward physical activity. These dimensions were identified as; physical activity as a social experience; physical activity for health and fitness; physical activity for the pursuit of vertigo; physical activity as an aesthetic experience; physical activity as a catharsis; and physical activity as an ascetic experience.³

It was noted that the aspect of competition was omitted as a significant component in the attitude toward physical activity, and this omission of an apparently strong element in the American ideology cast doubt on the efficacy of the model. Kenyon admitted that an attempt to include the concept of competition had been unsatisfactory and suggested that a lack of precision in the development of the original definitions could have been at fault. He noted, however, that a characteristic of competitive sport was the need of the participants to delay gratification in the quest for later success. Therefore, he concluded that competition was an integral part of the dimension; physical

³Gerald S. Kenyon, "Six scales for assessing attitude toward physical activity," Research Quarterly, vol. 39, no. 3 (1968), 566-574.

activity as an ascetic experience.⁴

In view of the difficulties that had been experienced in providing empirical support for the Caillois theory, and for the modification of that system of classification by McIntosh, it was proposed to attempt to operationalize the various components of the classifications of play, games, and sports, incorporate the Kenyon model, and assemble the concepts into a ranking scale for investigation. This scale would then be tested to determine whether it constituted an inclusive model for the classification of the motivations for involvement in physical activities in the group to be studied.

The essential feature of the classification scheme, then, was that it would be representative of the motivations regarded as important by the students of Michigan State University. It would not be proposed as a universally applicable model, but would be one which was capable of being employed within the specific group as a tool for the investigation of the relationship between motivational patterns and particular social background variables.

It was believed that specific social factors would be important influences upon the motivations for involvement with physical activities. The variables of sex, and

⁴Gerald S. Kenyon, "A conceptual model for characterizing physical activity." Research paper, Department of Physical Education-Men, University of Wisconsin, Madison (1966), pp. 4-9. (Mimeographed.)

the size and composition of the family would be expected to provide some indication of the influences of sex role identifications upon motivational patterns. The associated religious factors of strength of religious conviction, religious faith, and type of high school attended, were regarded as independent variables or control variables which would allow specification of the relationships between such ideological factors and the preferences expressed in the model. Finally, factors important in the socio-economic backgrounds of the respondents, such as parental income, parental occupation, and parental educational attainments, were postulated to be determinants of the motivations for involvement in physical activities.

Statement of the Problem

The central concern of this study was to develop a ranking scale inclusive of the various motivations for participation by college undergraduates in physical activities, and to determine the relation between these motivations and several social variables: (1) sex; (2) marital status of the respondent; (3) religion; (4) strength of religious conviction; (5) type of high school attended; (6) parental occupational status; (7) parental gross family income; (8) amount of formal education of the head of the household; (9) number of brothers; (10) number of sisters; (11) ordinal position in the family; (12) total number of siblings; and (13) residence.

Sub-Problems

(1) To clarify the determinant factors which lead the individual to become involved in physical activities by investigating the attitudes held toward play and its functions.

(2) To determine whether particular sports can be identified as being played, or watched, by specific socio-economic class groups.

Limitations of the Study

The analysis of play, games, and sports has occupied the attention of many philosophers, sociologists, psychologists, and physical educators. Although the review of the literature provides a basis for understanding the major conceptualizations, the analysis concentrates on Huizinga⁵, Caillois⁶, McIntosh⁷, and Kenyon.⁸

The data for this study were obtained from a random sample of undergraduate students enrolled at Michigan State

⁵Johan Huizinga, Homo Ludens: A Study of the Play-Element in Culture (Boston: Beacon Press, 1966).

⁶Roger Caillois, Man, Play and Games, trans. by Meyer Barash (New York: The Free Press of Glencoe, Inc., 1961).

⁷Peter C. McIntosh, Sport in Society.

⁸Gerald S. Kenyon, Values held for physical activity by selected urban secondary school students in Canada, Australia, England, and the United States. Report of U.S. Office of Education Contract S-376, Madison, Wis.: University of Wisconsin, 1968.

University in the Spring Term of 1969. This population was limited to students twenty-three years of age or younger, who were citizens of the United States of America.

Cross-cultural comparisons are difficult to justify in sociological investigations because of the different societal conditions that operate in each country. Therefore, the review of the literature was restricted, except in the discussion of the various theoretical positions, to material dealing with the social influences and functions of play, games, and sports in the United States of America.

Delimitations of the Study

The sample was drawn from a list of undergraduate students enrolled at Michigan State University for the Spring Term of 1969. The survey was not distributed until one month before the end of the academic year, and this fact may have led to a diminished response rate than may have been expected had the members of the sample received the questionnaires at some earlier time.

The survey instrument used for the collection of the data was a mailed questionnaire. The use of this technique involves limitations in itself, and these limitations were considered when the selection of the statistical procedures for data analysis was made.

The Importance of the Study

The study of the Sociology of Sport is a recent development and there is a paucity of data on problems relevant to this sub-discipline. Not only is there a shortage of empirically substantiated data, but those theories or systems of classification that are relevant to the study of play, games, and sport, and their function in society have remained largely conjectural.

This study attempted to determine the strength of the postulated motivations for participation in physical activity, and thus provide some degree of empirical support for the three closely related models seeking to explain such involvement.

It is generally believed that theories cannot be substantiated by the collection of unique facts, but that such a role is the function of data that is generalizable to a wide range of instances or populations. Such is the basis for the distinction between the nomothetic and ideographic disciplines. However, few disciplines can be regarded as being wholly contained in one or other of these extreme classifications. Nagel states that the natural sciences cannot claim to be completely nomothetic as there have been many instances where theoretical systems have been supported by particularistic rather than by universally applicable data.⁹ It was for this reason that it was believed

⁹Ernest Nagel, "The logic of historical analysis,"

that, despite the limitations imposed upon generalizability by the selection of nonparametric statistical procedures and by the limitations of the data drawn using the survey technique, this study could provide support for one or all of the theoretical models.

Hypotheses

1. Motivations for both participation and spectator interests in physical activity, vary with sex.
2. Motivations for both participation and spectator interests in physical activity, vary with the marital status of the individual.
3. Motivations for both participation and spectator interests in physical activity, vary with religious belief, the strength of religious conviction, and the type of high school attended (parochial or public).
4. Motivations for both participation and spectator interests in physical activity, vary with the occupational status of the head of the parental household.
5. Motivations for both participation and spectator interests in physical activity, vary with the parental gross family income.

in Readings in the Philosophy of Science, ed. by Herbert Feigl and May Brodbeck (New York: Appleton-Century-Crofts, Inc., 1963), pp. 688-700.

6. Motivations for both participation and spectator interests in physical activity, vary with the amount of formal education of the head of the parental household.

7. Motivations for both participation and spectator interests in physical activity, vary with residence.

8. Motivations for both participation and spectator interests in physical activity, vary with the number of siblings in the family, the number of older siblings, and the number of brothers and sisters in the family.

Operational Definitions

Attitude: a symbolic, socially determined, relatively stable expression of preference, either positive or negative, towards an object.

Game: a game is a form of play in which the rule structure has been partially formalized so that some agreement exists among the participants as to the manner of conduct regarded as appropriate during repetitions of the activity over a period of time.

Individual sport: a physical activity which involves an individual in competition against time, distance, or height, as well as against other people in competition. Such activities do not require more than a low level of task orientation.¹⁰

¹⁰Harry Webb, "Social backgrounds of M.S.U. athletes" (paper presented at the 83rd Anniversary National Convention of the A.A.H.P.E.R., St. Louis, Mo., March 30, 1968), p. 7.

Involvement: a deliberate action to enable the individual to become associated with an object; in this case, with physical activity.

Motivation: the stimulus leading the individual to take a particular action.

Physical activity: a human movement which can be characterized as either play, a game, or sport.

Play: play is an activity, generally involved with physical movement, which is free, circumscribed within limits of time and space, uncertain in course and result, unproductive, governed by rules, and accompanied by an awareness of a second reality as against real life.¹¹

Sport: a sport is a form of play in which an institutionalized rule structure has been developed and codified. Formal bodies administer to the stability or changing of the rule structure. In their more complex forms, sports are associated with mass spectator support.

Team sport: team sports are activities which require the integrated functioning of a collective of various numbers of players who strive to achieve a certain objective. The success of such a collective is conditional on all the component parts (the players), though performing specialized skills and differentiated tasks, operating as an integrated whole.¹²

¹¹Roger Caillois, Man, Play and Games, pp. 9-10.

¹²Harry Webb, "Social backgrounds of M.S.U. athletes," p. 8.

Trend: a linear relationship between two variables which is not statistically significant, but which appears to have some substantive significance and is, accordingly, worthy of further investigation.

CHAPTER II

THEORETICAL PERSPECTIVES

Many theoretical and quasi-theoretical approaches have been employed in an attempt to explain and classify play, and more recently, games and sports. To a certain extent, the theories that have been advanced have been in accordance with particular general theories popular at the time of their formulation. Thus, evolutionary theories have been advanced to explain play while considerable support was given to the Darwinian perspective; play was explained as a manifestation of instincts when such explanations were popular; and Freudian and psychoanalytical theories became prevalent when such explanations of general human behaviour were readily accepted.

From the early theories that dealt with surplus energy as the drive behind play, to the present analyses of play, games and sports in terms of classifications based upon individual motivations, the common thread linking all is the lack of empirical evaluation and support. Most are based on common sense explanations which appear to have some face validity, while other "theories" would best be labelled as pure conjecture. Only those theories or models which have gained contemporary support and prominence in the literature

of the period will be discussed in the first part of this review, while the classificatory models of major concern to the present research are discussed in the latter section.

Early Theoretical Positions

1. Surplus Energy Theory

Although there is some evidence that this explanation of play dates back to the Stoic philosophers and is believed to have had a long history of support in the educational literature, it has been identified predominantly with Schiller and Spencer.¹³

Certainly, it was an incidental part of the discussions made by Schiller on the relationship between man, play and the aesthetic sentiments. The major statement of his belief on the origin of play was made in his analysis of freedom in the play of animals. Schiller wrote:

No doubt nature has given more than is necessary to unreasoning beings; she has caused a gleam of freedom to shine even in the darkness of animal life. When the lion is not tormented by hunger, and when no wild beast challenges him to fight, his unemployed energy creates an object for himself; full of ardor, he fills the re-echoing desert with his terrible roars, and his exuberant force rejoices in itself, showing itself without an object. The insect flits about

¹³Wilbur P. Bowen and Elmer D. Mitchell, The Theory and Practice of Organized Play (New York: A.S. Barnes and Co. 1923), volume 1, p. 182.

rejoicing in life in the sunlight, and it is certainly not the cry of want that makes itself heard in the melodious song of the bird; there is undeniably freedom in these movements, though it is not emancipation from want in general, but from a determinant external necessity.

The animal works, when a privation is the motor of its activity, and it plays when the plenitude of force is this motor, when an exuberant life is excited to action.¹⁴

There is considerable evidence of anthropomorphism in this quotation for, as Hobhouse indicated, the apparently aimless movements of the insects and the calls of the birds may be manifestations of elements of the courtship process which are unknown to man.¹⁵ Certainly, it is possible that what seems to be play in much of animal and insect behaviour is related to the maintenance of life. This is not meant to deny that animals play, but rather to caution that all behaviour that appears to be unrelated to privation and breeding is not necessarily without such an object.

In his evaluation of the role of human imagination, Schiller proposed that the release of the energy surplus was unhindered:

The imagination, like the bodily organs, has in man its free movement and its material play, a play in which without any reference to form, it simply takes

¹⁴ J.C. Friedrich von Schiller, Essays Aesthetical and Philosophical (London: George Bell and Sons, 1884), pp. 112-113.

¹⁵ Leonard T. Hobhouse, Mind in Evolution (London: Macmillan and Company, Ltd., 1901), p. 8.

pleasure in its arbitrary power and in the absence of all hindrance. These plays of fancy, inasmuch as form is not mixed up with them, and because a free succession of images makes all their charm, though confined to man, belong exclusively to animal life, and only prove ... that he is delivered from all external sensuous constraint.¹⁶

The reference to sensual constraint is an important feature in Schiller's discussion of play. Man is presented with the problem of coping with the opposing forces of the sensuous instinct (sensation orientation) and the formal instinct (rational orientation). It is in the balance of these forces that man achieves his freedom and harmony as it is play "which makes man complete and develops simultaneously his twofold nature;"¹⁷ "For, to speak out once for all, man only plays when in the full meaning of the word he is a man, and he is only completely a man when he plays."¹⁸

It was undoubtedly Schiller who influenced Spencer to write; "Many years ago I met with a quotation from a German author to the effect that the aesthetic sentiments originate from the play-impulse."¹⁹

¹⁶J.C. Friedrich von Schiller, Essays Aesthetical and Philosophical, p. 113.

¹⁷Ibid., p. 71.

¹⁸Ibid., p. 71.

¹⁹Herbert Spencer, The Principles of Psychology (New York: D. Appleton and Co., 1898), vol. II-2, p. 627.

For Spencer;

The activities we call play are united with the aesthetic activities, by the trait that neither subserve, in any direct way, the processes conducive to life. The bodily powers, the intellectual faculties, the instincts, appetites, passions, and even those highest feelings we have lately dealt with, have maintenance of the organic equilibrium of the individual, or else maintenance of the species, as their immediate or remote ends.²⁰

As the evolutionary development of animals is traced, it becomes obvious that the higher the place of the species, the less time and energy is required for the maintenance of life;

Better nutrition, gained by superiority, occasionally yields a surplus of vigour. The appetites being satisfied, there is no craving which directs the overflowing energies to the pursuit of more prey, or to the satisfaction of some pressing want.²¹

The explanation of the way in which this surplus energy comes to be released is largely physiological, and draws upon the excitability of the nervous system as the energy source:

nerve-centres disintegrated by action, are perpetually re-integrating themselves, and again becoming fit for action ... in proportion as any part of a nerve-centre has been for a long time unused - in proportion, that is, as repair of it has gone on day after day and night after night unhindered

²⁰Ibid., p. 627.

²¹Ibid., pp. 628 - 629.

by appreciable waste, it must be brought to a state of more than ordinary instability - a state of excessive readiness to decompose and discharge.²²

The result of this state of readiness, and the "tendency to superfluous and useless exercise of faculties that have been quiescent,"²³ is play. Spencer believed that play will generally take the form of an artificial exercise of the powers which are most prominent in the animal's life: that play simulates real-life activities. In this way, the play of a child is a dramatization of the activities of adults; boys play activities which are largely concerned with the exercise of predatory instincts; and a thread that runs through all games is the desire for conquest. The sense of supremacy also accounts for the activity of the intellectual faculties in play.²⁴

Although Spencer attempted to account for the form that play takes by relating most of the play activities to those organs which are important in the animal's fight for survival, many authors have attempted to invalidate the theory on these grounds. Patrick wrote that;

the most serious difficulty with Spencer's theory is that it does not explain the form taken either by the plays of children or of adults. His view is that men and animals in their surplus-energy moods ...

²²Ibid., p. 629.

²³Ibid., p. 630.

²⁴Ibid., pp. 630-631.

would simply go on doing in a dramatizing way what they are accustomed seriously to do in their working moods. The horse would run, the tiger would jump, ... and the man presumably would plough and reap and dig and write books and give lectures. But this is precisely what the man does not do. He goes fishing.²⁵

McDougall made a similar criticism,²⁶ but such complaints appear to be either invalid expectations as to what can be expected of a theory, or over-reactions to the unfair reading of the theory as explaining play merely through the exercise of surplus energy. To dismiss it as a truism and to accuse Spencer of missing the whole point²⁷ is to take a rather simplistic view of the entire discussion. Spencer himself cautioned against the acceptance of his theory of aesthetics (including play) as the complete answer:

To deal fully with the psychology of aesthetics is out of the question. Its phenomena are extremely involved, and to treat them adequately would require many chapters. Here, in addition to the above general conceptions, I will set down such hints as seem needful for rightly developing them.²⁸

A more serious and legitimate criticism was made by Groos. In discussing the vigorous play of two dogs, he

²⁵George Thomas White Patrick, The Psychology of Relaxation (Boston: Houghton Mifflin Company, 1916), pp. 32-33.

²⁶William McDougall, An Introduction to Social Psychology (Boston: John W. Luce and Co., 1926), p. 111.

²⁷George Thomas White Patrick, The Psychology of Relaxation, p. 33.

²⁸Herbert Spencer, The Principles of Psychology, p. 635.

notes that they chased each other until forced to stop through fatigue. Then one or other of the dogs would get up and goad the other into a renewal of the game.

And so it goes with endless repetition, until we get the impression that the dog waits only long enough to collect the needed strength, not till superfluous vigor urges him to activity.²⁹

Certainly, it is difficult to explain, through the employment of the surplus energy theory, the desire of children and even adults to play until absolute exhaustion is reached.

The surplus energy theory has had considerable influence on educational thinking. It was used as an argument for introducing athletics into the universities in order that students would dissipate their surplus energies, not in anti-social activities, but in sports where supervision was possible. It was also part of the argument for the development of playgrounds, as it was believed that if adolescent energies could be diverted, lower frequencies of juvenile delinquency would result.³⁰

²⁹Karl Gross, The Play of Animals, trans. by Elizabeth L. Baldwin (New York: D. Appleton and Co., 1898), p. 19.

³⁰Allen V. Sabora and Elmer D. Mitchell, The Theory of Play and Recreation (New York: The Ronald Press Company, 1961), (3rd Edition), pp. 79-80.

2. Instinct Practice Theory

This particular theory is identified with Karl Gross, who believed that instincts were the motivating forces of life. To him, play was instinctual and served the purpose of preparing the child, through its practice, for the more serious concerns of adult life.

The progeny of the more highly developed animals, which includes man, are helpless and undeveloped in intellectual, physical and physiological capacities at birth. The period of childhood and youth makes the development of these faculties possible for the;

instinctive apparatus being inadequate for his life tasks, a period of parental protection is necessary to enable him to acquire imitatively and experimentally the capacities adapted to his individual needs. The more complicated the life tasks, the more necessary are these preparations; the longer this natural education continues, the more vivid do the inherited capacities become. Play is the agency employed to develop crude powers and prepare them for life's uses.... Play depends, then, first of all on the elaboration of immature capacities to full equality with perfected instinct, and secondly on the evolution of hereditary qualities to a degree far transcending this, to a state of adaptability and versatility surpassing the most perfect instinct.³¹

Groos' theory breaks down when three major areas are analyzed. First, there is a reliance on instincts as the

³¹Karl Gross, The Play of Man, trans. by Elizabeth L. Baldwin (New York: D. Appleton and Company, 1901), pp. 374-375.

motivating forces of human life. The attribution of human behaviour to hereditary endowments, with the socialization process a mere tool for the honing of such inherited traits, negates the considerable influence of social interaction and auxilliary training on the education of the child. An explanation based on the discussion of instincts may be satisfactory, in a pre-scientific sense, in accounting for the behaviour of the lower animals, but is incapable of explaining the rich diversity of human life.

Second, it completely omits an evaluation and explanation of the role of play in adult life. Groos admitted his concern for the applicability of his theory to adults; "Much of his play ... is of but slight biological significance, though the practice theory is often applicable even in later life to movement and fighting play, and still more so to social play".³²

Thirdly, Groos fails to demonstrate that all of the play patterns of children are necessarily preparations for adult life and the development of hereditary endowments. Certainly, there is no need for an educational object to be present in order for children to enjoy themselves. To insist that play must have such a function is to introduce too much rigidity into the motivations for human behaviour. The very freedom and spontaneity of children's play belies such

³²Karl Groos, The Play of Man, p. 378.

a strong belief in the infallibility of the powers of natural selection.³³

As Seashore noted:

Children seldom play with the intention of fitting themselves for life, nor are adults ordinarily conscious of serving this purpose in play. Children play, as do the rest of us, because it satisfies certain cravings and seems to be the eternally fit and natural thing to do. It is only in the larger, retrospective view that we realize how nature has wrought marvels of development through the operation of the play instincts.³⁴

Despite Seashore's final emphasis on instincts, the important point is that post hoc analysis of human behaviour has led many scientists into similar difficulties in their explanations, and part of Groos' difficulty lies at this source.

Groos made an important addition to his theory, however, which has had a considerable and long lasting effect on the analysis and justification of play. He introduced the concept of catharsis, whereby pent-up emotions can be released through the acceptable "safety-valve" of play.³⁵

³³Robert Edward Neale, "Play and the Sacred: Toward a Theory of Religion as Play" (unpublished Th.D. Dissertation. Union Theological Seminary in the City of New York, 1964) (Ann Arbor, Mich.: University Microfilms, Inc., 64-10, 525), p. 17.

³⁴Carl E. Seashore, Psychology in Daily Life (New York: D. Appleton and Company, 1916), p. 2.

³⁵Karl Groos, Das spiel, zwei Vorträge von Karl Groos (Jena: G. Fischer, 1922), Part II.

However, this concept appears contradictory to his notion of the rigid influence of natural selection.

3. Recapitulation Theory of Play

Hall looked in the opposite direction from Groos in attempting to explain play. Where Groos' theory was forward-looking, dealing as it did with the development of skills for adult life, Hall believed that the play of a growing child passed through the same stages or cultural epochs that his race had experienced over the centuries. By adhering to this view, he indicated his support for the cyclical theory of history. In a succinct statement of his position, he wrote;

The view of Groos that play is practice for future adult activities is very partial, superficial, and perverse.... I regard play as the motor habits and spirit of the past of the race, persisting in the present, as rudimentary functions sometimes of and always akin to rudimentary organs.... Thus we rehearse the activities of our ancestors, back we know not how far, and repeat their life work in summative and adumbrated ways. It is reminiscent, albeit unconsciously, of our line of descent; and each is the key to the other. The psycho-motive impulses that prompt it are the forms in which our forebears have transmitted to us their habitual activities. Thus stage by stage we reenact their lives.³⁶

Where Groos believed that the play instinct arose in natural selection, Hall followed Lamarck in the belief that acquired characteristics could become inherited as new instinctual patterns.

³⁶G. Stanley Hall, Youth: Its Education, Regimen, and

Hall's theory was based on the very poor foundation of a biological theory that stressed that ontogeny recapitulates phylogeny. Such a situation has not been demonstrated to exist in fact, while the similarity between the past actions of the race and the play of children in the present has yet to be demonstrated. The theory does not explain how play progresses sequentially in children, nor does it account for the richness of adult play. The bulk of the available research indicates that the types of activities the child performs in his play result from the social training he has received, and from the level of neuro-muscular skill he has attained.

4. Relaxation Theory of Play

Patrick believed that:

If we look at the matter physiologically, it is very evident, in the case of the adult, that there are some brain centers, or some brain tracts, or some forms of cerebral functioning, that are put under severe strain in our modern strenuous life and that there must be some kind of activity which will relieve these centres, or these tracts, during a considerable portion of each waking day and involve other centers not so subject to exhaustion. Such activity we call play and sport. Perhaps the word "relaxation" would be a more exact description of it.³⁷

Hygiene (New York: D. Appleton and Company, 1907), pp. 73-74.

³⁷George Thomas White Patrick, The Psychology of Relaxation, p. 49.

As the common types of activities which appear to create the most strain and anxiety in modern life are concerned with the concentration of attention, the use of abstract reasoning over long periods of time, and frequently involve the utilization of only the smallest muscles, it is not surprising to see adults seeking in their play and sports, exercise of the opposite type. Play, games and sports involve the exercise of the larger muscle masses and do not require abstract reasoning to any great extent.³⁸

The theory appears to incorporate much of the recreation and catharsis theories. The recreation theory holds that man seeks in his play to re-create himself following the exertions of work. His play offers him a chance to "recharge his batteries" and restore his energy so that he can maintain his efficiency at work and in his life. There appears to be a considerable element of the Protestant work ethic in the writings concerned with this theory. Sapora and Mitchell summarize some of these statements in the following:

Lord Kames, English philosopher, expressed this idea when he said, "Play is necessary for man in order to refresh himself after labor." Guts Muths, a German educator emphasized the recreative value of play as well as its value for development and training One of its strongest supporters was Moritz Lazarus of the University

³⁸Allen V. Sapora and Elmer D. Mitchell, The Theory of Play and Recreation, p. 82.

of Berlin, who urged people to "flee from empty idleness to active recreation in play."

The recreation theory is based on the obvious principle that a certain amount of rest and sleep is necessary, but beyond that a change to an active and interesting occupation is more restful than complete idleness.

Play revitalizes and restores the mentally and physically tired. As Lazarus puts it, "After work we require rest which accomplishes recuperation. But hardly ever does mere empty, inactive rest suffice for recuperation".³⁹

The catharsis theory may be traced back to Aristotle, but also come to be identified with Groos,⁴⁰ Carr,⁴¹ and Claparède.⁴² In this case, an individual finds a release in play for his suppressed feelings and emotions: Play acts as a safety valve to allow the release of emotions and anxieties which might otherwise be repressed.

Carr made a clear statement of the concept of catharsis when he wrote the following;

Catharsis ... implies the idea of purging or a draining of that energy which has anti-social possibilities, and hence the cathartic value may be predicted of only

³⁹Ibid., p. 81

⁴⁰Karl Groos, Das spiel, zwei Vorträge von Karl Groos.

⁴¹Harvey A. Carr, "The Survival Values of Play." Investigations of the Department of Psychology and Education, University of Colorado, vol. 1, no. 2 (1902), 1-47.

⁴²Edouard Claparède, Psychologie de l'Enfant et Pédagogie Expérimentale. (Experimental Pedagogy and the Psychology of the Child) trans. by Mary Louch and Henry Holman (New York: Longmans, Green and Co. Inc., 1911).

certain play reactions. The value of football, boxing, and other physical contests in relieving the pugnacious tendencies of boys is readily apparent as examples. Without the numberless well organized set forms of play possessed by society which give a harmless outlet to the mischievous and unapplied energy of the young, the task of the teacher and parent would be appalling.⁴³

The main difficulties with the relaxation, recreation, and catharsis theories is that they all apply predominantly to the adolescent and adult groups of society. The theories do not present satisfactory explanations for the play of children, who presumably do not have the pressures, anxieties, suppressed emotions, or intellectual fatigue about which the constructs are concerned.

5. Freudian Theory of Play

In the Freudian analysis of play, the dominant ideas were concerned with adult imitation, the repetition-compulsion principle and the pleasure principle. These were linked in the following:

It is clear that in their play children repeat everything that has made a great impression on them in real life, and that in doing so they abreact the strength of the impression and, as one might put it, make themselves master of the situation. But on the other hand it is obvious that all their play is influenced by a wish that dominates them the whole time - the wish to be grown-up and to be able to do what grown-up people do. It can also be

⁴³Harvey A. Carr, "The survival value of play." p. 18.

observed that the unpleasurable nature of an experience does not always unsuit it for play.... As the child passes over from the passivity of the experience to the activity of the game, he hands on the disagreeable experience to one of his playmates and in this way revenges himself on a substitute ... even under the dominance of the pleasure principle, there are ways and means enough of making what is in itself unpleasurable into a subject to be recollected and worked over in the mind.⁴⁴

According to Freud, the individual will seek to maximize his pleasurable experiences and to remember and reenact the activities which gave pleasure in the past. Pleasure can also be attained by the development of a sense of mastery over an object or an incident, and the repetition-compulsion impulse forces the individual to repeat experiences whether they were pleasurable or not, so that he can develop this awareness of mastery. These bases were regarded as the source of the play impulse in children.

The difficulties in Freud's analysis lie in his contention that children express their desire to be adult in all of their play activities, and the virtual rejection of the idea that adults play. Both of these assumptions are questionable at best.

⁴⁴Sigmund Freud, Beyond the Pleasure Principle, trans. by James Strachey (New York: Bantam Books, Inc., 1967), pp. 36-37.

6. Piaget's Developmental Theory of Play

Under this scheme, the child was believed to pass through three definite stages of development, each of which was characterized by a different type of play.

The individual's development is concerned with his adjustment to the opposite functions of assimilation and accommodation. Assimilation was defined as follows:

It is this objective modification of external movements and positions by the movements of the subject, as well as the subjective modification resulting from the fact that perception or comprehension of these movements and positions essentially depends on the subject's point of view, that we call assimilation.⁴⁵

Assimilation is involved with the modification of the position and movements of external objects, both subjectively and objectively, and being an action susceptible of repetition and generalisation, it gives rise to a recognition that is visual, tactual, kinesthetic, etc.⁴⁶

Accommodation was defined in relation to the action of grasping:

For instance, according as the object to be grasped is more or less distant there is perception of this depth and a correlative displacement of the hand, and the hand and the eyes follow the movement of the object. It is this modification of

⁴⁵Jean Piaget, Play, Dreams and Imitation in Childhood, trans. by C. Gattegno and F.M. Hodgson (London: Routledge and Kegan Paul Ltd., 1962), p. 274.

⁴⁶Ibid., p. 274.

the movements and point of view of the subject under the influence of the movements and positions of external objects that we call accomodation.⁴⁷

In the first, or sensory-motor activity period, there is an equilibrium between assimilation and accommodation. In this stage of development the child's play is largely involved in practice, where the child exhibits functional assimilation and the repetition of movements for pleasure.⁴⁸

In the second stage of development, the egocentric representative activity stage, there is a utilization of signs and symbols and a fluctuating primacy between assimilation and accommodation. When assimilation is paramount over accommodation the child plays; when accommodation is paramount over assimilation, the child imitates.⁴⁹ The characteristic play actions of this stage are symbolic games such as when the child pushes a box and makes-believe that it is a car.⁵⁰

In the third or operational representative activity stage, there is a more permanent development of an equilibrium between assimilation and accommodation. The completion of this stage marks the attainment of a mature adaptation where

⁴⁷ Ibid., p. 275.

⁴⁸ Ibid., pp. 113-114.

⁴⁹ Ibid., p. 276.

⁵⁰ Ibid., pp. 111-112.

assimilation takes care of reality and accommodation takes into account the earlier and later states in order that the operation or reversible action can be produced.⁵¹

It is this mobile, reversible equilibrium that ensures the conservation of concepts and judgments, and that governs both the correspondence of operations between individuals (social exchange of thought) and the interior conceptual system of the individual himself.⁵²

The play activities of the third stage are games of rules: rules which have been handed down via the socialization process, or that have developed among the players of the particular game.⁵³

It is during this final stage that the child must give up the play forms wherein he subordinated reality to his own ends and achieve a state in which his self is located in the environment and his play is oriented toward reality.⁵⁴

Two difficulties are apparent in Piaget's theory. It is obvious that he places a higher value and emphasis on the types of activities that lead to intellectual development and this over-emphasis leads him to neglect of the affective components of human life.

⁵¹Ibid., p. 289.

⁵²Ibid., p. 240.

⁵³Ibid., p. 143.

⁵⁴Allen V. Sabora and Elmer D. Mitchell, The Theory of Play and Recreation, p. 109.

Second, his explanation of adult play is unsatisfactory.⁵⁵

Neale believes that;

To posit a "subtle equilibrium" and assert that adult play "reconciles this ludic assimilation with the demands of social reciprocity" is to contradict his claim that play is essentially ego-centric and assimilative. Piaget has affirmed a basic difference between the play of the child and that of the adult. Assuming that the child is basically ego-centric, his play will be ego-centric and assimilative; and, assuming that the adult is not ego-centric, his play will be of a different nature and clearly not assimilative. The conclusion follows that either play must be defined as proper to the child or to the adult only, or that the definition of play must be sufficiently comprehensive to include both. In either case, Piaget's contribution is insufficient.⁵⁶

7. Huizinga's Cultural Theory of Play

For Huizinga,

The play concept must always remain distinct from all the other forms of thought in which we express the structure of mental and social life. Hence we shall have to confine ourselves to describing the main characteristics of play.

Since our theme is the relation of play to culture we need not enter into all the possible forms of play but can restrict ourselves to its social manifestations. These we might call the higher forms of play.⁵⁷

Accordingly, Huizinga developed a cultural definition

⁵⁵Robert E. Neale, Play and the Sacred: Toward a Theory of Religion as Play, pp. 30-32.

⁵⁶Ibid., pp. 32-33.

⁵⁷Johan Huizinga, Homo Ludens: A Study of the Play-Element in Culture, p. 7.

of play and made a beginning on the development of a system of classification. The definition of play was written in two forms. In the first presentation the definition is stated as follows:

Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside "ordinary" life as being "not serious", but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.⁵⁸

While this definition has problems with respect to the role of games of chance, and the necessity of secrecy, elements which were criticized by Caillois,⁵⁹ it is a later, summarized definition that appears to be of greater utility, and includes a minimal degree of logical difficulty.

According to this conception:

play is a voluntary activity or occupation executed within certain 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".⁶⁰

⁵⁸ Ibid., p. 13.

⁵⁹ Roger Caillois, "The Structure and classification of games", p. 63.

⁶⁰ Johan Huizinga, Homo Ludens: A Study of the Play-

He identified two basic components from which all of the higher forms of play were derived. These components were concerned with play as a contest for something, and play as a representation of something.

These two functions can unite in such a way that the game "represents" a contest, or else becomes a contest for the best representation of something.⁶¹

Thus all play consists of competition or display (imitation), or a blending of the two functions.

The Theory of Play and Classification of Games by Caillois

Caillois began his analysis of play with an evaluation of work of Huizinga. He believed that the major definition provided was in one respect too broad, and in another, too limited. The inclusion of the secret and mysterious aspects of human culture as part of play was regarded as inappropriate in view of the fact that much of play is within the sphere of spectacular and ostentatious activity in which the aim is to demonstrate one's abilities rather than cloak them in subterfuge.⁶²

On the other hand, the omission of those aspects of play concerned with material interests such as gaming and

Element in Culture, p. 28.

⁶¹Ibid., p. 13.

⁶²Roger Caillois, Man, Play and Games, p. 4.

betting seemed to rule out many forms of activities which occupy a conspicuous role in the activity selections of members of various societies.⁶³ The elimination of such activities from the definition would appear to be either a drastic oversight, or the operation of a value system upon the selection of those activities to be accorded the title of "play". Many play activities can be subsumed under the classification of zero-sum situations, and the inclusion of a wager against a particular result does not alter the definition of the situation; it merely magnifies the scope of the win or loss. The game does not, in itself, create any goods, it redistributes wealth when wagers are made, and it employs energy in wasteful forms at all times.

Play is an occasion of pure waste: waste of time, energy, ingenuity, skill, and often of money for the purchase of gambling equipment or eventually to pay for the establishment. As for the professionals ... who must think in terms of prize, salary, or title - it is clear that they are not players but workers. When they play, it is at some other game.⁶⁴

The definition provided by Caillois upon which his later theoretical position was based was that play is an activity which is;

1. Free: in which playing is not obligatory; if it were, it would at once lose its attractive and joyous quality as diversion;

⁶³Ibid., p. 5.

⁶⁴Ibid., pp. 5-6.

2. Separate: circumscribed within limits of space and time, defined and fixed in advance;
3. Uncertain: the course of which cannot be determined, nor the result attained beforehand, and some latitude for innovations being left to the player's initiative;
4. Unproductive: creating neither goods, nor wealth, nor new elements of any kind; and, except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game;
5. Governed by rules: under conventions that suspend ordinary laws, and for the moment establish new legislation, which along counts;
6. Make-believe: accompanied by a special awareness of a second reality or of a free unreality, as against real life.⁶⁵

Caillois then attempted to provide that which Huizinga omitted, a description and system of classification of games. Rather than attempt to classify these activities in terms of the types of implements used, or the qualifications required of the contestants, or the locale of the action, a two dimensional matrix was developed. On the one plane, games were grouped under four headings: agôn (with competition being dominant); alea (with chance or luck being paramount); mimicry (with the accent on simulation); and ilinx (where the pursuit of vertigo was the dominant characteristic). Within each of these areas, all of the appropriate games could be placed on a paidia-ludus continuum. In its polar form, paidia describes those activities which are unstructured, free of control, full of improvisation, impulse, and exuberance. At the other extreme are those activities which

⁶⁵ Ibid., pp. 9-10.

may be characterized as disciplined, controlled and weighed down by formal rules.⁶⁶

Agôn

In games characterized under this rubric, competition is the major component of all of the actions which together make up the activity. Where competition is involved, efforts are usually made to provide some degree of equality of opportunity for the contestants. If all conditions are equivalent except ability, it is possible for the individuals competing to determine who is superior. In order to make a victory clean-cut and reduce complexity, the competition is usually unidimensional, in that only one quality, such as speed, jumping ability, endurance, skill, strength, etc., is matched in each contest. Games of this nature may take place between individuals, or between teams of players, but in all cases the source of satisfaction is in the demonstration of a superiority over others.⁶⁷

Games pursued for the feeling of competition may be enjoyed regardless of the level of skill of the competitors, provided that some level of equality can be assumed at the start of the event by each of the participants, although Caillois stressed that;

⁶⁶ Ibid., pp. 12-13.

⁶⁷ Ibid., pp. 14-15.

... the practice of agôn 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, so that in return the victor's superiority will be beyond dispute.⁶⁸

Such dedicated preparation appears to confine the practice of games of agôn to those athletes who have finely developed their skills, and to eliminate those who play to achieve a relative level of superiority over particular opponents rather than to achieve championship status.

Alea

In borrowing the Latin name for dice as the title of this category, Caillois wished to exemplify the fact that in these activities the players are absolutely equal and subject to destiny and the laws of probability. There is no adversary to be defeated, and the player cannot gain an advantage by employing particular skills as no amount of training, application or desire can influence the result:

... alea negates work, patience, experience, and qualifications. Professionalization, application and training are eliminated. In one instant, winnings may be wiped out. Alea is total disgrace or absolute favor. It grants the lucky player infinitely more than he could procure by a lifetime of

⁶⁸Ibid., p. 15.

labor, discipline, and fatigue. It seems an insolent and sovereign insult to merit ... Agôn is a vindication of personal responsibility; alea is a negation of the will, a surrender to destiny.⁶⁹

Agôn and alea are similar in one important characteristic even though they seem to occupy polar positions on a continuum of individual control:

... they both obey the same law - the creation for the players of conditions of pure equality denied them in real life. For nothing in life is clear, since everything is confused from the very beginning, luck and merit too. Play, whether agôn or alea, is thus an attempt to substitute perfect situations for the normal confusion of contemporary life. In games, the role of merit or chance is clear and indisputable. It is also implied that all must play with exactly the same possibility of proving their superiority or, on the other scale, exactly the same chances of winning. In one way or another, one escapes the real world and creates another.⁷⁰

Mimicry

This feature of an escape from the real world and the creation of a new one adapted for the purposes of the game may be seen in the extreme form in games which stress mimicry and allow the individual to "escape himself and become another".⁷¹ The player may disguise himself with a

⁶⁹Ibid., pp. 17-18.

⁷⁰Ibid., p. 19.

⁷¹Ibid., p. 19

mask or costume, or discard his personality in an effort to create a second reality or an alternative personality. Mimicry may be seen in the efforts of children to imitate and "be" their parents, in the role playing of adults in a play, or in the identification of the spectators with their heroes on the playing field. In the latter case, the spectators, by providing support and vocal encouragement, believe they can influence the course of the event they are observing and ensure the success of the group they favour.⁷²

In a defining statement, Caillois related mimicry to the component parts of play.

With one exception, mimicry exhibits all the characteristics of play: liberty, convention, suspension of reality, and delimitation of space and time. However, the continuous submission to imperative and precise rules cannot be observed - rules for the dissimulation of reality and the substitution of a second reality. Mimicry is incessant invention. The rule of the game is unique: it consists in the actor's fascinating the spectator, while avoiding an error that might lead the spectator to break the spell. The spectator must lend himself to the illusion without first challenging the décor, mask, or artifice which for a given time he is asked to believe in as more real than reality itself.⁷³

⁷² Ibid., pp. 19-22.

⁷³ Ibid., pp. 22-23.

Ilinx

These games are made up of all those activities in which a momentary distortion of perception and stability is achieved in a state similar to that of vertigo. The enjoyment in such activities is the feeling of panic, shock and loss of control over the situation.⁷⁴

Essential is the pursuit of this special disorder or sudden panic, which defines the term vertigo, and in the true characteristics of the games associated with it: viz. the freedom to accept or refuse the experience, strict and fixed limits, and separation from the rest of reality.⁷⁵

Vertigo may be achieved through the experience on a fairground roller-coaster or rotor, through rapid acceleration and the application of cornering stresses to the body in a fast car, in some forms of dancing, in body surfing, and in high speed skiing.

Virtually all of the physical activities played by man contain some form of rules which, dependent upon their degree of complexity, allow such activities to be placed on a continuum from the polar extreme of improvisation, to that of formal structure. In the developmental sequence of the child the initial activities appear related to the quest for knowledge of the immediate environment and pleasure is found in the exercise of the perceptual faculties. Gradually some

⁷⁴Ibid., p. 23.

⁷⁵Ibid., p. 26.

intrusion of the parent upon the experimentation period introduces some cultural regularities into the life of the child. The way of play of the particular society begins to be imposed, and with this imposition come some of the techniques and artifacts appropriate for socialization of the child. Once the particular conventions are learned and the child realizes that there are set ways of performing physical activities, the four streams of activities (âgon, alea, mimicry and ilinx) begin to separate and become distinct means of achieving particular pleasures and sensations. When rules become formalized in some activities,

the pleasure experienced in solving a problem arbitrarily designed for this purpose also intervenes, so that reaching a solution has no other goal than personal satisfaction for its own sake.⁷⁶

This final state is the pure form of ludus. The rules may be imposed intellectually where logic is required for solution of problems, they may be imposed by the vagaries of atmospheric conditions, or by the exploitation of natural laws and principles in order to achieve a particular end in play.⁷⁷

Caillois defined paidia as:

a word covering the spontaneous manifestation of the play instinct: a cat entangled in a ball of wool, a dog sniffing, and an

⁷⁶Ibid., p. 29.

⁷⁷Ibid., pp. 27-29.

infant laughing at his rattle represent the first identifiable examples of this type of activity. It intervenes in every happy exuberance which effects an immediate and disordered agitation, an impulsive and easy recreation, but readily carried to excess, whose impromptu and unruly character remains its essential if not unique reason for being. From somersaults to scribbling, from squabble to uproar, perfectly clear illustrations are not lacking of the comparable symptoms of movements, colors, or noises.⁷⁸

Ludus, on the other hand;

relates to the primitive desire to find diversion and amusement in arbitrary, perpetually recurrent obstacles. Thousands of occasions and devices are invented to satisfy simultaneously the desire for relaxation and the need, of which man cannot be rid, to utilize purposefully the knowledge, experience, and intelligence at his disposal, while disregarding self-control and his capacity for resistance to suffering, fatigue, panic, or intoxication ... ludus stands for the specific element in play the impact and cultural creativity of which seems most impressive ... in disciplining the paidia, its general contribution is to give the fundamental categories of play their purity and excellence.⁷⁹

Some difficulty was encountered by Caillois in his system of classification by virtue of the fact that the four categories of play were not mutually exclusive. It is possible to classify particular games in terms of combinations of two or more of the basic components of agôn, alea, mimicry, or ilinx. The analysis of the combinations of more than two

⁷⁸Ibid., pp. 27-28.

⁷⁹Ibid., pp. 32-33.

of the categories was omitted as Caillois believed that such combinations were rare juxtapositions in which the domains were relatively autonomous and had little influence upon the actual character of the games.⁸⁰

Even in the analysis of the six possible combinations of the domains taken two at a time; two appeared to be incompatible (forbidden relationships), two were largely accidental associations (contingent relationships), and only two appeared to have any compatibility at all (fundamental relationships).⁸¹

Caillois specified that the relationship between competition and vertigo (agôn-ilinx) and chance and simulation (alea-mimicry) cannot possibly occur. The introduction of the spasms associated with vertigo would have the effect of destroying the control that is necessary for the maintenance of the competitive spirit. Vertigo destroys all the components of agôn that are required for the demonstration of superiority; control, the use of skill, the willingness to adhere to the rules, etc. In a similar fashion, the introduction of the domain of simulation into games of chance rules out the possibility of equality under destiny. If destiny is to be paramount in deciding the winner, then any deception or ruse destroys the level of equality or introduces

⁸⁰Ibid., pp. 71-72.

⁸¹Ibid., pp. 72-76.

an extraneous element into the action. As no game is possible when vertigo is allied to competition, or when simulation is allied to chance, Caillois specified that such combinations were to be regarded as forbidden relationships.⁸²

When the combinations discussed above are reversed, however, the associations are viable. Certainly it is possible that an individual obsessed with games of chance could develop the sense of distorted perception that occurs in vertiginous activities. The compatibility between alea and ilinx may be attributed to the fact that in both, there is a resignation of the will. Similarly, agôn and mimicry can readily be combined as the competition is reinforced by the spectacle which surrounds it. It is the inter-relationship between the players and the spectators that allows the combination of the two domains to be viable. However, as both alea and agôn can continue unchanged by the addition or removal of these domains, Caillois specified that the associations be regarded as contingent relationships.⁸³

The only relationships regarded by Caillois to be fundamental were those linking agôn and alea, and mimicry with ilinx. In each of these two cases, there is a basic symmetry between the elements. As was noted previously, there is a level of absolute equality between the players

⁸²Ibid., pp. 72-73.

⁸³Ibid., pp. 73-74.

and a strong rule structure in the domains of agôn and alea. Regulation is an essential component in these types, although the manner of deciding upon a victor is entirely different. In competitive activities, the individual can win only by utilizing his own resources to a level sufficient to overcome the opposition. In games of chance, individual abilities mean nothing and factors outside the control and manipulation of the players decide the result. Games may be placed on a continuum stressing different combinations of competition and recourse to chance.⁸⁴

Just as the domains of competition and chance have a common adherence to rules, games which combine simulation and vertigo (mimicry-ilinx) presume, in their extreme form, a world with no rules. In games of mimicry there is an awareness in the player of the simulation, but with the introduction of vertigo, the awareness is eliminated. When one wears a mask the personality is disguised and this loss of the awareness by others of the identity of the masked individual allows him to enjoy a feeling of liberation. He can magnify this into a distortion of perception and reality. The association of the two can be so powerful that the sense of play may be lost. Indeed, Caillois believes that such a combination is a natural component of the realm of the sacred, and as such, provides for much of the fascination and

⁸⁴ Ibid., pp. 74-75.

terror involved in such activities.⁸⁵

McIntosh evaluated the classificatory system of Caillois and found several areas where valid criticisms could be made. He believed that the distinction between competitive games and games of chance, which differed mainly in the degree of personal control possible to influence the play situation, was viable only when considering extreme examples. In many games which could be classified as games of chance, it is possible to take a situation presented to the player by "destiny" and to translate it into a victory through the employment of strategy and psychological insight. McIntosh stated that bridge and poker were games in which such skills could be employed to allow some control following the operation of the factors of chance.⁸⁶

This criticism appears to be somewhat invalid, as Caillois himself discussed the fact that many games can be regarded as combinations of the four domains, and the activities used as examples by McIntosh would appear to fit on the agôn-alea continuum.

Never-the-less, McIntosh's dissatisfaction with the agôn category does have merit, particularly in the sense that it does not make any distinction between competition

⁸⁵Ibid., pp. 75-76.

⁸⁶Peter C. McIntosh, Sport in Society, p. 125.

involving individuals and teams, by the individual against himself and his own standards, or between the individual and elements of the natural environment. In each case, the source of satisfaction is the achievement of a measure of superiority, but the relationship between the individual player and his adversary is different.⁸⁷

McIntosh also indicated that he had some difficulty in accepting as a special domain the pursuit of vertigo, where the loss of perceptual clarity or equilibrium was the main defining element. While it was admitted that in activities such as those involving fairground devices there was a loss of equilibrium that provided the thrill and excitement, in most activities involving speed, acceleration and vertigo, the player is aware of the risk of a loss of equilibrium and uses skill to try to prevent that situation occurring.⁸⁸

The feature of real interest in this discussion, however, was missed by McIntosh. If we use skiing as an example of a vertiginous sport (as did Caillois and McIntosh), then the awareness of the risk of a loss of equilibrium and the employment of sufficient control to enable the player to maintain the thrill of speed and acceleration without losing his momentum would appear to be an example of a viable or

⁸⁷Ibid., pp. 126-127.

⁸⁸Ibid., pp. 125-126.

fundamental association between competition and vertigo. This agôn-ilinx combination was termed a forbidden relationship by Caillois, but it seems capable of being a legitimate association, especially when considering the sports of motor racing, skiing, and mountaineering.

A further criticism made by McIntosh of the Caillois schema was concerned with errors of omission. The play activities that have as their central purpose the expression of ideas, feelings, and beauty in human movement do not appear to be able to fit into the structure. In these activities the aim is not usually to be better than someone else, or to court the loss of equilibrium; the source of pleasure is located in the performance of a movement with grace, style and artistry.⁸⁹ This particular omission appeared to be a serious one, especially in view of the fact that considerable female participation in play activities is centered on such forms. Certainly, there is no reason why women could not perform well in any play activity, game or sport played by the males of our society. The definitions as to what constitute appropriate activities for the sexes are incorporated in the existing socialization patterns and as a consequence of these, there appears to be a definite deficiency in the relative numbers of males involved in the aesthetic play forms, and of females involved in the aggressive activities.

⁸⁹Ibid., p. 128.

Another difficulty was the failure to adequately include or even mention those activities in which man is a predator. Such activities may include the hunting and fishing pursuits, or even marksmanship training where the quarry is represented as a target. All told, the recreational games and sports fit poorly into the Caillois model.⁹⁰

The McIntosh Classification

In response to his criticism of the Caillois model, McIntosh proposed his own theoretical system of classification. He proposed a division of the category of agonistic games into three parts.

He emphasized, however, that "the classification of sport here given depends on the motive and the nature of the satisfaction which the sport gives, not upon the activity itself",⁹¹ thereby hoping to eliminate the difficulties inherent in the Caillois schema of having to classify particular games and sports as belonging to two or more categories or to combinations of the domains.

The first component of this model provided a separate category for all those games and sports which enable an individual or team unit to demonstrate superiority over an opponent or other team on some exercise of skill. These

⁹⁰Ibid., p. 126.

⁹¹Ibid., p. 128.

activities may be regarded as competitive games and sports where the predominant source of satisfaction is in the exercise of skill dominance over others. Such activities may include track and field events, swimming competitions, some elements of hunting and fishing, and a variety of social and organized sports.⁹²

A second division of the competitive games was made up of activities which involve personal or group combat. The aim in such games is to demonstrate a measure of superiority against an opponent in activities which stress physical combat or combat using a variety of weapons. In such activities the aim is to forcefully incapacitate through violence or restriction of movement, or to strike the opponent with a sword or stick in such a place on the body that severe injury or death would be the result if padding and other protective measures were not provided. For McIntosh, the

special feature of personal contact with an opponent either directly through limb and body or indirectly through foil, blade or single stick deserves a special category.⁹³

The third category comprised those activities which are enjoyed because the individual sees satisfaction in the conquest of some element of the natural environment, or over

⁹²Ibid., pp. 126-127.

⁹³Ibid., p. 127.

some situation in life. Examples of such games and sports are legion, and the most obvious include mountaineering, skiing, water skiing, surfing, aqua-lung diving, and even recreational swimming if the individual has a low level of skill and perceives such an activity as a conquest of fear or flotation. "For most of those who take up conquest sports the appeal is just the impersonal nature of the challenge."⁹⁴

The fourth and final category in the McIntosh model provided recognition for those activities which allow the participant an opportunity, not to demonstrate a measure of superiority, but to show his ability to express beauty in human movement. The aim in such activities is "to express or communicate ideas and feelings using and enjoying the movements and sensations of the body in the process."⁹⁵ Activities such as dance, gymnastics, and figure skating would provide such satisfactions for their participants.

In view of the intention of McIntosh to develop a system of classification based upon the sources of satisfaction and motivations for individual participation, it would appear to be a weakness in his scheme to omit the common desires of man to achieve satisfaction in social interaction, in the pursuit of health through physical activity, and for the generation of a feeling of fun and excitement in games

⁹⁴Ibid., p. 127.

⁹⁵Ibid., p. 128.

and sports. The motives people express as being behind their selection of particular behaviour patterns are legion, and although they provide a more adequate means of classifying play, games and sport, more than those rather limited categories provided by McIntosh would appear to be necessary.

The Kenyon Model for the Characterization of Physical Activity

Kenyon built upon the McIntosh belief that the characterization of physical activity was possible only through considering the sources of satisfaction provided by games and sports for the participants. In his studies

it was assumed that 'physical activity' can be reduced to more specific, or meaningful components; i.e., a set of all physical activities can be reduced to logical subsets, and that a meaningful basis for doing so was the 'perceived instrumentality' of each class of physical activity".⁹⁶

In this way, it was possible to provide definitions for several dimensions of physical activity which referred to differing aspects of the motivational system leading to participation.

The development of the model passed through three stages, each being tested empirically. The first attempt involved the development of an inventory to test a six component model of physical activity participation. The

⁹⁶Gerald S. Kenyon, Values held for physical activity by selected urban secondary school students in Canada, Australia, England and the United States, p. 5.

sub-domains utilized in this study were concerned with physical health, the Platonic mind-body dichotomy, cooperation-competition, mental health, social intercourse, and patriotism as motivational factors leading to participation in physical activity. The inventory was submitted to two groups and found to be inadequate. The reasons for this failure were believed to be associated with the multidimensionality of the sub-domains, the low number of items reflecting each sub-domain, and the possible lack of a unitary relationship between the sub-domains and the model itself.⁹⁷

The second stage involved the development of another set of six sub-domains and the test of this model using a Likert scale.⁹⁸ The six sub-domains in this case were specified as; physical activity as a social experience, physical activity for health and fitness, physical activity as the pursuit of vertigo, physical activity as an aesthetic experience, physical activity as a recreational experience, and physical activity as a competitive experience. Following the administration of the scale to a sample of college students, it was found that the operationalization of the sub-domains concerned with competition and recreational experiences was

⁹⁷Gerald S. Kenyon, "A conceptual model for characterizing physical activity", pp. 3-4.

⁹⁸Rensis Likert, "The method of construction an attitude scale", in Readings in Attitude Theory and Measurement, ed. by Martin Fishbein (New York: John Wiley and Sons Inc., 1967), pp. 90-95.

not satisfactory. It was proposed that these difficulties were probably due to definitional imprecision.⁹⁹

The final stage concerned the employment of a series of scales developed using the semantic differential technique of Osgood, Suci and Tannenbaum¹⁰⁰ for testing the structure of the refined model. In this case, seven characterizations of physical activity were developed as sub-domains. These were:

1. Physical activity as a social experience, which was characterized as "those physical activities whose primary purpose is to provide a medium for social intercourse, i.e., to meet new people and to perpetuate existing relationships."¹⁰¹

2. Physical activity for health and fitness, where the desire to participate in a particular activity was evaluated in terms of its "capacity to enhance personal health."¹⁰²

3. Physical activity as the pursuit of vertigo, which considered "those physical experiences providing, at some

⁹⁹Gerald S. Kenyon, "A conceptual model for characterizing physical activity", p. 4.

¹⁰⁰Charles E. Osgood, George J. Suci and Percy H. Tannenbaum, The Measurement of Meaning (Urbana, Ill.: University of Illinois Press, 1967).

¹⁰¹Gerald S. Kenyon, Values held for physical activity by selected urban secondary school students in Canada, Australia, England and the United States, p. 31.

¹⁰²Ibid., p. 31.

risk to the participant, an element of thrill through the medium of speed, acceleration, sudden change of direction, or exposure to dangerous situations, with the participant usually remaining in control".¹⁰³ This sub-domain was the only one which drew directly on the classification scheme of Caillois, and the modification and criticism provided by McIntosh.

4. Physical activity as an aesthetic experience where the physical activity was perceived "as having aesthetic value for the individual - that is activities are conceived of as possessing beauty or certain artistic qualities".¹⁰⁴

5. Physical activity as catharsis where the physical activity is "perceived as providing a release of tension precipitated by frustration through some vicarious means".¹⁰⁵

Although this dimension appeared to pre-suppose frustration as a precondition to the enjoyment of activities in order to achieve a cathartic effect, the operationalization of this concept for use in the scale referred to "the problems of modern living" and "pent-up emotions" which were more general.¹⁰⁶

¹⁰³ Ibid., p. 32.

¹⁰⁴ Ibid., p. 33.

¹⁰⁵ Ibid., p. 33.

¹⁰⁶ Ibid., p. 189

6. Physical activity as a ascetic experience, where the activity for the individual "becomes long, strenuous and often painful training and stiff competition demanding a deferment of many gratifications".¹⁰⁷ It is with this dimension that much of the difficulty lies with the Kenyon model for, although all other dimensions can be utilized with equal effectiveness with the overall population, this sub-domain provides a strong measure of restriction by referring only to activity participation at a level where the participant sacrifices time, effort and alternative activities in order to develop a high degree of skill. In all other sub-domains, it is possible that the individual can select an activity to satisfy a particular conscious or sub-conscious need and participate at a low, medium or high level of skill and ability. In this case, however, the casual participant is automatically excluded as involvement pre-supposes a period of strenuous training and a high level of competition.

7. Physical activity as chance, which included all those activities which allow the participants opportunities to court the laws of probability in order to secure some gain. This last dimension was included in view of the strong support provided for it in the literature concerned with games and sports,¹⁰⁸ although it had been omitted in the early

¹⁰⁷ Ibid., p. 33.

¹⁰⁸ Ibid., p. 5.

studies used to validate the model.

Kenyon believed that in order to demonstrate the efficacy of the model, each sub-domain would have to be shown to be internally consistent and independent, or relatively so, of the other sub-domains. The inventory was submitted to a sample of college freshmen, and analysis of the data, using Hoyt reliabilities and Factor Analyses, indicated that the conditions for acceptance of the model were met. It was concluded, however, that it was possible that not all of the appropriate sub-domains had been included at that time.¹⁰⁹

Cross cultural comparisons between samples drawn from several countries were made using the final version of the inventory to determine the values held by secondary school students toward physical activity.^{110, 111, 112} When these data were compiled, it was found that the most positive attitudes were expressed for the sub-domains of physical

¹⁰⁹Gerald S. Kenyon, "A conceptual model for characterizing physical activity," pp. 9-12.

¹¹⁰Darwin M. Semotiuk, "The attitudes toward and interests in physical activity of Edmonton secondary school students" (unpublished M.A. Thesis (Physical Education). University of Alberta, April, 1967).

¹¹¹Kevin A. Collins, "The attitudes toward and interests in physical activity of Western Australian urban secondary school students" (unpublished M.A. Thesis (Physical Education). University of Alberta, July, 1967).

¹¹²Gerald S. Kenyon. Values held for physical activity by selected urban secondary school students in Canada, Australia, England and the United States.

activity as a social experience, physical activity as health and fitness, physical activity as an aesthetic experience, and physical activity as catharsis. The support provided for physical activity characterized as pursuit of vertigo, as an ascetic experience, and as chance, was less positive or marginal.¹¹³

Female respondents provided stronger support for the sub-domains of physical activity characterized as social experience, as health and fitness, as aesthetic experience and as catharsis. The males sampled gave stronger support than the females for the physical activities characterized as the pursuit of vertigo, ascetic experience, and as chance.¹¹⁴

Among adults, Kenyon determined that there were no great differences in the degree of male and female participation in sports and that active participation in physical activities tended to vary directly with the level of individual educational attainment. He also found that there was no clear relationship between participation in physical activity and occupational status (although it was found that low occupational status groups did not attend sporting events as frequently), and the frequency of participatory and spectator involvement with physical activities and sports was

¹¹³Ibid., p. 170.

¹¹⁴Ibid., pp. 170-171.

positively related to gross family income.¹¹⁵

In another study, he related the responses to the sub-domains of the physical activity model to the educational level and occupational status of the parent. Among secondary school students in the United States group sampled, the only relevant association between parental education and the sub-domains was the weaker support given the value of physical activity as an aesthetic experience among girls whose fathers (or family heads) had more than one year of college education. It was found that boys from white-collar family backgrounds gave less support for physical activity as a means of securing health and fitness. Girls from blue-collar family backgrounds gave stronger support for the values of physical activity as a social experience, as the pursuit of vertigo, and as catharsis.¹¹⁶

Integration of the Classificatory Theories

Neither Caillois nor McIntosh submitted their systems of classification of play, games and sport to empirical test,

¹¹⁵Gerald S. Kenyon, "The significance of adult physical activity as a function of age, sex, education, and socioeconomic status" (paper presented at the Midwest Convention of A.A.H.P.E.R., Detroit, Michigan, April 11, 1964), pp. 7-8. (Mimeographed.)

¹¹⁶Gerald S. Kenyon, John W. Loy Jr. and Barbara S. Isaacman, "Values held for physical activity as a function of social class background" (paper presented at the A.A.H.P.E.R. National Convention, Chicago, Ill., March 20, 1966), pp. 6-7. (Mimeographed.)

and for this reason, their theories, though having considerable face validity, are open to question. In the case of the Kenyon model, considerable work had been done with adult and secondary school adolescent samples in order that the efficacy of the model could be demonstrated.

Apart from the logical difficulty in the Kenyon model through the inclusion of the asceticism motivation among other, more recreational, dimensions of physical activity participation, there was also a measurement difficulty. Although Osgood, et al.¹¹⁷ indicated that the use of parametric statistical procedures, including Factor Analysis, was permissible with the scores derived from a semantic differential scale, there is reason to doubt whether the use of such statistics is appropriate.¹¹⁸ For all intents and purposes, the semantic differential technique yields scores which belong at no more than the ordinal level of measurement. Clearly, then, the implicit assumption involved with the use of Pearson correlation coefficients and Factor Analysis; that of interval level of measurement, precludes the use of such statistical procedures with these scales.

Although it is possible that the validity of the Kenyon model was unaffected by the introduction of these

¹¹⁷Charles E. Osgood, George J. Suci and Percy H. Tannenbaum, The Measurement of Meaning.

¹¹⁸Brian M. Petrie, "Statistical analysis of attitude scale scores." Research Quarterly, vol. 49, no. 2 (May, 1969), 434-436.

measurement biases, it was believed that its explanatory capacity should be tested along with those of Caillois and McIntosh. Unfortunately, the statistical treatments appropriate to the ordinal level of measurement are not as useful for the testing of models.

The ranking scale employed as a survey instrument in the present study was developed by combining the various sub-domains of the Caillois, McIntosh and Kenyon systems of classification. Accordingly, the following set of ten items was developed;

1. Physical activity as a way of pursuing personal risk, thrills and danger. This item included the content of the factor of physical activity as the pursuit of vertigo which was common to both the Caillois and Kenyon theories.

2. Physical activity as a way of meeting people in social situations. This factor appeared only in the Kenyon model although the socialization function of games has frequently been recognized in the past.

3. Physical activity that matches skill in the use of a weapon against a target or quarry. Although McIntosh recognized such activities as belonging predominantly to the area of competitive games involving the demonstration of skill,¹¹⁹ it was felt that there may be some social class association with these activities which could best be investigated if the

¹¹⁹Peter C. McIntosh, Sport in Society, pp. 126-127.

item was given a separate classification.

4. Physical activity as a way of improving the health and fitness of the body. This motivational factor was found to be a unitary sub-domain by Kenyon, but was not included as a separate component in either of the systems of Caillois or McIntosh.

5. Physical activity as a way of involving the individual against "chance" or "luck" in an attempt to win an object or money. Games of chance occupied much of the system of classification of Caillois, and has been included in most of the works of Kenyon. In his later works, however, the physical activities characterized as games of chance have been omitted from his theoretical model.^{120, 121.}

6. Physical activity as a way of having fun and for pure enjoyment. This particular item reflects much of the content of the catharsis, recreation, and relaxation theories, but was included only in the Kenyon model.

7. Physical activity as a way of expressing ideas and feelings in movement. This statement would be included in the concept of mimicry in the Caillois system, and as part of the aesthetic motivation of Kenyon. It was expressed in the system of McIntosh as the motive for communication of

¹²⁰Gerald S. Kenyon, "A conceptual model for characterizing physical activity." Research Quarterly, vol. 39, no. 1 (March, 1968), pp. 96-105.

¹²¹Gerald S. Kenyon, "Six scales for assessing attitude toward physical activity." Research Quarterly, vol. 39, no. 3 (October, 1968), pp. 566-574.

ideas and feelings though the use of the body, and this description appeared to be more appropriate for use in the survey instrument of the present study.¹²²

8. Physical activity as competition involving SKILL as the predominant part of the performance. This statement, as well as the two which follow, was drawn directly from the McIntosh classification of play and games. All three competition motivations are subsumed under the category of agôn in the Caillois plan, while the element of ascetic experience in the Kenyon model appears to convey only part of the content.

9. Physical activity as competition involving COMBAT as the predominant part of the performance. This is the second of the three divisions of the competition motivation identified in the work of McIntosh.

10. Physical activity as competition against part of the natural environment. This final statement was included in the schemes of all three authors to varying degrees and given considerable stress as a separate sub-domain by McIntosh.

It was believed that the classification system presented here would also have experimental utility in the evaluation of spectator involvement in physical activities of all kinds. Accordingly, a separate scale was included

¹²²Peter C. McIntosh, Sport in Society, pp. 127-128.

referring to such involvement and only minor changes were necessary to the ten statements discussed above to make such a spectator scale an apparently satisfactory reflection of the three models.

CHAPTER III

METHODS AND PROCEDURES

In order to investigate the problem, the survey research technique was employed and data was collected from a random sample drawn from the undergraduate population of Michigan State University in the Spring Term of 1969. All statistical analyses were performed using the computer facilities available at Michigan State University and at the University of Western Ontario.

The Development of the Survey Questionnaire

In order to determine the suitability of the topic for analysis using the survey technique involving a mailed questionnaire, a series of interviews was conducted with members of the University undergraduate, graduate and academic community. These interviews were structured in such a way that preliminary questions for inclusion in the survey were evaluated in terms of their capacity to investigate the problem, and to provide an indication of the ability of the questions to elicit unidimensional response patterns from the respondents. The purpose of the interviews was also to seek an evaluation of the capacity of the physical activity model to be fully inclusive of the motivations held towards participation and spectator involvement with physical activity.

Following the interviews, the questionnaire format was refined in conformity with suggestions made by the respondents and prepared for presentation to a non-random sample of 100 undergraduate students registered in required-program classes of Physical Education at Michigan State University.

In addition to the normal instructions involved with the completion of the questionnaire, the respondents were asked to make suggestions which would lead to the expansion of the physical activity model, or to the correction of any statements or response categories which appeared to provide for ambiguity.

Following the analysis of these questionnaires, the survey instrument was again refined and submitted to the various members of the advisory committee for evaluation.

The final version of the questionnaire was then printed and prepared for submission to the members of the sample (Appendix A).

The Selection of the Sample

After written permission was secured from the Registrar's Office and from the Department of Institutional Research of Michigan State University, the files of the Admissions Office were made available for the selection of the sample.

An arbitrary sample size of 1,000 was selected and the following conditions were made for inclusion in the sample:

1. All members of the sample were to be registered under-graduate students of Michigan State University.
2. All those selected were to be American citizens (foreign students to be omitted from the listing).
3. All those students above the age of 23 years were to be eliminated from consideration as members of the sample.

At the beginning of the Spring Term of 1969, the enrollment in undergraduate programs at Michigan State University comprised the following numbers of students:

Men: 16,086 students (55.12% of undergraduate enrollment).

Women: 13,096 students (44.8% of undergraduate enrollment).

Total: 29,182 students.

Following elimination of the previously mentioned students from the file, a total of 20,000 students remained as the population from which the sample was to be drawn.

The sample was selected by programming the computer to select every twentieth student number from the file of the Admissions Office with the entry point into the file being determined at random.

The sample selected may be defined as a systematic sample with known and equal probabilities of selection.

In addition to the selection of the sample, Avery Labels were printed of the East Lansing addresses of those selected and a computer print-out was provided showing the following details for each member of the sample:

1. Student number.
2. Full name.
3. Local address.
4. Home address.
5. Class at Michigan State University.
6. Program level at Michigan State University.
7. Curriculum of study.
8. Dormitory Code.

From this information, the sex of each member of the sample was deduced, although in two cases only the initials of the given names were listed.

This information was later utilized to determine if there were differences in the response rates on any of those variables believed to be significant determinants of the willingness to reply to a survey.

Twelve members of the sample had to be eliminated from consideration for various reasons. Despite the preliminary sifting of the population list by the members of the administration computing staff, six members of the sample were determined to be citizens of other countries. Of these, two were male and four were female. One female student telephoned to report that she had previously completed her undergraduate requirements and was a fully registered graduate student for the Spring Term. No address was able to be determined for one male member of the sample, while another male student had been inducted into U.S. Service. Two women

students had dropped out of college, while another had withdrawn from classes in order to travel to England.

As three sets of Avery Labels were printed with the local addresses of each member of the sample, the opportunity was presented for the sending of two follow-up or reminder cards to request cooperation with the aims of the study. The fact that the survey had been approved by the office of Institutional Research and was carried out under the auspices of the College of Education was expected to secure the maximal degree of cooperation.

The composition of the sample was compared to that of the over-all undergraduate population on the basis of sex (Table 1).

Table 1. Sex composition of the sample compared to that of the over-all undergraduate population of Michigan State University, Spring Term, 1969.

	Over-all population	Sample drawn	Corrected sample
No. of Men	16,086	531	527
Proportion of Total	55.12%	53.10%	53.34%
No. of Women	13,096	467	459
Proportion of Total	44.88%	46.70%	46.46%
Sex Unknown	-	2	2
Proportion of Total	-	0.20%	0.20%
TOTAL	29,182	1,000	988

The Distribution of the Questionnaire

All questionnaires addressed to students living in University dormitories were sent through the Campus Mail Service. Questionnaires addressed to students living off-campus were sent through normal postal channels. The respondents were requested to replace the Avery Label showing their own address with another, which was enclosed, showing the address on Campus which was used as a central return point for all questionnaires. The respondents were requested to then return the questionnaires using the Campus Mail Service.

Reminder Notices

As the questionnaires were numbered, and the respondents could be identified by name from this information, it was possible to check off the names as the questionnaires were returned.

Two cards were sent following the original distribution of the questionnaire to remind those who had not responded of the importance of the study and requesting that they complete the survey and return it through the mail (Appendix B).

The first card was sent to all who had not replied by the seventh and eighth day following the date of the original mailing. The second card was sent to those who had not responded by the fourteenth and fifteenth days following the original mailing.

Statistical Analysis of the Data

All the data were analyzed using computer programs developed at Michigan State University and the University of Western Ontario. The Computer Institute of Social Science Research developed the Nonparametric Statistics Package NPSTAT, the Multiple Frequency Count program PERCOUNT, and the Four Way Cross-Classification program NUCROS. These programs were used with the Control Data Corporation CDC 3600 computer available at Michigan State University.

The XTAB-5 Generalized Cross-Tabulation program was used at the University of Western Ontario for further analysis of the data. The IBM 360/85 computer operated by the SDL Company of Ottawa, made available by telephone line from the University of Western Ontario Computer Center, was used for these analyses.

The first analyses performed on the survey data enabled response frequency counts to be determined for each response cell. Following this procedure, the Kruskal-Wallis Analysis of Variance by Ranks¹²³ was used as a sifting device to determine which of the independent variables would be utilized in later analyses. This later procedure involved the use of two- and three-way cross classifications utilizing the chi square test of significance between independent groups.¹²⁴

¹²³Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, 1956), pp. 184-193.

¹²⁴Ibid., pp. 175-179.

The Characteristics of the Members of the Sample and
Respondents to the Survey

Information concerning members of the sample

Of a total of 988 students who were selected as members of the sample, and satisfied the requirements for inclusion a total of 624 responded to the survey and returned their questionnaires. This response represented a 63.16 per cent return rate, and was regarded as satisfactory in view of the difficulties inherent in mailed questionnaire designs.

Because of the fact that a less than total return had occurred, it was believed that the respondent group no longer mirrored the characteristics of the original sample. To provide a check of this belief, the respondent group was compared to the sample group on known criteria.

The computer listing of the sample group included data on several variables which made such comparisons feasible.

This information indicated the class of the student (freshman, sophomore, junior, or senior), the program level attained by the student (University College, Upper Division or Residential College, Honors College, etc.), the curriculum of study, the sex of the student, and the local address of the member of the sample (classified for analytic purposes as on-, or off-campus).

This information was then analysed to determine whether differences existed between the respondents and non-respondents on any of these factors. Due to the fact that

there were low cell frequencies for many of the separate branches of curricula available for study, this variable had to be omitted from chi square analysis. The practical difficulties of the number of separate classifications of curricula, and the limitation of the non-availability of a computer program which would consider more than 21 columns for any one variable, were contributing factors in the elimination of analysis of the variability of response rates by curriculum.

The response rate for students of each undergraduate class is shown in Table 2.

Table 2. Questionnaire return by undergraduate class (N=988).

Questionnaire Return	Freshman	Sophomore	Junior	Senior	Total
Yes (N=624)	7.1	32.4	28.8	31.7	100
No (N=364)	5.2	28.8	29.9	36.0	100

$$\chi^2 = 3.476, \text{ not significant at } p .05.$$

From the information presented in the above table, it would appear that the members of the freshman group were strongly under-represented in the sample. However, as the survey was made during the third term of the academic year, many of the entering freshmen would probably have already earned the 40 credits needed to qualify them for the status

of sophomore by the time the sample was drawn. Any underrepresentation beyond this cause would presumably have occurred through the operation of chance factors in the selection of the sample.

The analysis of the response rate for students at each program level is shown in Table 3.

Table 3. Questionnaire return by program level*
(N=988).

Questionnaire Return	Program Level							Total
	1	2	3	4	5	6	7	
Yes (N=624)	27.9	36.4	1.4	4.6	9.8	17.3	2.6	100
No (N=364)	26.1	42.3	1.1	2.2	6.9	20.1	1.4	100

$\chi^2 = 10.968$, not significant at $p .05$.

*Program Levels.

- 1 = University College.
- 2 = Upper Division or Residential College.
- 3 = Honors College, University College (Lower Division or Residential College).
- 4 = Honors College (Upper Division).
- 5 = General Agriculture, Agriculture Technology; University College (two year terminal); University College Candidate for Professional Teaching Certificate.
- 6 = Upper Division or Residential College. Candidate for Professional Teaching Certificate. Dual enrollment with College of Education.
- 7 = Honors College; University College candidate for Professional Teaching Certificate; Upper Division or Residential College candidate for Professional Teaching Certificate. Dual enrollment with College of Education.

When the response rate was analysed by sex, significant differences were found (Table 4).

Table 4. Questionnaire return by sex (N=986).

Questionnaire Return	Male	Female	Total
Yes (N=624)	48.9	51.1	100
No (N=362)	61.3	38.7	100

$$\chi^2 = 14.267, p \text{ less than } .001.$$

Additionally, significant differences were found to exist when the relationship between response to the survey and local residence was considered. In view of the general tendency for students living off-campus at Michigan State University to share accommodation with several friends, it was expected that the combination of increased social demands, a reduced level of time available for the completion of non-essential tasks, and the competition for attention, would mediate against a high return rate among these members of the sample. The results of the analysis of these data are shown in Table 5.

It would appear, then, that the women selected as members of the sample were somewhat more compliant than the men with regard to the return of the questionnaire, and the students living in university residences were also more

Table 5. Questionnaire return by local residence
(N=988).

Questionnaire Return	Local residence		Total
	On-campus	Off-campus	
Yes (N=624)	58.0	42.0	100
No (N=364)	37.9	62.1	100

$$\chi^2 = 37.160, p \text{ less than } .001.$$

likely to cooperate. To the extent that these results produced a respondent group which did not mirror the characteristics of the sample, some degree of bias may have been introduced. Additionally, the fact that there was a less than total response indicated that the respondents could not be regarded as being a random sample of undergraduate students at Michigan State University. It was for these reasons, and because of the limitations imposed by the level of measurement obtained in the data (being predominantly at the ordinal level), that all analyses were performed using non-parametric statistics.¹²⁵

Background Information Concerning the Respondents

Specific questions were asked in the body of the questionnaire seeking information concerning the respondent's

¹²⁵Ibid., p. 30.

age, sex, marital status, citizenship, the number of living brothers, the number of living sisters, the number of older siblings in the family, strength of religious conviction, family religion, the type of high school attended, College and major at Michigan State University, gross annual family income, parental occupational status, level of education attained by the head of the household, home town size and occupational aspirations of the respondent.

These variables were expected, in many cases, to be associated with the attitudes expressed toward physical activity and to be important determinants for motivations for participation and spectator involvement in particular types of activities. This section of the analysis presents the data obtained from the background questions, while those variables which were used as checks (citizenship, College and major) were eliminated from consideration.

The selection of the arbitrary age limit of 23 years as the upper limit for inclusion in the sample appears to have provided little distortion when considering the age composition of the undergraduate population of the university as a whole. Table 6 shows the age distribution found to exist among the respondents.

Although support was given for the establishment of the age of 23 years as the upper limit for inclusion, it was possible that there was a lower response rate among the older members of the sample and that this factor gave the

Table 6. Age distribution of the respondents
(N=625).

Age in Years	N	Proportion of Total*
17	2	0.32
18	24	3.84
19	132	21.12
20	205	32.80
21	166	26.56
22	91	14.56
23	1	0.16

*No response: accounted for 0.64 per cent of the total,
N=4.

appearance of a tailing-off of the age distribution.

The response distribution based upon the sex of the respondents is shown in Table 7.

Table 7. Sex distribution of the respondents
(N=625).

Sex	N	Proportion of Total*
Male	306	48.96
Female	318	50.88

*No response: accounted for 0.16 per cent of the total,
N=1.

It was shown in the discussion of the response rates for particular classifications of the members of the sample, that the female members of the sample drawn were more likely to return the mailed questionnaire than the males. When the over-all undergraduate population at Michigan State University (including foreign students and students over the age of 23 years) was considered, it was found that men constituted 55.12 per cent of the Spring Term enrolment, while women made up 44.88 per cent of the population. The respondent group, then, was not a true representation of the sex distribution of the population from which the sample was drawn.

Analysis of the data on the marital status of the respondents showed that there was only a small group of married students and this fact made cross-classification between this variable and the dependent or score variables difficult. In virtually all cases, control using marital status as an intervening variable was not possible without collapsing cells in the chi square table. In this manner it was possible to fulfil the assumptions with relation to the distribution and magnitude of the expected cell frequencies.¹²⁶ Table 8 illustrates the distribution of the respondents on marital status.

¹²⁶Ibid., p. 178.

Table 8. Marital status of the respondents
(N=625).¹²⁷

Status	N	Proportion of Total*
Single (never married)	579	92.64
Single (divorced)	1	0.16
Married (once only)	42	6.72

*No response: accounted for 0.48 per cent of the total, N=3.

The question concerning citizenship was included as a check of the screening process which was to eliminate foreign students from the sample. Some errors were located on the sample list itself, and these students were omitted from consideration. One respondent indicated that he did not hold American citizenship so he was excluded. Another respondent did not check any of the response categories but wrote, "I'm black" beside the question. This respondent was included in the study.

The number of brothers in the respondent's family was expected to account for some of the activity preferences and reasons for participation. The greater the number of brothers in the family of a female respondent, for example, the greater

¹²⁷Clark Kerr and Logan Wilson, National Survey of Higher Education Questionnaire (Minneapolis, Minn.: N.C.S. Processing Center 1968). Question 85, p. 12.

would be the expectation for her choices to tend toward those of the male students. Table 9 shows the distribution of the numbers of brothers in the families of the respondents.

Table 9. Number of brothers in the families of the respondents (N=625).

Number of Brothers	N	Proportion of Total*
None	182	29.12
1	245	39.20
2	123	19.68
3	41	6.56
4 or more	30	4.80

*No response: accounted for 0.64 per cent of the total, N=4.

The variable, number of sisters in the family, was also expected to explain some of the variability in the response patterns in relation to activity motivations. The distribution of the number of sisters of the respondents was similar to that given for the number of brothers (Table 10).

Some attitudes and reasons for participation in particular types of activities would be expected to vary with the position of the individual in the birth order of the family. Respondents from larger families would be expected to develop the habits of cooperation, companionship, and

Table 10. Numbers of sisters in the families of respondents (N=625).

Number of Sisters	N	Proportion of Total*
None	190	30.40
1	239	38.24
2	134	21.44
3	39	6.24
4 or more	21	3.36

*No response: accounted for 0.32 per cent of the total, N=2.

joint effort to attain goals, and accordingly these individuals would gravitate toward team activities, games, and sports where the expression of these attitudes is essential for success. It may also be expected, however, that the individual from a large family would receive the fulfillment of the needs for collective competition through his family associations, and would prefer to engage in individual activities outside the family unit.¹²⁸ The number of older siblings in the families of the respondents is shown in Table 11.

¹²⁸Harry Webb, "Social backgrounds of M.S.U. athletes", pp. 18-19.

Table 11. Number of older siblings in the families of the respondents (N=625).

Number of older siblings	N	Proportion of total*
None	287	45.92
1	224	35.84
2	70	11.20
3	22	3.52
4	12	1.92
5	5	0.80
6	1	0.16

*No response: accounted for 0.64 per cent of total, N=4.

From the data obtained from the three sets of questions concerning the number of brothers, sisters, and older siblings, it was possible to determine the actual number of children in the family of each respondent. This data is presented in Table 12.

This table does include the accumulation of the non-responses of a maximum of eight respondents but was believed to be satisfactory for use in the study. The variable, number in family, was used as an independent variable in analyses dealing with attitudes toward activity.

The item dealing with the strength of religious conviction was used in a mailed questionnaire concerned with

Table 12. Number of children in the families of respondents (N=625).

Number of children in family	N	Proportion of total*
1	41	6.56
2	171	27.36
3	182	29.12
4	116	18.56
5	53	8.48
6	33	5.28
7	20	3.20
8	4	0.64
9	4	0.64

*No response: accounted for 0.16 per cent of total, N=1.

university student attitudes toward higher education.¹²⁹ It was included in this study as a means of controlling for the variability in the religious factor as a determinant of social behaviour. The response distribution of this question is shown in Table 13.

An individual's religion is a private matter, and, anticipating that some respondents might prefer not to reply

¹²⁹Clark Kerr and Logan Wilson, National Survey of Higher Education Questionnaire. Question 77, p. 12.

Table 13. Strength of religious conviction among the respondents (N=625).

Religious conviction	N	Proportion of total*
Deeply religious	50	8.00
Moderately religious	360	57.60
Indifferent to religion	173	27.68
Opposed to religion	35	5.60

*No response: accounted for 0.64 per cent of total, N=4.

with details of their religious belief, the response category, "No answer" was added. The variation in the family religion of the respondents was not particularly great, with most respondents being Protestant (Table 14).

Table 14. Family religion among the respondents (N=625).

Religion	N	Proportion of total*
Protestant	384	61.44
Catholic	166	26.56
Jewish	27	4.32
Other	16	2.56
None	25	4.00
No answer	2	0.32

*No response: accounted for 0.48 per cent of the total N=3. Two respondents filled in two categories, Protestant-Catholic, and accounted for 0.32 per cent of the total.

It was believed that there may be some influence on attitudes toward activity and on the reasons for participation that developed due to the socialization process in the school. Attendance at parochial schools could develop a degree of minority identification that would lead the graduates to become more involved in team activities that stress the unitary solution to a problem by a group. Graduates of the public schools would be expected to be distributed relatively evenly in team and individual activities. Tabulation of the data revealed that there were an overwhelming number of graduates from public schools among the respondents, thus making the value of this variable as an intervening variable rather restricted (Table 15).

Table 15. Type of high school attended by the respondents (N=625).

Type of school	N	Proportion of total*
Public high school	534	85.44
Parochial high school	73	11.68
Private high school	14	2.24

*No response and dual response: accounted for 0.64 per cent of the total, N=4.

Analysis of the grouped data for gross family income indicated that the respondents were largely representative of families whose incomes placed them in the top Census

fifth. Although it is admitted that the estimates given by adolescents of their parent's incomes are usually unreliable, the great emphasis given responses for the upper income levels would at least be indicative of an over-representation of the middle- and upper-middle class in the respondent group (Table 16).

Table 16. Gross family income of the families of the respondents (N=625).

Income level	N	Proportion of total*
\$ 0 - \$ 2,790	6	0.96
\$ 2,791 - \$ 4,790	14	2.24
\$ 4,791 - \$ 6,490	21	3.36
\$ 6,491 - \$ 8,999	71	11.36
\$ 9,000 - \$ 12,000	117	18.72
\$ 12,001 - \$ 15,000	73	11.68
\$ 15,001 - \$ 20,000	103	16.48
More than \$ 20,000	91	14.56
Not known	116	18.56

*No response: accounted for 2.08 per cent of the total, N=13.

The large number of "Not known" responses made the use of this variable rather uncertain for analytical purposes.

Most respondents came from homes where the major financial provider was the father. In those cases where neither the father nor the mother was the major provider, the respondents indicated that "welfare", a guardian, or insurance

benefits following a parental death provided for the maintenance of the family while he was enrolled in high school (Table 17).

Table 17. Major financial provider for the household while the respondent was attending high school (N=625).

Provider	N	Proportion of total*
Father	574	91.84
Mother	37	5.92
Other	12	1.92

*No response: accounted for 0.32 per cent of the total, N=2.

Socio-economic status is frequently correlated with many forms of social behaviour, and in this study, the Census classification of occupational rankings was used as the measure of social status. In view of the skewed distribution of the data concerning gross family income, it was felt that there would be an over-representation at the higher parental occupational levels. Indeed, as Table 18 indicates, the heads of the parental households generally occupied positions that were classified among the professional, technical, managerial, clerical, sales, and kindred occupations.

Table 18. Census classifications of the occupation levels of the heads of the respondents' households (N=625).

Occupational category	N	Proportion of total
Professional, technical and kindred workers	126	20.16
Managers, officials and proprietors (excl. farm)	154	24.64
Clerical, sales and kindred workers	107	17.12
Farmers and farm managers	29	4.64
Craftsmen, foremen and kindred workers	66	10.56
Military	6	0.96
Private household and service workers	31	4.96
Operatives and kindred workers	83	13.28
Labourers, farm foremen and farm labourers	10	1.60
No response, unclassified	13	2.08

The strong representation of the heads of the respondents' households in the white collar occupational levels, and in the blue-collar occupations where considerable overtime benefits are available for skilled personnel (in the Michigan area) provide support for the gross family income distribution. This measure of socio-economic background was preferred over gross family income in later analyses because

it was thought to provide a more reliable estimate of the social background of the individual. It was believed that the capacity of the individual to recall the gross family income of his parental household was subject to exaggeration, or that this information might not be part of the respondent's knowledge.

The education level of the head of the household was believed to be an important, though not as accurate, measure of the social backgrounds of the respondents. It is possible that such information might not have been known to the respondent, or, that there was little relationship between the education level attained, and the occupation held by the parent. Nevertheless it was felt that this variable could be used as an independent variable in investigating determinants of the attitudes toward participation and spectator involvement in sports and games. Table 19 shows the education levels attained by the providers of the respondents' families.

The question of whether an individual's residence in a rural or urban area affects his attitudes toward physical activity and his participatory involvement pattern is one which has received some degree of support.^{130, 131} These

¹³⁰Harry Webb, "Social backgrounds of M.S.U. Athletes," pp. 21-27.

¹³¹Brian M. Petrie, "Social backgrounds of athletes awarded grants-in-aid at Big Ten Universities from 1960-1963" (unpublished M.A. Thesis (Sociology) Michigan State University, 1968), pp. 42-47.

Table 19. Education level of the head of the respondents' households (N=625).

Education level	N	Proportion of total*
Graduate school	90	14.40
College degree	97	15.52
Attended college	129	20.64
High school graduate	196	31.36
Attended high school	38	6.08
Grade 9	26	4.16
Attended Junior high school	18	2.88
Grade 6	9	1.44
Attended elementary school	9	1.44
Not known	5	0.80

*No response: accounted for 1.28 per cent of the total, N=8.

previous studies concerned the social backgrounds of college athletes on scholarship and showed that team athletes tend to come from the smaller towns and cities. It was postulated that such differences were due to the greater degree of media exposure received by such athletes. The factor of media exposure is not relevant to the present sample, but it was believed that those living in the smaller cities might have better access to recreational facilities than residents in the major cities supplying students to Michigan State University, and as a result would prefer participation in activities involving competition against the natural environment or activities in which skill with a weapon was important.

Table 20 shows the distribution of the respondents on the population size of their home towns and cities.

Table 20. Population size of the home towns of the respondents (N=625).

Home town size	N	Proportion of total*
Less than 5,000	127	20.32
5,001 - 10,000	56	8.96
10,001 - 25,000	70	11.20
25,001 -100,000	186	29.76
100,001 -500,000	92	14.72
500,001 -1 million	18	2.88
Over 1 million	62	9.92

*No response and dual response: accounted for 2.24 per cent of the total, N=14.

The factor of the occupational aspiration of the respondent was found to have little analytic utility in view of the emphasis given to the upper echelons of the professional and white-collar occupations (Table 21).

It had been expected that the more competitively oriented would be proceeding into managerial and executive positions, but the greatly skewed distribution precluded further use of this variable.

Table 21. Occupational aspirations of the respondents (N=625).

Occupational category	N	Proportion of total
Professional, technical and kindred workers	464	74.24
Managers, officials, and proprietors (excl. farm)	40	6.40
Clerical, sales, and kindred workers	31	4.96
Farmers and farm managers	4	0.64
Craftsmen, foremen, and kindred workers	0	0.00
Military personnel	6	0.96
Private household and service workers	5	0.80
Operatives and kindred workers	0	0.00
Labourers, farm foremen, and farm labourers	0	0.00
No response, unclassified	75	12.00

CHAPTER IV

EVALUATION OF THE THEORETICAL MODELS USED TO EXPLAIN PARTICIPATION IN PHYSICAL ACTIVITY

The theories of Caillois, McIntosh, and Kenyon were used as the bases guiding this study. Statements representing their classifications of play, games, and sports were submitted to an interview and pre-test group, corrected and refined at each step, and submitted to the college sample.

It was not possible to submit these results to a Factor Analysis to determine which of the theoretical systems was the more inclusive and complete model with this group, in view of the measurement limitations imposed by the data. However, evaluation of the explanatory power of the theories in relation to the present model was possible by determining what proportion of the total number of endorsements was encompassed by each of the three systems. This method is crude, but in order to avoid the deliberate introduction of bias by the misapplication of statistical tools, it was thought to be appropriate to the level of measurement of the data.

A tabular representation of the various motivations for participation in physical activity, showing the comparative terms used to classify physical activity in the various

models, was used as a starting point for this analysis (Table 22).

Table 22. Comparison of the classification terms used in the models of Caillois, McIntosh, and Kenyon, with those of the present study.

Motivational terms of present study. (3102 positive endorsements).	Classifications of physical activity		
	Caillois' term	McIntosh's term	Kenyon's factor
Risk, thrills and danger (153 endorsements)	Vertigo	*	Vertigo
Social interaction (433 endorsements)	*	*	Social
Skill with weapon (75 endorsements)	*	Competition in skill	*
Health and fitness (569 endorsements)	*	*	Health and fitness
Chance and luck (79 endorsements)	Alea	*	*
Fun and enjoyment (602 endorsements)	*	*	Catharsis
Aesthetic (309 endorsements)	Mimicry	Ideas and feelings	Aesthetic
Competition in skill (495 endorsements)	Agôn	Competition in skill	Ascetic
Competition in combat (62 endorsements)	Agôn	Competition in combat	Ascetic
Competition against environment (325 endorsements)	Agôn	Competition against environment	Ascetic

* = Not included in model.

Using the total number of positive endorsements provided by the respondents of the present study as a maximum, and providing each equivalent term with the same number of endorsements, the three models were compared in terms of their capacity to fully account for the Michigan State data (Table 23).

Table 23. Proportion of the responses provided in the present study explained by the Caillouis, McIntosh, and Kenyon models.

Model	Number of endorsements explained	Proportion explained
Caillouis	1423	45.87
McIntosh	1266	40.81
Kenyon	2948	95.04
TOTAL	3102	100.00

It would initially appear that the Kenyon model was the more inclusive of the three in terms of its explanatory power. However, this evaluation depends upon the assignment of the three competition factors; competition on the basis of skill, competition on the basis of combat and competition against the natural environment; to the "ascetic" factor of Kenyon. The stimulus in the Kenyon study that provided the basis for the responses regarded as showing preference

for the ascetic factor stated:

PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING.

Physical activities which require long periods of strenuous and often painful training; which involve stiff competition and demands that the individual give up a number of pleasures for a period of time.¹³²

Thus, while all of the other factors in this schema do not presuppose a high level of skill attainment such as that desired by the highly trained elite athlete, this factor introduced a new dimension that was essentially foreign to the others in which it was placed. While McIntosh¹³³ specified that the expression of superiority should be considered in any model of play, games, and sport, he did not state that such superiority had, necessarily, to be achieved at a high standard of excellence in performance. The drive for superiority may be equally strong in a player who has little skill but still perceives a sense of satisfaction in demonstrating the ability to win a game over a particular opponent. Such a feeling is not dependent upon long and arduous training, delayed gratification, or an aspiration for excellence.

¹³²Gerald S. Kenyon, Values held for physical activity by selected urban secondary school students in Canada, Australia, England and the United States, p.189.

¹³³Peter C. McIntosh, Sport in Society, p. 126.

Rather than assign the three competition statements to equivalence with the "ascetic" factor, it would be equally feasible to state that this element, referring as it did to the highly skilled or motivated athlete, did not belong among the other statements referring to a predominantly non-athletic group. In this case, the Kenyon model would only explain 2,066 endorsements, or 66.60 per cent of the total. This proportion would still be considerably higher than that explained by the other models.

In terms of first-rank support for the particular motivational statements, the Kenyon model was clearly superior although, again, the statement concerning competition on the basis of skill was regarded as equivalent to the "ascetic factor".¹³⁴

Of the four statements to receive over 5 per cent of the first-rank endorsements, the Caillois and McIntosh models accounted only for one: the motivation for competition on the basis of skill. All four were accounted for in the Kenyon model as significant determinants of involvement in physical activities (Table 24).

It was not the purpose of this study to provide a fully inclusive model explaining man's participation in physical activities. The only claim that may be made from these

¹³⁴Gerald S. Kenyon, Values held for physical activity by selected urban secondary school students in Canada, Australia, England and the United States, p. 33.

Table 24. Comparison of the theories of Caillois, McIntosh and Kenyon, with the statements receiving first-rank endorsement by over 5 per cent of the respondents in the present study.

Motivational statement in the present study	Number of first-rank endorsements	Accounted for in model		
		Caillois	McIntosh	Kenyon
Fun and enjoyment	329	No	No	Yes
Health and fitness	117	No	No	Yes
Competition in skill	70	Yes	Yes	Yes
Social interaction	41	No	No	Yes

data is that, among the members of the undergraduate population of Michigan State University who were sampled, and responded to the questionnaire, there was variable agreement concerning the centrality of particular statements of motivations for participation in physical activities. Pre-testing indicated that ten statements accounted for all of the motivations for participation, and the investigation revealed that there was considerable support for most of them by the respondents. It is believed that a similar set of motivational statements, pretested before use with another sample, would provide a basis for further investigations on the reasons for human play.

CHAPTER V

MOTIVATIONS FOR PARTICIPATION IN PHYSICAL ACTIVITIES

In a series of interviews, and in a pre-test, respondents were asked to propose motivations for participation in physical activities, and to assess the relevance of a group of motivational statements drawn from the existing theories and classifications of play, games, and sports. Following this procedure, a list of ten statements was drawn up representing the motivations deemed to be relevant to the undergraduate population of Michigan State University. These statements were;

1. Physical activity as a way of pursuing personal risk, thrills, and danger.
2. Physical activity as a way of meeting people in social situations.
3. Physical activity that matches your skill in the use of a weapon against a target or quarry.
4. Physical activity as a way of improving the health and fitness of the body.
5. Physical activity as a way of involving the individual against "chance" or "luck" in an attempt to win an object or money.

6. Physical activity as a way of having fun and for pure enjoyment.

7. Physical activity as a way of expressing ideas and feelings in movement.

8. Physical activity as competition involving skill as the predominant part of the performance.

9. Physical activity as competition involving combat as the predominant part of the performance.

10. Physical activity as competition against part of the natural environment (water, mountain, snow, etc.).

The order of placement of these statements on the page of the survey devoted to this question was determined randomly, except that the three competition statements were thought to be best grouped together and only one ballot was drawn to place these items in a position on the list.

It may be noted that there was a deviation in the wording of the statements used in the study from that employed by the authors of the classification systems and theories concerning the motivations for participation in play, games, and sports. Such changes that were made reflected the opinions of the members of the interview and pre-test groups. Accordingly, the statements reflect the manner of presentation thought to be best for the investigation of involvement in physical activities among the members of the population sampled.

Each respondent was asked to select from the 10 item

list the five statements regarded as the most significant motivators for his participation in physical activity and to rank these in order of preference. Thus, the importance of each statement to the total group of respondents could be evaluated in two ways. The first-rank importance was determined by counting the number of times each statement was given a first-choice by a respondent. The over-all importance of the item was determined by counting the number of times a particular statement was positively endorsed by respondents, regardless of rank, within the five selections allowed. Those statements given the greatest number of positive endorsements would then be regarded as the most important statements representing motivations for participation in physical activities.

Failure to endorse an item as one of the five most important to the individual's motivations for participation was regarded as a rejection of that item and, as such, was regarded as being of considerable importance in the analysis of the reasons for participation and of the influence of particular social variables upon such involvement.

Upon tabulation of the data, it was noted that there was considerable variation in the degree of support provided for each of the ten items.

The amount of support given for each statement of motive for participation in physical activities may be determined from Table 25.

Table 25. Motivations for participation in physical activities (N=625).

Motivation	Number giving positive rankings	Proportion responding in each rank					Total
		1	2	3	4	5	
Risk, etc.	153	6.5	10.5	20.3	25.5	37.3	100
Social	433	9.5	22.4	22.6	24.0	21.5	100
Weapon	75	5.3	14.7	20.0	36.0	24.0	100
Health	569	20.6	30.1	25.7	13.4	10.4	100
Chance	79	2.5	6.3	12.7	26.6	51.9	100
Fun	602	54.7	20.4	14.8	6.0	4.2	100
Ideas & Feelings	309	7.8	17.8	19.7	28.8	25.9	100
Competition in Skill	495	14.1	17.4	21.6	25.5	21.4	100
Competition in Combat	62	8.1	6.5	22.6	24.2	38.7	100
Competition against Environment	325	5.8	16.3	15.4	27.1	35.4	100

Taking into consideration only those statements which received first-rank support by more than 5 per cent of the respondents (a minimum of 31 respondents), the following rank order was evident.

1. Physical activity as a way of having fun and for pure enjoyment; 329 first-preferences.

2. Physical activity as a way of improving the health and fitness of the body; 117 first-preferences.

3. Physical activity as competition involving skill as the predominant part of the performance; 70 first-preferences.

4. Physical activity as a way of meeting people in social situations; 41 first-preferences.

No other motivational statements received first-rank support by more than 5 per cent of the respondents.

When the statements were ranked in order of the greatest to the least number of total positive endorsements, the following order was apparent;

1. Physical activity as a way of having fun or for pure enjoyment (602 endorsements).

2. Physical activity as a way of improving the health and fitness of the body (N=569).

3. Physical activity as competition involving skill as the predominant part of the performance (N=495).

4. Physical activity as a way of meeting people in social situations (N=433).

5. Physical activity as competition against part of the natural environment (N=325).

6. Physical activity as a way of expressing ideas and feelings in movement (N=309).

7. Physical activity as a way of pursuing risk, thrills and danger (N=153).

8. Physical activity as a way of involving the individual against "chance" or "luck" in an attempt to win an object or money (N=79).

9. Physical activity that matches skill in the use of a weapon against a target or quarry (N=75).

10. Physical activity as competition involving combat as the predominant part of the performance (N=62).

All the statements received some degree of support by at least 5 per cent of the respondents.

The lack of favour for activities involving combat and chance would be expected in this predominantly middle class group as there is some support for the acceptance of these types of activities as lower class games and sports.^{135,136}

The strong support given to activities enjoyed because of the fun they provide would indicate a great weakness in the classificatory schemes of Caillois and McIntosh, which did not include this concept. The factor of catharsis in the Kenyon model would appear to closely approximate this area of motivational interest.

While it is admitted that the words "fun" and "pure enjoyment" may be defined in many ways, and may have been identified in a number of ways by the respondents, the common thread of a break with the serious, the boring, or the

¹³⁵Gregory P. Stone, "Some Meanings of American sport," in College Physical Education Association 60th Annual Proceedings, ed. by C.P.E.A. (Washington, D.C.: C.P.E.A. 1957), p. 19.

¹³⁶John W. Loy, "Game forms, social structure, and anomie," in New Perspectives of Man in Action, ed. by Roscoe C. Brown Jr. and Bryant J. Cratty (Englewood Cliffs, N.J.: Prentice-Hall Inc., 1969), pp. 188-189.

occupational concerns, must have been considered by the respondents in answering this question.

Participation in physical activity in order to maintain and improve the health and fitness of the body has been stressed for many years following the concern given to the subject by President Eisenhower and President Kennedy, and it was not considered surprising that the respondents gave considerable support to this reason for participation.

The desire for involvement in activities providing for competition on the basis of skill was third in the order of first-preferences, and was also third in order of total endorsement. It was believed that individuals in this particular age group would still be experimenting with the body's capacity to perform particular skills, and evaluating such performance in competition against others so as to build up a conception of the body image and an idea of the capacity for fulfillment of the self through physical activity. The perceived or competitively determined limits to an individual's capacity at specific or generalized athletic skills provide an important determinant for physical activity selection patterns throughout life. At this age level, it was believed that such experimentation was still in progress, and that the desire for competition on this basis would still be quite strong. The support given to this motivational statement provided some justification for these contentions.

The motivation for participation in order to meet new

friends and to enjoy social experiences was ignored in the formulations of Caillois and McIntosh, but was found to be a significant factor by Kenyon. In the present study, the degree of support given to the social experience motive may be due to the great emphasis given to the intra-mural program at Michigan State University and to the provision of many opportunities for diverse recreational activities. Such support may also be due to the emphasis on social contact and breaking down the impersonality inherent at large universities, and to the particular stage of social development attained by members of this age group.

The low level of emphasis given to competition against the natural environment was surprising. It was expected that as Michigan is publicized as a State with excellent opportunities for outdoor recreation, there would be more support given to this motivation for participation. It is possible, however, that such activities as skiing, sailing, skating, water skiing and canoeing are perceived as providing opportunities for social interaction, skilful competition, or for fun and excitement, rather than as competition against the natural environment. Nevertheless, this particular motivation was ranked sixth in first preference support, and fifth in order of total endorsements received.

Social Factors Related to the Motivations for Participation in Physical Activities

Various social factors were hypothesized to be associated with particular motivations for such participation, but only the factor of the sex of the respondent provided for consistent differences in the rankings.

In all analyses, it was hoped to include the five levels of positive endorsement of the various motivational statements, as well as the level of non-response (that is, rejection of the statement as one of the five most important to the individual). In some cases, however, the distribution of the responses led to the necessity of collapsing the categories of positive endorsement completely, or into dichotomies in order to fulfil the assumptions of the chi square test.

1. Sex Differences. When the data were analyzed by sex, significant differences were determined between the responses of the men and women students on the motivational statements of: risk and danger, social interaction, skill with a weapon, fun and enjoyment, aesthetic expression, skillful competition, combative competition, and competition against the natural environment. The female students gave significantly higher rankings for participation for social interaction, fun, and aesthetic expression. The males gave greater support than the females for the pursuit of risk, the demonstration of skill with a weapon, competition on the basis of skill,

competition on the basis of combat, and competition against the natural environment. No differences were evident in the endorsements given to the motivations of participation for health and fitness, and for involvement against chance (Table 26).

Table 26. Summary table of sex differences in the rankings of motivations for participation in physical activities.*

Motivation	Unranked N	High Group	df	Chi Square	p
Risk	472	M	1	30.3263	.001
Social interaction	192	F	5	56.3848	.001
Skill with weapon	550	M	1	4.6740	.05
Health	56	M	5	5.5922	NS
Chance	546	M	1	1.3480	NS
Fun	23	F	5	31.5237	.001
Aesthetic	316	F	2	56.4999	.001
Competition in skill	130	M	5	35.6225	.001
Competition in combat	563	M	1	23.5902	.001
Competition against environment	300	M	2	14.4341	.001

*Complete chi square tables for each of these analyses are included in Appendix C.

Investigation of the relationship between sex and the motivation for participation in physical activities for the pursuit of risk, thrills, and personal danger provided results which were in the expected direction. Activities of this type are a component part of the societal conception of appropriate masculine behaviour, while they are not regarded as particularly important elements of the female identity.

It was believed that the preference for such activities would change upon the marriage of male students as the pressures of the need for security, and the responsibilities to wife and family mounted. In order to determine whether this occurred, sex was introduced as a control variable in the relationship between marital status and the motivation for risk taking. In separate analyses, no significant differences were found between the rankings made by the married and unmarried males ($\chi^2 = 0.1845$, $df = 1$, not significant at $p .05$), or between those of the married and unmarried females ($\chi^2 = 0.5581$, $df = 1$, not significant at $p .05$).

In an attempt to determine whether differences existed in the preferences for activities allowing the expression of this motivation among members of social class groups, sex was introduced as a control variable in the relationship between socio-economic status and the preference for risk-taking. No differences, however, were determined in the endorsement patterns of males from white-, or blue-collar backgrounds

(chi square = 0.0106, df = 1, not significant at p .05), or in those of female respondents from such socio-economic backgrounds (chi square = 1.0972, df = 1, not significant at p .05).

The significantly higher approval of the social interaction motivation among the female respondents was unexpected. It had been hypothesized that the social needs of both sexes of this particular age group would be high, and that both groups would provide high and equivalent degrees of endorsement for this item. The differences in the rankings appeared in the greater endorsement by the women in the three upper levels of approval, and the greater degree of rejection of the item by the males. No differences were evident in the rankings of the married and unmarried males (chi square = 0.5055, df = 1, not significant at p .05), or among those of the females of differing marital status (chi square = 0.0233, df = 1, not significant at p .05). Similarly, controlling for sex in the relationship between socio-economic background and the social interaction motivation indicated that the rankings of the males, and of the females, from differing social class backgrounds, did not differ significantly.

It was not determined by this study whether the higher support provided by the women for the social interaction motive was due to the belief that there was a better opportunity to meet men in a sporting environment, or because women prefer to play sport together on an informal

basis. Regardless of this difficulty, there is an ethic in the North American culture that women should not be particularly competitive in sports and games, and this stereotype, anti-feminist as it may be, was borne out by the responses of the women to this survey.

The motivation for participation in physical activities involving the demonstration of skill with a weapon was poorly supported by the respondents and there was considerably greater rejection by the females. Only 9.09 per cent of the women provided positive support at any preference level. In view of the predominantly middle class backgrounds of the male respondents, the low degree of their acceptance of this item was surprising especially as Stone had identified hunting, an activity that would surely be included under this category in the minds of most students, as a middle class sport.¹³⁷ The significant difference between the male and female rankings was expected, however, even though there are several sports, traditionally associated with female participation, which would appear to satisfy this motivation for participation in physical activities.

No differences were evident in the rankings when sex was introduced as a control variable in the relationship between marital status and the motivation for participation in order to demonstrate skill with a weapon. The degree of

¹³⁷Gregory P. Stone, "Some meanings of American sport", p. 19.

association was extremely low in relation to the responses of the married and unmarried males (chi square = 0.0249, $df = 1$, not significant at $p .05$), and among the similarly classified females (chi square = 0.8327, $df = 1$, not significant at $p .05$).

Similarly, controlling for sex in the relationship between socio-economic background and this motivational statement indicated that there were no significant differences in the responses of the males (chi square = 0.0605, $df = 1$, not significant at $p .05$), or among those of the females from varying social class backgrounds (chi square = 0.4193, $df = 1$, not significant at $p .05$).

Considerable support was provided by the respondents for the motivation for participation in physical activities in order to improve the health and fitness of the body. It was second over-all in terms of the number of first-rank endorsements received, and also in terms of the total number of positive endorsements provided. The differences between the male and female rankings were not significant with both groups giving similar levels of support in the top three ranks. Very few men and women rejected this statement as an important motivator for their participation in physical activities.

There was no strong likelihood for responses to differ among the single and married students. The rankings provided by the males did not differ when sex was controlled in the

relationship between marital status and the health motivation (chi square = 0.0008, df = 1, not significant at p .05), and a similar result was evident in the responses of the married and unmarried women in the respondent group (chi square = 0.0217, df = 1, not significant at p .05).

No differences were evident in the ranking patterns when socio-economic status, with sex introduced as a control variable, was related to the motivation for participation to achieve health and fitness. Blue- and white-collar background effects did not lead to variations in the degree of endorsement provided by the men (chi square = 0.1524, df = 1, not significant at p .05), or by the women (chi square = 0.2743, df = 1, not significant at p .05).

It was apparent from these results that there was a consistently high level of support for this reason for involvement that was stable regardless of the influence of the social variables of sex, marital status, and parental occupational status.

Participation in physical activities to involve the individual against chance or luck in order to attempt to win an object or money is generally believed to be associated with membership in the lower socio-economic levels of society.^{138, 139}

¹³⁸John W. Loy, "Game forms, social structure and anomie," pp. 189-196.

¹³⁹Roger Caillois, "Unity of play: Diversity of games," Diogenes, vol. 19 (1957), 92-121, 113.

Certainly, the popularity of the numbers game, and similar games of chance, among the residents of the inner city would appear to provide ample testimony of the propensity for activities which provide an opportunity for sudden wealth.

In view of these considerations, it was not surprising that there was a rejection of this item by more than 87 per cent of the predominantly middle- and upper-middle-class respondents.

No significant differences were evident in the rankings provided by the male and female respondents. Similarly, there were no differences among the married and unmarried males (chi square = 0.0040, df = 1, not significant at p .05), or among the females of differing marital status (chi square = 0.0899, df = 1, not significant at p .05), in their level of endorsement for the motivation of participation as an exercise against chance.

Of particular interest, however, was the analysis of the relationship between parental occupational status and the gambling motivation when sex was used as a control variable. If the propensity for gambling was predominantly a lower social class activity, then significant differences would be expected, especially between the rankings provided by the blue- and white-collar males. This was not the case among the respondents in this study. No differences were evident between the levels of endorsement of the males from these socio-economic levels (chi square = 0.0761, df = 1, not

significant at $p .05$); nor were there any differences between the rankings provided by the women from white- and blue-collar backgrounds (chi square = 1.0916, $df = 1$, not significant at $p .05$). This result may have been due to the fact that children from blue-collar families who aspire to high levels of educational achievement in school and for university entrance, would be expected to be socialized into the acceptance of white-collar values and motivational patterns. The respondents from blue-collar backgrounds in the present study, then, could have lost touch with values appropriate to their social backgrounds, and responded in keeping with the values developed through differential associations and anticipatory socialization in school.¹⁴⁰

In the investigation of this motivation among members of a more diverse population, the addition of definitions to adequately describe the context of the statement and specify the type of gambling and resort to chance to be studied, would appear to be necessary. The low support, and the minimal difficulty expressed concerning this statement in pre-testing, indicated that such specification was not necessary with this respondent group.

The motivation for participation in physical activities for fun and for pure enjoyment received considerable

¹⁴⁰Richard L. Simpson, "Parental influence, anticipatory socialization, and social mobility," American Sociological Review, vol. 27 (1962), 517-522.

support by the respondents with 329 first-preferences and 602 positive endorsements. Although it was hypothesized that men and women would be similarly attracted to activities allowing the expression of this motivation, significant differences were evident in the levels of endorsement, with the women providing greater support. Indeed, over 61 per cent of the women gave this item their first preferences and less than 2 per cent rejected the item completely.

When marital status was considered, with sex controlled, no significant differences were evident in the endorsement patterns of the single and married males (chi square = 0.0005, $df = 1$, not significant at $p .05$), or of those of the females of differing marital status (chi square = 0.4066, $df = 1$, not significant at $p .05$).

When sex was introduced as a control variable in the relationship between socio-economic background and the fun motivation, minimal levels of association were determined in the rankings of the white- and blue-collar males (chi square = 0.9726, $df = 1$, not significant at $p .05$), and females (chi square = 0.7112, $df = 1$, not significant at $p .05$).

The high level of endorsement which was given to this item provided support for the belief that both sexes were strongly committed to the intrinsic satisfactions to be derived from participation in physical activities. The differences between the rankings of the men and women, however,

indicated a much stronger commitment to such satisfactions among the women.

The significant difference in the rankings of the men and women for the motivation for participation in physical activities as a way of expressing ideas and feelings in movement was expected. There is a cultural stereotype which defines dancing and other activities which enable the individual to express ideas and feelings in movement as being more appropriate for women than for men. There is a belief that males who participate in such activities are somewhat effeminate, and although this attitude is restrictive of male attempts at self-actualization through movement, the attitude has considerable strength.

The males were far more likely to completely reject this item (65.69 per cent against 36.05 per cent rejection rate by the women) and gave very little support to this motivation as one of the first three preferences. The surprising feature, however, was that there was strong rejection by the women of an item which seemed closely related to the stereotype of female participation patterns.

The introduction of marital status as an independent variable in relation to the aesthetic motivation, with sex as a control variable, indicated a higher level of rejection among the married males, but the differences were not significant (chi square = 3.2549, df = 1, not significant at p .05). The ranking patterns were virtually equivalent among

the single and married women (chi square = 0.5188, df = 1, not significant at p .05).

No differences were determined in the rankings provided by males from white- and blue-collar backgrounds (chi square = 0.7169, df = 1, not significant at p .05), but significant differences were determined in the levels of endorsement provided by the women from different social class backgrounds (Table 27).

Table 27. Socio-economic background among females, and the motivation for participation in physical activity as a way of expressing ideas and feelings in movement (N=312).

Parental occupational background	Did not rank item	Ranked item	TOTAL
White collar (N=212)	32.55	67.45	100
Blue collar (N=100)	45.00	55.00	100

$$\chi^2 = 4.0230, p \text{ less than } .05.$$

The lower rejection rate, and the concomitantly higher level of positive endorsement among the women from white-collar backgrounds, indicates that the aesthetic motivation for expression in movement is a predominantly middle class feature, mainly associated with women. The strength of the stereotype mediating against masculine participation appears to remain at a high level but the rejection by women from blue-collar backgrounds would appear to result from a reduced

level of disposable income in the family at the time of the respondent's childhood, rather than from the existence of a negative stereotype.

It was hypothesized that there would be significant differences between the rankings of the male and female respondents on the motivation for participation in physical activities for competition in which skill was the predominant element. The males were expected to be less likely to reject the item, and more likely to provide higher levels of support in the upper three rank levels, and this belief was confirmed in the data. The sex role identification favours masculine involvement in competitive activities and regards highly competitive behaviour among women as being somewhat contrary to sex appropriate standards. Indeed, highly competitive behaviour among women is identified with a lack of femininity and the development of masculine traits. Even though this conception constitutes a restrictive stereotype that limits female capacities for enjoyment in such activities that are obviously suitable in other respects, the attitude is strong. To a large extent the negative male response toward female competitiveness leads to a degree of self limitation among women. This was evidenced in the data by a greater tendency for women to reject the item, and to provide particularly low support for the upper two rank levels.

It was not expected that marital status would have

any influence upon the rankings among the men or the women, and this was borne out in the data. There were no differences among the rankings of the single and married males (chi square = 2.3508, $df = 1$, not significant at $p .05$), or among the females of differing marital status (chi square = 0.1339, $df = 1$, not significant at $p .05$).

When socio-economic background, with sex controlled, was related to the skilful competition motivation no differences were evident in the rankings of the men (chi square = 2.1504, $df = 1$, not significant at $p .05$) or the women (chi square = 0.0026, $df = 1$, not significant at $p .05$).

The motivation for participation in physical activities in order to enjoy competition in which combat was the predominant element was hypothesized to be a predominantly masculine stimulus for involvement. The item did provide a significant separation between the responses of the men and women with a greater degree of support provided by the males. Very little support, however, was provided for the item by the men as well as the women in the respondent group. It was rejected completely from the ranking systems of all but 62 of the respondents.

The fact that some of the women endorsed the item is interesting in itself as it was expected that there would be total rejection, but it was not possible to determine which activities they had in mind when they included this statement in their selections.

An interesting feature in the data was the fact that

married men provided significantly greater support for this item than single men. The substantive significance of this result is not clear and may have been due to a random fluctuation in the data but, nevertheless, the relationship was present (chi square = 3.912, df = 1, p less than .05).

Between the responses of the single and married women, however, no significant differences were evident (chi square = 0.0614, df = 1, not significant at p .05).

Despite the fact that sports and games which would normally satisfy the combative competition motive are generally believed to be identified with the working- and lower-classes,¹⁴¹ no significant differences occurred in the likelihood of males from white- and blue-collar backgrounds to endorse this item (chi square = 0.1178, df = 1, not significant at p .05). Similarly, there were no differences in the rankings provided by the women from such socio-economic backgrounds (chi square = 2.0066, df = 1, not significant at p .05).

Although it was hypothesized that men would provide consistent and significantly higher rankings from the items stressing competition, some blurring of the differences was expected in relation to competition against the natural environment. In this case, competition is not so much against other people, but a conquest of an inanimate part of the

¹⁴¹Gregory P. Stone, "Some meanings of American sport", p. 19.

environmental setting and of oneself. Activities which could satisfy such motivations would likely include skiing, water skiing, swimming and sailing; all of which receive considerable support from women. When the data were tabulated, however, significant differences were evident, with the men providing the greatest support.

This unexpected finding may indicate that "competition", whatever its context, is a key word which elicits particular responses from men and women. It may also be a manifestation of the anti-competition stereotype that appears to affect women in their activity preferences and behaviour.

Among the single and married men, no significant differences were present in the ranking systems (chi square = 0.1557, df = 1, not significant at p .05), but when the rankings of the women were analyzed with marital status taken into consideration, it was found that the married women were much more likely to provide positive endorsement for the item (Table 28).

Table 28. Marital status among females, and the motivation for participation in physical activity for competition against the natural environment (N=317).

Status	Did not rank item	Ranked item	TOTAL
Single (N=300)	51.33	48.67	100
Married (N= 17)	17.65	82.35	100

$$x^2 = 6.0178, p \text{ less than } .02.$$

The relationship would merit further study, as, at this time, it was not possible to determine whether the result was due to the existence of a selection factor among the small number of married women in the respondent group, to a random fluctuation in the data, or due to a definite change in the value and motivational systems with regard to physical activity participation following marriage.

When socio-economic background, with sex as a control variable, was related to the motivation for competition against the environment, no differences were determined in the rankings of either the males (chi square = 0.0, df = 1, not significant at p .05), or among the females from varying social backgrounds (chi square = 1.2130, df = 1, not significant at p .05).

Webb indicated that socialization patterns in the United States dictate that the male must develop a level of submission to evaluation through the use of achievement criteria in his passage through school, and that these emphases tend to be applied in the play situation. For females, less submission to achievement criteria is expected and their major evaluations in adult life, which to a large extent involve selection of a husband, are made on the basis of ascriptive criteria.¹⁴² Given these influences, it

¹⁴²Harry Webb, "Professionalization of attitudes toward play among adolescents," in Aspects of Contemporary Sport Sociology, ed. by Gerald S. Kenyon (Chicago: The Athletic Institute, 1969), p. 168.

was not surprising that the major and most consistent results in this section of the study indicated that the male motivations for participation in physical activity during adolescence were those which provided for a ready evaluation of one's performance on an achievement basis. Where their responses differed significantly from those of the women, the males gave their support to the motivations which provided for extrinsic satisfactions in play which could be evaluated by achievement. The risk and danger motivation was an exception to this belief, but even here, the male respondents' endorsements were in keeping with the types of behaviour expected in the occupational sphere of the adult male role.

The women tended to provide their greatest levels of support for activity motivations expressive of the intrinsic satisfactions to be derived from performance of the activities themselves. In the milieu of games and sports, achievement and ascriptive criteria did not appear to influence their selection of particular motivations for participation: the factors intrinsic to the activities, the social relationships, the aesthetic components, and the fun to be derived during play were sufficiently powerful to differentiate their rankings of such elements from those of the men.

In both the male and female groups, it appeared that attitudes of most value to the fulfillment of the predominant adult roles were expressed in their selection of motiva-

tions for participation in physical activities. It was not possible in the present study to determine whether elements in the play-game situation socialize the individual into acceptance of these characteristics, or whether a generalized expectation of appropriate adult behaviour becomes reflected in that milieu and receives reinforcement from it.

2. Marital Status Differences. When the data were analyzed by the marital status of the respondents, only one significant difference was revealed in the rankings made by the single and married students for particular motivations for participation in physical activities. In this case, unmarried students gave much greater support for the aesthetic motivation than was provided by the married students (Table 29).

Table 29. Marital status and the motivation for participation in physical activity as a way of expressing ideas and feelings in movement (N=622).

Status	Did not rank item	Ranked item		TOTAL
		1,2,3,	4,5	
Single (N=580)	49.14	22.59	28.28	100
Married (N= 42)	69.05	21.43	9.52	100

$$\chi^2 = 8.1973, p \text{ less than } .02.$$

The lower level of support provided by the married

students was believed to have been due to a lower capacity for involvement in such activities among the married women. As was shown in connection with the data analyzed by sex, women were much more likely to endorse this item than men. Therefore, any diminishment in the endorsement levels upon marriage would probably be located among the endorsements of the women.

It was previously recorded, however, that no significant differences were evident in the rankings made by the single and married women for the aesthetic motivation (chi square = 0.5188, $df = 1$, not significant at $p .05$). When marital status was used as a control variable in the relationship between sex and the rankings for the aesthetic motivation, there was a greater separation between the rankings of the single men and women (chi square = 46.2463, $df = 1$, p less than .001), than there was between those of the married men and women (chi square = 4.8484, $df = 1$, p less than .05). This slight difference may have been sufficient to account for the significance of the relationship between marital status and the aesthetic motivation, but without the support of a significant level of separation between the endorsements of the single and married women, the reason for this difference remains unclear. It was considered possible, however, that dichotomization of the data which was made necessary by the low expected frequencies in an excessive number of cells may have masked some

of the differences in this case, and further study would appear to be justified.

In all other analyses of the relationships between marital status and particular motivations for participation in physical activities, low levels of association were found which were determined to be non significant at the criterion level of $p .05$.

3. Religious Differences. Greeley demonstrated that there has been a diminishing importance of the religious factor as a determinant for social behaviour among college students over the years since World War 2.¹⁴³ Nevertheless, in view of the early Puritan labelling of play, games, and sports as sinful, it was believed that some differences in the levels of support provided for various motivations for participation in physical activities may be evident among members of the Protestant and Roman Catholic faiths.

It was expected that such differences would occur with regard to the rankings given for participation in the more generalized forms of physical activities; physical activity participation for social reasons, for fun and enjoyment, and for the expression of ideas and feelings in movement. Such activities might be expected to be more strongly supported by members of the Roman Catholic religion

¹⁴³Andrew M. Greeley, "Influence of the 'religious factor' on college plans and occupational values of college graduates." American Journal of Sociology, vol. 68 (1963), 658-671.

as there is less of a linkage between these activities and ideologies inherent in the occupational milieu. The activities that appear to be closely linked with the occupational goals and achievement orientations associated with the Protestant Ethic would be those satisfying the motivations involving competition of all types. It was expected that these motivations would be strongly supported by members of the Protestant religions.

Despite the strong negative sanction for play and all of its forms by the early Puritans and members of the more fundamentalist Protestant faiths, play continued, even within these social groups. In such cases, it was believed that the people attempted to rationalize their involvement in play by calling upon the belief that it provided a recreational effect which enabled men to work harder and more efficiently. Another form of justification would be to link the ideological elements involved in the work ethic with the predominant characteristics of some games. Thus, such games would be expected to be excused with mild criticism by early religious leaders.

These hypotheses, conjectural as they were, provided the rationale for the investigation of the levels of support provided for various motivations for participation in physical activities as functions of religious belief.

Preliminary analysis of the data using a frequency count program, indicated that virtually all students stated

that they had been socialized in either the Protestant or Roman Catholic religious belief. Insufficient numbers of respondents indicated support of other religions for satisfactory analyses to be performed using the chi square test.

Despite the belief that religion would be a strong determinant of the motivations for participation in physical activities, in only one case; the motivation for participation in order to pursue risk, thrills and danger, was there a significant separation of the rankings (Table 30).

Table 30. Religion and the motivation for participation in physical activity as a way of pursuing personal risk, thrills, and danger (N=550).

Religion	Did not rank item	Ranked item	TOTAL
Protestant (N=384)	78.91	21.09	100
Catholic (N=166)	69.28	30.72	100

$$\chi^2 = 5.3754, p \text{ less than } .05.$$

The greater support provided by the Catholic respondents for a motivation which appeared to be related to a component of the work ethic (risk-taking) did not seem to be associated with any particular element of the belief structure of that religion.

In all other analyses testing the relationship between religion and the motivations for physical activity partici-

pation, minimal levels of association were present in the data. When religion was employed as a control variable in the relationship between the strength of religious conviction and each of the motivational statements, no significant differences were determined in any of the ranking systems.

The strength of religious convictions held by the respondents was expected to be a variable which would provide some control over the variability in the factor of religion, and be a suitable variable to be employed in the analysis of degree of support given to motivations for participation in physical activities. It was found that there was a significant difference in the rankings provided for the motivation for involvement on the basis of risk and danger. The lower the level of religious conviction, the higher was the support provided for the risk motivation (Table 31).

The reduced level of support provided as the respondents indicated higher levels of religious conviction may be partly explained in terms of the religious teachings stressing the responsibility of the individual to avoid placing himself in situations where his life may be in danger or where the courting of risk might be regarded as suicidal. The strong support given by individuals opposed to religion cannot be explained in terms of a rejection of such self-preservatory values and should be subject to further investigation.

Table 31. Strength of religious conviction and the motivation for participation in physical activity as a way of pursuing personal risk, thrills, and danger (N=618).

Strength of conviction	Did not rank item	Ranked item	TOTAL
Deeply religious (N=50)	82.00	18.00	100
Moderately religious (N=360)	76.94	23.06	100
Indifferent to religion (N=173)	75.72	24.28	100
Opposed to religion (N=35)	48.57	51.43	100

$$\chi^2 = 15.2305, p \text{ less than } .01.$$

A significant difference was determined in the association between the strength of religious conviction and the motivation for competition against the natural environment. This relationship was not clear cut, however, and it was assumed that the difference was due to a random fluctuation in the data (chi square = 12.7266, df = 6, p less than .05).

When religious conviction was employed as a control variable in the relationship between religion and each of the motivations for participation in physical activities, it was found that only with the gambling motive was a significant difference present in the rankings. Here it was found that respondents of the Roman Catholic religion who

Had strong religious convictions provided significantly greater support for the item (Table 32).

Table 32. Religion and strong religious convictions, and the motivation for participation in physical activity as a way of involving the individual against chance or luck in an effort to win an object or money (N=378).

Religion	Did not rank item	Ranked item	TOTAL
Protestant (N=263)	91.25	8.75	100
Catholic (N=115)	82.61	17.39	100

$$\chi^2 = 5.1063, p \text{ less than } .05.$$

In this analysis, respondents who expressed support for the deep and moderate levels of conviction were grouped together as strongly religious individuals. The higher level of support provided by the Roman Catholic respondents of such conviction levels may be explained in terms of the higher level of tolerance for gambling and games of chance that exists among the priests and members of that religious group. Among the Protestant religions, however, gambling has continued to be regarded as sinful, or at least, negatively valued behaviour. Accordingly, it would be expected that these generalized belief structures would be applied to the physical activity milieu.

Because of the fact that a large number of Roman Catholic students attend separate religious schools, while the great majority of Protestants attend public schools, it was hypothesized that respondents who attended parochial high schools would respond differently to the motivational statements than would those from public high schools. This social variable, however, did not discriminate between any of the ranking systems for the various motivations for participation in physical activities.

4. Other Social Factors Contributing to Differences in Rankings

The social variables of number of brothers, number of sisters, number of older siblings, gross family income, father's occupational status, father's educational level, and home town size were introduced as independent variables in relation to each motivational statement. Each was believed to provide some basis for the provision of support to particular items, but there were no consistent tendencies for any of these factors to provide for significant separations of the rankings.

(a) Factors related to the size and composition of the family

It was hypothesized that the larger the number of brothers in the family, the greater would be the preference for the rougher and competitive activities, with this expectation holding regardless of sex. It was also hypothe-

sized that the larger the number of sisters in the family, the greater would be the support provided for the motivations for participation providing for intrinsic satisfactions such as fun and enjoyment, aesthetic expression, and social interaction.

Neither the number of sisters in the family, nor the total number of older siblings in the family had any significant influence upon the ranking systems of any of the ten motivational statements.

The number of brothers in the family was found to be a variable which had an influence upon particular motivations. In the case of the motivation for participation in risky and dangerous activities, respondents from families which included three or more brothers provided significantly greater support (Table 33).

Table 33. Number of brothers and the motivation for participation in physical activity as a way of pursuing personal risk, thrills and danger (N=621).

Number of brothers	Did not rank item	Ranked item	TOTAL
None (N=182)	78.02	21.98	100
One or two (N=368)	76.63	23.37	100
Three or more (N=71)	63.38	36.62	100

$$\chi^2 = 6.5221, p \text{ less than } p .05.$$

This result would appear to have face validity, in view of the fact that the larger number of boys in the family would provide the leadership and group pressure to encourage all members to respond to challenges and dares. This would lead to an increased awareness and appreciation of the excitement that is involved in such risk-taking behaviour, and probably foster its continuance through adolescence.

Those respondents who came from families where there were no brothers provided significantly higher support for participation for fun and enjoyment. There did not appear to be any substantive significance in this result, especially as the bi-modal distribution of the data indicated a lack of clarity in the relationship (chi square = 18.7565, df = 10, p less than .05).

(b) Factors related to parental socio-economic level

The variables of gross family income, parental occupational status, and the education level attained by the father (or head of the household) were regarded as independent variables which would lead to the differential ranking of the various motivations for participation in physical activities.

When gross family income was related to each of the motivational statements in turn, it was found that no significant differences were evident in any of the rankings provided by the income groups dichotomized at the \$8,999 level.

Similarly, no significant differences were located in the rankings for the various motivational statements provided by respondents from white- and blue-collar occupational backgrounds. There was, as discussed previously, a significantly higher level of support provided for the aesthetic motivation when sex was introduced as a control variable in the relationship between socio-economic background and that statement. The women from white-collar backgrounds gave significantly greater support than that provided by the women from blue-collar backgrounds (chi square = 4.0230, df = 1, p less than .05).

Father's educational attainment was employed as an independent social variable, and it was found that in only one motivational statement, the demonstration of skill with a weapon, was there a significant differentiation between groups. In this case, the lower the education level attained by the father, the greater was the level of approval provided for the item (Table 34).

Admittedly, this item received only a marginal level of over-all support (74 positive endorsements) but the relationship was clear and linear. This finding provided a minor level of confirmation for the hypothesis that such activities are more suited to the needs of members of the lower socio-economic groups. But, in the absence of support for this statement by respondents from blue-collar backgrounds and lower income level families, such a hypo-

thesis would require further investigation before it could be accepted or rejected.

Table 34. Father's educational status and the motivation for participation in physical activity that matches skill with weapon against a target or quarry (N=612).

Educational level	Did not rank item	Ranked item	TOTAL
Graduate school or college degree (N=187)	93.58	6.42	100
Attended college or high school (N=363)	85.95	14.05	100
Grade 9 or less (N=62)	82.26	17.74	100

$$\chi^2 = 8.8362, p \text{ less than } .02.$$

(c) The influence of residence upon the motivations for participation in physical activity.

It was hypothesized that respondents from the smaller towns would provide greater levels of support for statements indicative of the motivations concerned with the use of a weapon, social interaction, and competition against the natural environment. Residents of the larger urban centers were expected to regard competitive combat, chance, health and fitness, and fun as significant motivators for their active participation.

Only one of these hypotheses was found to be justified following analysis of the data. In the case of the motivation for participation in physical activity as a way of involving the individual against chance or luck in order to win an object or money, it was found that the greater the size of the respondent's home town, the greater was the level of support provided (Table 35).

Table 35. Home town size and the motivation for participation in physical activity as a way of involving the individual against chance or luck in an effort to win an object or money (N=611).

Home town size	Did not rank item	Ranked item	TOTAL
Up to 25,000 residents (N=253)	90.91	9.09	100
25,001 to 500,000 residents (N=278)	87.41	12.59	100
Over 500,000 residents (N=80)	77.50	22.50	100

$$\chi^2 = 10.0448, p \text{ less than } .01.$$

Despite the low level of positive support provided for this item (76 endorsements), the result appeared to have face validity. Gambling, both at the participant and spectator level, has always appeared to have greater support in the

larger urban areas than in the smaller cities, towns and villages. There is more opportunity for regular gambling and this greater community tolerance for games of chance would be expected to carry over into physical activities where the individual would match his skill in some form of game against an opponent with a wager on the result.

Reviewing all of these results, it was apparent that the social variable providing for the greater degree of separation between groups in their motivations for participation in various types of physical activities was that of sex. In virtually every case, the differences between the levels of support provided for the statements by the male and female respondents were significant at high probability levels. It was noted also, that the males tended to provide their support for the motivations expressive of the extrinsic satisfactions connected to values inherent in the occupational ideology, while the females gave significantly greater support for motivations expressive of the intrinsic satisfactions to be secured in participation in physical activities.

Utilization of the other social variables in relation to the rankings provided for the motivational statements revealed few significant differences between groups of respondents.

CHAPTER VI

MOTIVATIONS FOR SPECTATOR INVOLVEMENT WITH PHYSICAL ACTIVITIES

The ten statements given as choices to account for spectator involvement with physical activities were similar to those provided as motivations for participation, except that they were written to be consistent with the topic (i.e. "Watching people involved in dangerous, thrilling, and risky activities"). The statements referring to spectator involvement were placed in the same order as that of the participation statements.

As before, the respondent was asked to choose the five statements which provided the reasons for spectator involvement which were most important to him. These five were then ranked in decreasing order of personal importance. The remaining five statements were regarded as unranked motivations, but were included in all analyses.

The amount of support given to each of the motivational statements referring to spectator involvement is illustrated in Table 36.

The method of assigning a rank order of importance to these data was the same as that employed with the participation motivations. Omitting those statements which received

Table 36. Motivations for spectator involvement in physical activities (N=625).

Motivation	Number giving positive rankings	Proportion responding in each rank					TOTAL
		1	2	3	4	5	
Risk, etc.	368	10.1	21.5	24.2	26.4	17.9	100
Social	195	7.2	8.7	24.1	28.7	31.3	100
Weapon	118	4.2	7.6	16.1	34.7	37.3	100
Health	187	7.0	8.6	16.6	25.7	42.2	100
Chance	188	3.7	10.6	18.6	22.9	44.1	100
Excitement	580	41.9	25.9	14.1	12.1	6.0	100
Ideas & feelings	292	11.6	23.6	19.2	24.7	20.9	100
Competition in skill	586	38.7	29.2	18.9	8.4	4.8	100
Competition in combat	178	9.6	19.1	25.8	17.4	28.1	100
Competition against environment	385	5.2	13.5	26.0	28.3	27.0	100

the first-rank support of less than 5 per cent of the respondents (N=31), the following hierarchy was determined;

1. Watching physical activities that give you a feeling of excitement; 243 first-preferences.

2. Watching competition involving skill as the predominant part of the performance; 227 first-preferences.

3. Watching people involved in dangerous, thrilling, and risky activities; 37 first-preferences.

4. Watching the expression of ideas and feelings in physical movement; 34 first-preferences.

No other statements received the first-rank support of more than 5 per cent of the respondents.

When the statements were ranked in order of the greatest to the least number of endorsements, regardless of rank, the following order was apparent;

1. Watching competition involving skill as the predominant part of the performance (586 endorsements).

2. Watching physical activities that give you a feeling of excitement (N=580).

3. Watching people in competition against part of the natural environment (N=385).

4. Watching people involved in dangerous, thrilling, and risky activities (N=368).

5. Watching the expression of ideas and feelings in physical movement (N=292).

6. Watching people involved in physical activities which are enjoyed for purely social reasons (N=195).

7. Watching people involved against "chance" or "luck" in an attempt to win an object or money (N=188).

8. Watching people involved in activities that improve the health and fitness of the body (N=187).

9. Watching competition involving combat as the predominant part of the performance (N=178).

10. Watching a person match his skill in the use of a weapon against a target or quarry (N=118).

All the statements received some degree of support by at least 5 per cent of the respondents.

In comparing the rank orders determined from data concerning the motivations for participant and spectator involvement with physical activities, some variability was evident. This variability is illustrated in Table 37, showing the differences in first-preference support, and Table 38, showing the differences in the rankings of the motivations for participation and spectator involvement.

Table 37. Differences in first-preference rankings of the motivations for participant and spectator involvement in physical activities.

Motivation	Ranking for participation	N	Ranking for spectator involvement	N
Fun and excitement	1	329	1	243
Health and fitness	2	117	*	13
Competition on skill	3	70	2	227
Social	4	41	*	14
Risk and danger	*	10	3	37
Ideas and feelings	*	24	4	34

* First - preference endorsement by less than 5 per cent of the respondents.

Table 38. Comparison of rankings of total endorsement support for the motivations for participant and spectator involvement in physical activities (N=625).

Motivation	Ranking for participation	Ranking for spectator involvement
Risk and danger	7	4
Social	4	6
Weapon	9	10
Health and fitness	2	8
Chance and luck	8	7
Fun and excitement	1	2
Ideas and feelings	6	5
Competition on skill	3	1
Competition on combat	10	9
Competition against environment	5	3

The shift in the response patterns concerning the motivations for involvement in physical activities, indicated that there was a greater desire to view activities presenting dangerous situations and competitive activities where skill and the natural environment were the predominant elements, than there was to actually participate in such activities. Of particular interest was the change in the rankings for the risk and danger motivation. As a participation motive, this factor received little first-preference or total endorsement support. As a spectator motive, however,

this factor was ranked third in first-preference support and fourth in terms of the total number of endorsements received regardless of rank.

The different patterns of ranking of the motivational statements for spectator and participant involvement indicated that this particular form of survey instrument, subject to pretesting with different samples, had utility for further investigation of this problem.

Social Factors Related to the Motivations for Spectator Involvement with Physical Activities

Very few significant differences were found to exist between the ranking systems of particular social groups for the various motivations for spectator involvement with physical activities. As was indicated in the data on participation, sex was the only variable which provided consistent differences in the rankings.

In all the analyses, the levels of support provided for the various statements, as well as the level of non-response (rejection of the item as not personally important) were included, although in some cases it was necessary to collapse the positive levels completely, or into dichotomies in order to fulfil the assumptions of the chi square test.

1. Sex Differences. Analysis of the data by sex revealed that there were significant differences in the responses of the male and female students on the spectator motivation statements of risk and danger, social interaction, health

and fitness, aesthetic expression, and competition on the basis of combat. The female respondents gave significantly higher levels of endorsement for spectator involvement at events based on social interaction, health and fitness, and aesthetic expression. The males gave greater support than the females for the motivations of risk and danger and competition on the basis of combat as determinants of their spectator involvement. No differences were determined in the levels of endorsement provided for the spectator motivations of skilful weaponry, chance and luck, fun and enjoyment, competition on the basis of skill, and competition against the natural environment (Table 39).

Analysis of the relationship between sex and the spectator motivation of risk and danger indicated results in the hypothesized direction. Men are expected to be the risk takers in North American society as well as being the ones who are supposed to enjoy danger, and, accordingly, they would also be expected to be interested in similar activities as spectators. The differences in the rankings were, as indicated, significant, but the degree of support given to this motivation by the female respondents was also seen to be high. This support could be interpreted as female interest in the exercise of masculinity in a sporting situation.

No significant differences were observed when sex was used as a control variable in the relationship between

Table 39. Summary table of sex differences in the rankings of motivations for spectator involvement with physical activities.*

Motivation	Unranked N	High group	df	Chi Square	p
Risk	257	M	2	42.1850	.001
Social interaction	430	F	1	11.8978	.001
Skill with weapon	507	M	1	2.4962	NS
Health	438	F	1	19.1694	.001
Chance	437	M	1	1.6920	NS
Excitement	45	F	5	3.0223	NS
Aesthetic	333	F	2	55.8660	.001
Competition in skill	39	M	5	5.0181	NS
Competition in combat	447	M	1	92.8579	.001
Competition against environment	240	F	5	5.6342	NS

*Complete chi square tables for each of these analyses are included in Appendix C.

marital status and the risk motivation. Nor were there any differences in the rankings made by males, and females, from white- and blue-collar backgrounds.

The motivation to watch people involved in physical activities which are enjoyed for purely social reasons was given strong support by the women, but rejected by over 75

per cent of the men. The activities which would satisfy such desires for spectator involvement would presumably be those which the female respondents had in mind when they endorsed this motive with respect to participation. If the participation is enjoyed for social reasons, then watching while waiting one's turn to play would satisfy the similar spectator motive. This would be true whether the activity was tennis, bowling, or recreational swimming.

No differences were determined in the rankings of the single and married women on this motivational statement, nor were there any differences in the rankings made by the males of differing marital status.

The introduction of sex as a control variable in the relationship between social class background and the social motivation did not provide for any statistically significant separations of the rankings.

The desire to watch activities involving the demonstration of skill with a weapon was expected to be more strongly supported by the males. Most marksmanship activities have male and female participants, but the sports are more strongly supported at the participant and spectator levels by males. When the data were analyzed, however, no significant differences were determined in the rankings. Indeed, the item was poorly supported by both males and females; both groups had a rejection rate of this item which was greater than 78 per cent.

Controlling for sex in testing the relationship between marital status and the skill with a weapon motivation; and socio-economic background and the same motivation, did not provide for any significant separations of the rankings between groups.

The female respondents gave significantly higher levels of support for the desire to watch people engaged in physical activities as ways to improve the health and fitness of the body. This does not necessarily imply that the women were considering masculine body development activities when they endorsed this item. It is probable instead, that this spectator motivation is related to the previous level of support provided for the social motivation for spectator and participant involvement. In this case, women would be expected to participate for the health (or figure stabilization) and social reasons, and enjoy the spectator involvement as they watch their friends play for the same reasons.

No significant differences were determined when sex was utilized as a control variable in the relationship between marital status and the health motive responses. However, it was found that male students from blue-collar backgrounds were more likely to provide high levels of endorsement for this item (Table 40).

In this instance, it would appear likely that the male respondents from blue-collar backgrounds would support body building and similar health and fitness activities as

Table 40. Socio-economic background among males, and the motivation to watch people involved in activities which improve the health and fitness of the body (N=300).

Parental occupational background	Did not rank item	Ranked item	TOTAL
White-collar (N=175)	83.43	16.57	100
Blue-collar (N=125)	72.00	28.00	100

$$\chi^2 = 5.0144, p \text{ less than } .05.$$

spectator sports. Their support for this motivational statement adds a measure of face validity to this contention. No differences were evident in the rankings made by women from white- and blue-collar backgrounds for this item.

When the rankings provided for the gambling motivation were analyzed, no significant differences were found between the levels of support provided by the men and women of the respondent group. The item was endorsed positively by only 188 respondents, and with these rankings collapsed into one support category, the proportions endorsing or rejecting the item were almost equivalent.

Marital status made no difference in the rankings when it was used as an independent variable with sex as a control variable in the relationship with the motivation for watching physical activities involving chance.

It was found, however, that the female respondents

from white-collar backgrounds gave significantly higher support for this motivation. There would appear to be little substantive connection between membership of the middle class, white-collar background group and endorsement of the gambling motive among females. The relationship was statistically significant, but may have been due to random fluctuations in the data (chi square = 4.7933, df = 1, p less than .05).

The excitement motivation for spectator involvement was strongly supported by the respondents, receiving the greatest number of first-preference endorsements, and being ranked second in terms of the total number of endorsements received. There were no differences in the rankings made by the men and women in the study, both groups providing strong support in the upper three rank levels.

It was found that the unmarried women gave particularly strong support for spectator involvement in order to enjoy a feeling of excitement (Table 41).

Table 41. Marital status among females, and the motivation for watching physical activities that give a feeling of excitement (N=317).

Marital status	Did not rank item	Ranked item	TOTAL
Single (N=300)	5.00	95.00	100
Married (N= 17)	23.53	76.47	100

$\chi^2 = 6.7907$, p less than .01.

The lower level of support among the married females for spectator attendance at exciting activities could be attributed to the operation of a selection factor among the small number of women in this respondent group. It was believed possible, however, that attendance at activities perceived by the respondents to belong in this classification, would constitute part of the dating behaviour of the college women at Michigan State University. Upon marriage attendance at such activities would not be so desirable. For this reason, further investigation of the relationship would appear to be warranted.

The introduction of sex as a control variable in the relationship between socio-economic background and the excitement motivation did not provide for any significant separations of the endorsement levels between groups.

The strong female support of the aesthetic motivation for participation in physical activities was also present in the rankings for the motivation for watching the expression of ideas and feelings in movement as a spectator. This level of support provided by the female respondents was significantly higher than that provided by the males.

It was evident that the male rejection of expressive movement was strong, whether the involvement was at the participant or the spectator level. The conception of the sex appropriate behaviour patterns for males apparently excludes a strong level of involvement with physical

activity performed for expressive appreciation.

With sex used as a control variable in the relationship between marital status and the aesthetic motivation, no statistically significant differences in the rankings were determined.

A similar result was found when sex was employed as a control variable in the relationship between socio-economic background and the aesthetic motivation.

Spectator involvement with physical activities where competition on the basis of skill was predominant, received considerable support from the respondents. The motivational statement received the greatest number of total endorsements, and was second in the ranking of items which received strong first-preference support. No differences were evident in the levels of endorsement provided by the men and women of the respondent group, nor were any significant differences determined when sex was used as a control variable with the independent variables of marital status and socio-economic background.

Competition where combat predominates was strongly supported by the male respondents, and no differences were found in the rankings of the married or unmarried men, or of the men from differing socio-economic backgrounds. The item was supported by almost half the male respondents, but was rejected by over 88 per cent of the women.

Combative competition gains considerable spectator

attention from members of the lower socio-economic groups of society and this support is not restricted to males. The finding that there were no differences in the rankings provided for this item by men, and women, from white- and blue-collar backgrounds may be indicative of the operation of anticipatory socialization upon students from lower socio-economic backgrounds who are college bound in high school and actually enter university.¹⁴⁴ These students would be expected to conform to the conceptions of appropriate behaviour of the middle class students so that by the time they enter college the expected support for spectator attendance at combative activities would diminish.

No differences were evident in the level of endorsement given to the spectator motive related to competition against the natural environment among male and female respondents. The item was strongly favoured by both groups. With sex employed as a control variable, the rankings remained equivalent among the male, and female, respondents regardless of marital status or socio-economic background.

2. Marital Status Differences. When the data were analyzed with marital status employed as an independent social variable in relation to the motivations for spectator involvement with physical activities, only one significant

¹⁴⁴Richard L. Simpson, "Parental influence, anticipatory socialization, and social mobility".

difference was determined in the levels of endorsement given to the items by the married and unmarried students.

Unmarried students were more likely to provide positive endorsement for watching physical activities that provide a feeling of excitement for the individual (Table 42).

Table 42. Marital status and the motivation for watching physical activities that provide a feeling of excitement (N=622)

Marital status	Did not rank item	Ranked item	TOTAL
Single (N=580)	6.38	93.62	100
Married (N= 42)	16.67	83.33	100

$$\chi^2 = 4.8373, p \text{ less than } .05.$$

The relationship between marital status and the excitement motive, with sex employed as a control variable, was discussed previously. It was found that no differences were evident in the levels of endorsement provided by the single and married males, but among the females, significant differences were apparent.

The significant relationship between marital status and the excitement motive would appear to be due to the response patterns provided by the unmarried women. It was believed to be possible that the higher levels of endorsement

of the item among these women could be related to dating behaviour. As Brookover indicated, attendance at many of the intercollegiate athletic events was popular among the women students at Michigan State University, but football was the only spectator sport where attendance was independent of the dating situation.¹⁴⁵ It is possible that domestic concerns, and the elimination of the dating factor lead to a diminished support for spectator attendance at exciting events by married women.

3. Religious Differences. There were no differences attributable to religious ideology in the levels of endorsement for the various items expressing motivations for spectator involvement with physical activities. Similarly, when the strength of religious conviction was employed as a control variable in the various relationships between religion and each of the items, and when religion was used as a control variable between religious conviction and each statement, no significant differences were determined.

When the strength of religious conviction was employed as an independent variable with each of the motivational statements, only one set of endorsements was determined to include significantly different levels of support. The

¹⁴⁵Wilbur B. Brookover, Joel Smith and Donald Conrad, "Student athletic activities at Michigan State University." Social Research Bureau. Michigan State University, 1956, pp. 15-17, 31. (Mimeographed.)

greater the strength of religious conviction, the greater was the support provided for the health and fitness item. This relationship was linear (Table 43).

Table 43. Strength of religious conviction and the motivation for watching people involved in activities which improve the health and fitness of the body (N=618).

Strength of conviction	Did not rank item	Ranked item	TOTAL
Deeply religious (N= 50)	56.00	44.00	100
Moderately religious (N=360)	68.33	31.67	100
Indifferent to religion (N=173)	75.72	24.28	100
Opposed to religion (N= 35)	77.14	22.86	100

$$x^2 = 8.6722, p \text{ less than } .05.$$

Despite the clarity and linearity of the result, there would appear to be little in the elements of religious conviction which could account for this finding. The relationship would merit further investigation to determine the factors which account for such differences.

The social variable of type of high school attended is related to religion, and this factor was expected to account for some differences in the rankings. No significant

differences, however, were determined to exist between the responses of students who attended public or parochial schools on any of the motivational statements.

4. Other Social Factors Contributing to Differences in Rankings

Despite the introduction of a considerable number of social factors as independent variables in relation to each of the motivational statements, very few significant differences became apparent.

(a) Factors related to the size and composition of the family

When number of brothers in the family, number of sisters in the family, and number of older siblings were utilized as independent variables in relation to each of the items, no significant differences were determined. Ordinality and sex composition of the family, could therefore be excluded as significant differentiating factors in the motivations for spectator involvement with physical activities.

(b) Factors related to parental socio-economic level

The variables gross family income, parental occupational status, and father's educational attainment, were the social factors employed as independent variables in this section of the study. No differences were determined to

exist in any of the levels of endorsement provided by groups differentiated on the basis of parental gross family income.

Respondents from white-collar backgrounds were found to provide significantly higher rankings for the excitement motivation, but the relationship was not clear cut (Table 44).

Table 44. Socio-economic background and the motivation for watching physical activities that give a feeling of excitement (N=612).

Parental occupational background	Did not rank item	Rank order given by respondents					TOTAL
		1	2	3	4	5	
White-collar (N=387)	5.94	41.86	23.26	11.63	13.18	4.13	100
Blue-collar (N=225)	8.44	35.11	24.00	16.00	8.00	8.44	100

$$\chi^2 = 13.0369, p \text{ less than } .05.$$

Analysis of the expected and observed frequencies in the various cells indicated that the relationship was bi-modal, and although the white-collar students gave greater support in the first rank level, it was difficult to assign clear support to either social background group.

The spectator motivations related to activities where skill with a weapon, and health and fitness were paramount, were supported at a significantly higher level by students

whose fathers had low levels of educational attainment. In the case of skill with a weapon as an attraction for spectator interest, the respondents whose fathers were highly educated gave considerably less than the expected level of endorsement, while much greater support was provided by those whose fathers were poorly educated (Table 45).

Table 45. Father's education status and the motivation to watch a person match his skill in the use of a weapon against a target or quarry (N=612).

Educational level	Did not rank item	Ranked item	TOTAL
Graduate school or college degree (N=187)	85.56	14.44	100
Attended college or high school (N=363)	80.99	19.01	100
Grade 9 or less (N=62)	69.35	30.65	100

$$\chi^2 = 8.0420, p \text{ less than } .02.$$

This result was consistent with that found in connection with participant involvement. Although it would appear that such activities could be regarded as being favoured by predominantly lower social class groups, there was no support for this belief in the analysis of the differences in the rankings for this motivation when either gross income or

father's occupational status was employed as an independent variable. It was believed possible that the lower level of support provided by students whose parents had higher educational attainments was due, in part, to the influence of the humanistic and pacifist ideologies hypothesized to be present among college students at this time. However, this hypothesis must remain conjectural until a relationship between parental educational level and student attitude toward pacifism and humanism is determined.

Respondents whose fathers had lower educational attainments also gave significantly higher support for spectator attendance at activities where individuals attempt to improve the health and fitness of the body. In this analysis, the greater degree of acceptance of this item by the respondents whose fathers were poorly educated was matched by a greater than expected level of rejection among those whose fathers were moderately well educated (Table 46).

In conjunction with the result which showed that blue-collar males provided significantly greater levels of support for this item ($\chi^2 = 5.0144$, $df = 1$, p less than .05), it would seem to be appropriate to accept the belief that the motivation to watch people involved in activities which improve the health and fitness of the body should be regarded, at least among males, as a lower social class attitude.

Table 46. Father's educational status and the motivation to watch people involved in activities which improve the health and fitness of the body (N=612).

Educational level	Did not rank item	Ranked item	TOTAL
Graduate school or college degree (N=187)	70.05	29.95	100
Attended college or high school (N=363)	71.90	28.10	100
Grade 9 or less (N=62)	56.45	43.55	100

$$x^2 = 6.0029, p \text{ less than } .05.$$

(c) The influence of residence upon the motivations for spectator involvement with physical activities

The use of residence as an independent social variable in relation to each of the motivational statements indicated that significant differences were evident in the rankings provided for spectator involvement where skill with a weapon and competition against the environment were the predominant characteristics of the activities. In each case, the smaller the size of the respondent's home town, the greater was the level of support provided.

Table 47 illustrates the relationship between residence and the skill with a weapon motivation.

Table 47. Residence and the motivation to watch a person match his skill in the use of a weapon against a target or quarry (N=611).

Home town size	Did not rank item	Ranked item	TOTAL
Up to 25,000 residents (N=253)	75.89	24.11	100
25,001 to 500,000 residents (N=278)	83.45	16.55	100
Over 500,000 residents (N=80)	87.50	12.50	100

$$\chi^2 = 7.5233, p \text{ less than } .05.$$

This result appeared to have considerable face validity in view of the availability of access of respondents from the smaller centers to locations where such activities could be performed.

It would appear logical that the same reasons apply to the greater degree of support provided by the respondents from smaller towns and villages for watching activities where the individual competes against the environment (Table 48).

With all of the data on preferences for particular types of spectator sports and physical activities, the clearest tendency, apart from the sex differences, was seen for homogeneity in the response patterns regardless of social

Table 48. Residence and the motivation to watch people in competition against part of the natural environment (N=611).

Home town size	Did not rank item	Rank order given by respondents					TOTAL
		1	2	3	4	5	
Up to 25,000 residents (N=253)	35.57	5.93	10.67	18.58	13.44	15.81	100
25,001 to 500,000 residents (N=278)	37.77	1.44	7.55	14.03	21.22	17.99	100
Over 500,000 residents (N=80)	46.25	0.00	5.00	16.25	17.50	15.00	100

$$\chi^2 = 22.9341, p \text{ less than } .02.$$

background variables. This level of homogeneity may have been due to the strong socializing effect of schools and universities upon their populations to the extent that common values and attitudes come to be associated with the majority of students.

Coleman showed the influence of the school peer-group socialization which defined the possession of athletic skill as a key characteristic of the leading crowd and demonstrated the way in which this assignment of status influenced other features of high school life.¹⁴⁶ Brookover et al., showed how

¹⁴⁶James S. Coleman, The Adolescent Society (New York: The Free Press, 1961).

rapidly social standards of acceptable spectator interests could be fostered at a major university regardless of the interests of the students prior to entering college.¹⁴⁷ This socializing effect of university life could be expected to provide for a homogeneity of values toward specific forms of behaviour, and in the present study, was believed to eradicate many of the influences of social background factors that would be expected to provide for differences in spectator preferences. It is also possible that mass spectator sports are capable of bridging social differences and provide for a genuine manifestation of the mass culture.

¹⁴⁷ Wilbur B. Brookover, Joel Smith and Donald Conrad, "Student athletic activities at Michigan State University, p. 37.

CHAPTER VII

SOCIAL FACTORS RELATED TO PHYSICAL ACTIVITY PREFERENCES

A number of questions were posed to the respondents which attempted to provide an understanding of the various dimensions of the attitudes toward physical activity participation. These questions concerned preferences for particular categories of physical activities; the types of needs satisfied by involvement in such activities as a participant or spectator; and the degree of professionalization of attitudes held toward play.¹⁴⁸

Social factors related to preferences for work and leisure activities

Although most human behaviour cannot be reduced to a simple choice between two alternatives, it was believed that this question would draw out the adherents of the Protestant work ethic so that analysis of their social backgrounds would be possible. The question was also used as a lead-in question to set the tone for later, more specific questioning. Table 49 shows the response pattern for the item.

¹⁴⁸Harry Webb, "Professionalization of attitudes toward play among adolescents."

Table 49. Response pattern to the question, "In which kinds of activities would you rather spend your time; leisure activities or work activities?" (N=619)

Response	N	Per cent of total
Leisure	531	85.78
Work	88	14.22

Although it would be expected that the males, being the members of society most strongly socialized for involvement in the work milieu, would be more likely to endorse this item, no such tendency was evidenced in the data (chi square = 1.602, df = 1, not significant at p .05).

The religion of the respondent was also expected to be an important determinant of his preference for work- or leisure-oriented activities in view of the belief that acceptance of the philosophical beliefs of the Protestant religions would still lead the individual to a negation of his leisure opportunities. Again, the predicted relationship was not sustained. The introduction of the social variable of religion, operationalized here into the endorsement of either the Protestant or Catholic faiths, did not separate the respondents into significantly different response groups (chi square = 3.648, df = 1, not significant at p .05). The fact that no differences were observed in the data that could be attributed to the influence of religious belief

provided support for Greeley, who indicated that there had been a diminishment of the effect of religion on factors relevant to educational and occupational values.¹⁴⁹

The social variables of marital status, size and sex composition of the family, strength of religious conviction, type of high school attended, gross family income, father's occupational status, father's educational level, and residence, introduced no significant group effects upon the preferences for work and leisure activities.

Social factors related to preferences for
cultural, social, or physical activities during leisure

In this question, the respondents were asked to rank the three choices in terms of their personal preferences. The distribution of these preferences is illustrated in Table 50.

Table 50. Response pattern to the question, "In which type of activity would you prefer to spend your leisure time?" (N=625).

Activity preference	No response	Rank order given by respondents			TOTAL
		1	2	3	
Cultural	3.36	14.72	27.20	54.72	100
Social	2.24	52.00	30.24	15.52	100
Physical	2.40	32.16	39.36	26.08	100

¹⁴⁹Andrew M. Greeley, "Influence of the 'religious factor' on college plans and occupational values of college graduates."

A forced choice between three leisure activities that may not be unidimensional, and in which various proportions of the other two elements may be present in each, might appear to have little experimental utility. However, it was believed that leisure activities could be classified in such a way, and that responses would be made in terms of each item's capacity to provide for the self-realization of the individual. The fact that so few of the respondents had difficulty with this question indicated that this supposition had some justification.

When the factor of sex was introduced as an independent variable significant differences were determined to exist in the ranking systems. It was postulated that the female respondents would rank the cultural interests higher than the males, would provide equivalent levels of endorsement for the social interests, and would give lower rankings for the physical activities. These hypotheses were believed to reflect the current emphases placed upon the socialization of the sexes to hold sex-appropriate attitudes toward leisure.

With one exception, these hypotheses were supported by the data. The women gave significantly higher rankings for cultural activities, as well as for social activities, as preferred leisure pursuits. As predicted, the men gave higher support for physical activities than was found in the rankings provided by the women (Table 51).

Table 51. Sex and the rankings for cultural, social, and physical activities as preferred leisure pursuits.

Rank	Cultural		Social		Physical	
	Male	Female	Male	Female	Male	Female
1	13.5	16.9	41.9	63.9	46.0	20.3
2	19.3	36.7	43.0	19.5	37.3	43.2
3	67.2	46.4	15.1	16.6	16.7	36.5
	100	100	100	100	100	100
Total N	296	308	298	313	300	310
χ^2	28.955		41.221		54.153	
p	.001		.001		.001	

The greater level of support provided by the women for social activities indicated that there was a degree of consistency in the response patterns of the respondents as a similar result was determined in the rankings of the various motivations for participant and spectator involvement (albeit with reference to physical activity).

Significant differences were also found in the rankings made by the single and married respondents. The unmarried students gave stronger support for the social interests, while the married students gave higher rankings for the physical activities. No significant differences were evident in the rankings provided for cultural interests (Table 52). The strong support given to the social activities by the single students would be expected to be a component of the dating situation, and the men and women at this stage of the socialization process are strongly involved in developing attachments to members of the opposite sex. The considerable level of support provided by the married respondents for the physical activities was unexpected, but may be due to an emphasis placed upon the maintenance of health and fitness and figure stabilization among married students. This explanation did not receive support, however, from the rankings of the married students for the motivation for participation in healthful physical activities.

The negation of the body was a strong element in the philosophic traditions of the Protestant faiths, but the use

Table 52. Marital status and the rankings for cultural, social and physical activities as preferred leisure pursuits.

Rank	Cultural		Social		Physical	
	Single	Married	Single	Married	Single	Married
1	15.15	17.07	55.11	26.83	31.10	57.14
2	28.34	26.83	29.58	48.78	41.52	23.81
3	56.51	56.10	15.32	24.39	27.39	19.05
	100	100	100	100	100	100
Total N	561	41	568	41	566	42
χ^2	0.1244		12.2913		12.1213	
p	NS		.01		.01	

of religion as a group variable did not have the anticipated effect upon the rankings. No significant differences were evident in the rankings provided for physical activities as preferred leisure activities (chi square = 0.885, df = 2, not significant at p .05). The only comparison which did prove significant was the investigation of the rankings of the preference for cultural activities. In this case, the Protestant respondents gave greater support for the item, (chi square = 6.498, df = 2, p less than .05) but the relationship did not appear to have substantive significance. The other religion-oriented variables, strength of religious conviction, and the type of high school attended, did not provide for significant separations of the ranking systems when introduced as independent variables with these items.

The only socio-economic variable which provided for a significant separation in the rankings was that of the father's educational attainment. In this analysis, the greater the level of education of the head of the household, the greater was the level of support for the cultural interests (chi square = 14.1245, df = 4, p less than .01). This result has considerable face validity in view of the greater level of support for such activities among the professional and white-collar levels of society. However, the non significant differentiations in the rankings determined when socio-economic background and gross family income were used as independent variables with the preference for cultural activi-

ties reduced the strength of this explanation.

Among the variables associated with family size and sex composition, various patterns of differential preference were evident. Although the number of sisters in the family made no difference in the rankings, the number of brothers was found to provide for significant differences with each of the activity choices. Respondents who had no brothers gave significantly higher support for the cultural activities, those with one or two brothers gave higher rankings for social activities, while those with three or more brothers supported the physical activity choice to a significantly greater extent (Table 53).

The ready availability of play partners for the physical activities would probably account for the greater preference of respondents with several brothers for such activities. It would be expected that the larger the number of brothers, the greater would be the emphasis upon masculine games during childhood and this was seen in the preference for risky and dangerous activities among the responses of the individuals with several brothers to the motivational statements for participation in physical activities.

The greater preference for cultural activities among those with no brothers, and for social activities among those with one or two brothers would appear to be related to the preference patterns indicated by females to these leisure forms as well as to a reduced press toward masculine acti-

Table 53. Number of brothers and the rankings for cultural, social and physical activities as preferred leisure pursuits.

Rank	Cultural			Social			Physical		
	None	1,2	3,4	None	1,2	3,4	None	1,2	3,4
1	16.85	15.25	11.59	52.78	55.71	42.03	30.90	30.73	47.89
2	32.58	28.81	14.49	30.00	27.86	47.86	37.64	42.46	36.62
3	50.56	55.93	73.91	17.22	16.43	10.14	31.46	26.82	15.49
	100	100	100	100	100	100	100	100	100
Total N	178	354	69	180	359	69	178	358	71
χ^2	11.5798			11.2911			11.3777		
p	.05			.05			.05		

vities among such males and females during childhood.

Looking at the total number of children in the family, it was found that the same patterns of response were evident in the data. Although the data in this case were dichotomized with the cutting point above three children, it was determined that those from the smaller families gave significantly higher rankings for the social and cultural activities, while those from the larger families gave significantly greater support for the physical activities.

The support of the respondents from the smaller families for cultural activities would appear to be related to the development of particular personality structures among only children and children with few siblings. No data was available from this study to determine whether this belief had merit but the diminished chance of interruption and the increased opportunity for introspection would appear to provide a greater opportunity for development of the cultural and aesthetic capabilities.

Additionally, it was believed that those from smaller families would have greater social needs, thus leading them to provide significantly higher support for these activities. Among those from the larger families, the social needs would appear to be reduced in terms of activity choices outside the family.¹⁵⁰ Certainly, the availability of play partners

¹⁵⁰ Harry Webb, "Social backgrounds of M.S.U. athletes," pp. 18-19.

in the larger family would lead to an increased preference for physical activities among the respondents with more than 3 siblings.

The various relationships between family size and leisure activity preferences are illustrated in Table 54.

The data analyzed for ordinal position in the family revealed substantially similar results, although there were non-significant differences with regard to the social activity selection. Those respondents who were first-born were more likely to endorse the cultural activity selection (chi square = 11.1166, df = 4, p less than .05), while those with three or more older siblings gave significantly higher rankings for the physical activity selection (chi square = 11.6568, df = 4, p less than .05).

With all of the family size and composition variables, a degree of response consistency was present. Those respondents who came from families where they were the first born; whose families were small; or who had no brothers; gave significantly higher rankings for the cultural activity selection as their preferred leisure pursuit. The social activity was supported at a significantly higher level by respondents from small families, and by respondents with only one or two brothers. The physical activity selection as the preferred leisure pursuit was given significantly higher rankings by respondents from large families (four or more children); who were low in the birth order (third born or later); or who had 3 or more brothers.

Table 54. Total number of children in the family and the rankings for cultural, social, and physical activities as preferred leisure pursuits.

Rank	Cultural		Social		Physical	
	1-3	4+	1-3	4+	1-3	4+
1	17.0	12.2	56.0	48.2	28.1	41.2
2	30.6	23.9	27.2	37.4	41.7	38.1
3	52.4	64.0	16.7	14.4	30.2	20.8
	100	100	100	100	100	100
Total N	382	222	389	222	384	226
χ^2	7.788		6.800		12.502	
p	.05		.05		.01	

Social factors related to preferences for active or
passive involvement with leisure activities

The responses to this question were so strongly in favour of participation that there was little justification for the investigation of the responses in relation to social background variables. Over 93 per cent of the respondents endorsed active participation for their favoured leisure pursuits.

Despite the low number of endorsements for passive involvement, and the low level of justification for further analysis, each of the social variables was introduced in association with the response modes. No social factor was found to provide for a significantly high level of differentiation between the responses of particular groups.

Social factors related to the sources of satisfaction
in playing games

Tumin hypothesized that:

all human experiences can be classified into three categories, so far as the source of human satisfaction is concerned: (1) those in which the locus of satisfaction is in the extrinsic rewards received for performance; (2) those in which the locus of satisfaction resides in the social relations with others while in the performance; and (3) those in which the locus of satisfaction is in the very actions which constitute the performance.¹⁵¹

¹⁵¹Melvin Tumin, "Obstacles to creativity," ETC: Review of General Semantics, vol. 11 (Summer, 1954), 261-271, 261.

With this questionnaire, these sources of satisfaction were defined in terms of games as being, (1) winning, (2) companionship, and (3) the demonstration of skill. No attempt was made to test whether all human actions could be reduced to these three sources of satisfaction, rather, it was believed that representatives of different social groups would rank them in terms of varying degrees of personal importance. The response patterns to this item are shown in Table 55.

Table 55. Response pattern to the question, "When you participate in games, what gives you the most satisfaction?" (N=625).

Satisfaction preference	No response	Rank order given by respondents			TOTAL
		1	2	3	
Winning	0.16	21.92	37.44	40.48	100
Companionship	0.48	45.44	25.28	28.80	100
Demonstrating your skill	0.48	32.48	36.80	30.24	100

The only social factor that led to a differentiation between the responses was sex. The males gave strong support for the satisfaction of winning, and for the demonstration of skill, while the females gave significantly higher rankings for companionship. The levels of significance of the differences between the rankings were particularly high, providing support for the contention that an attitudinal socialization

pattern existed and inculcated differential beliefs concerning sex appropriate behaviour for play. The results appear consistent with those of Coleman who determined that there were different attitudes toward leisure activities among male and female adolescents, which the females preferring vicarious enjoyment and companionship and the boys preferring active outdoor pursuits.¹⁵²

The sex differences in evaluating the three loci satisfaction in games are shown in Table 56.

Considering only the distribution of the first-preferences, the male respondents placed the three choices in the rank order of skill-companionship-winning, while the females gave their ranking in the order of companionship-skill-winning. The placement of the success related choice in third place by the male and female respondents, and the confused distribution of the ranks given to the items for the second and third preferences indicated that the males were not nearly as oriented toward generalized evaluation using achievement criteria as had previously been hypothesized.

¹⁵²James S. Coleman, "Academic achievement and the structure of competition," Harvard Educational Review, vol. 29, no. 4 (1959), 332-333.

Table 56. Sex and the rankings for winning, companionship and skill as major loci for satisfaction in games.

Rank	Winning		Companionship		Skill	
	Male	Female	Male	Female	Male	Female
1	30.1	14.2	31.9	58.8	38.5	27.0
2	37.6	37.4	28.0	23.0	34.2	39.6
3	32.4	48.4	40.1	18.2	27.3	33.3
	100	100	100	100	100	100
Total N	306	318	304	318	304	318
χ^2	27.929		51.899		9.327	
p	.001		.001		.01	

Social factors related to the explanations for
participation in games

The respondents were provided with a list of six words which are frequently used to explain why people play games. These words were; competition, companionship, excitement, prestige, self satisfaction, and relaxation. Each was asked to rank these words in order of importance to his own playing needs.

The question was drawn from a questionnaire submitted by Webb¹⁵³ to students in the Battle Creek, Michigan school system. It was hoped to identify, through this item, the hierarchy of values perceived to be inherent in games by the respondents from particular social groups. The response patterns found in the data are illustrated in Table 57.

In terms of the choices provided by the question, the most important reason for playing a game was for securing relaxation and fun. Self satisfaction was the next favoured, and companionship was third in the rank order. Although competition received first-rank support by over fifty respondents, that reason, together with excitement and prestige, was clearly of minor importance.

When sex was introduced as an independent variable with each of these ranking systems, it was found that the

¹⁵³Harry Webb, "Professionalization of attitudes toward play among adolescents."

Table 57. Response patterns to the question concerning the ranking of six reasons for participation in games (N=625).

Reasons for participation	No response	Rank order given by respondents						TOTAL
		1	2	3	4	5	6	
Competition	0.48	9.12	12.16	16.80	17.60	35.04	8.80	100
Companionship	0.64	12.64	25.44	17.92	18.08	15.68	9.60	100
Excitement	0.64	6.08	15.84	30.56	29.60	13.76	3.52	100
Prestige	0.32	1.12	2.24	3.20	5.12	14.88	73.12	100
Self satisfaction	0.48	21.44	22.56	17.76	21.60	14.40	1.76	100
Relaxation and fun	0.48	49.44	21.28	12.96	7.20	5.76	2.88	100

male respondents were significantly higher than the females in their rankings of the reasons; competition, prestige, and self satisfaction. The female respondents provided significantly higher rankings for companionship and relaxation and fun as the more important reasons for playing games. The higher ranking by the women for companionship indicated that there was response consistency in their endorsements as they had provided similar responses in previous questions concerning the loci of satisfaction in games, and the motivations for participant and spectator involvement with physical activities.

No significant differences were determined in the rankings of the male and female respondents for excitement as a reason for playing games.

Of the six choices, four were indicative of reasons intrinsic to participation, while two were expressive of extrinsic as well as achievement oriented satisfactions secured through playing. In terms of first rank support, the male respondents provided a hierarchical ranking of the choices in the order of; relaxation-self satisfaction-competition-companionship-excitement-prestige. The females gave their first rank support in the order of; relaxation-companionship-self satisfaction-excitement-competition-prestige. These results are shown in Table 58.

From these results, it was clear that the female respondents gave their strongest support for items expressive

Table 58. Sex and the rankings for reasons for playing games.

Rank	Competition		Companion- ship		Excitement		Prestige		Self satisfaction		Relaxation and fun	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	16.1	2.5	7.9	17.4	6.9	5.4	2.0	0.3	28.2	15.1	39.7	59.3
2	18.7	6.0	18.4	32.5	15.5	16.4	3.6	0.9	24.6	20.8	19.3	23.3
3	17.7	16.1	16.8	19.2	29.9	31.5	5.6	0.9	15.1	20.5	14.4	11.7
4	17.4	18.0	21.1	15.5	27.3	32.2	7.5	2.8	14.8	28.4	11.5	3.2
5	21.0	48.9	19.4	12.3	15.1	12.6	20.7	9.4	13.8	15.1	10.2	1.6
6	9.2	8.5	16.4	3.2	5.3	1.9	60.7	85.5	3.6	0.0	4.9	0.9
	100	100	100	100	100	100	100	100	100	100	100	100
N	305	317	304	317	304	317	305	318	305	317	305	317
χ^2	86.354		59.444		7.744		52.091		40.787		57.281	
p	.001		.001		NS		.001		.001		.001	

of the intrinsic satisfactions to be enjoyed in playing, and provided a definite rejection of the extrinsic-achievement oriented responses. The female rejection of the achievement oriented choices was more definite, however, than the predicted acceptance of such choices by the males. Prestige was given minimal support at the first rank level by both groups, a result that may be indicative of the acceptance of this word as being "loaded" with negative cultural connotations. The major difference in the rankings was a far higher ranking of competition by the men.

Only three other social variables were found to differentiate the ranking systems. The unmarried students provided significantly higher rankings for the relaxation item ($\chi^2 = 6.3887$, $df = 1$, p less than .02), but some of the precision was lost as the responses had to be collapsed into a dichotomy in view of difficulties with the expected cell frequencies. The single students gave considerably greater support for this selection in their top three preferences.

It was found that the competition item was provided with significantly higher rankings by those with one or two sisters ($\chi^2 = 19.3128$, $df = 10$, p less than .05). The reason for such a difference was somewhat lacking in clarity, as those with no sisters at all appeared to give little support for the item. The ranking for competition may be a function of sibling rivalry between the sexes in

smaller families, but this hypothesis must remain conjectural subject to further investigation.

Students whose fathers had lower levels of educational attainment were found to provide significantly higher rankings for the prestige selection as a reason for playing in games (chi square = 7.9669, df = 2, p less than .02). These responses also were dichotomized with the cutting point above the third rank. The strong support for this item was believed to be indicative of the attitude structure inherent in upward social mobility among respondents from families in which the father had little education.

Social factors related to preferences for individual
or team sports as a participant

Upon tabulation of the results, it was found that there was almost equivalent support for each choice, although the individual sports received slightly more endorsements (Table 59).

Table 59. Response pattern to the question, "When you participate in sports, which type do you prefer, individual or team sports?" (N=617).

Preference	N	Per cent of total
Individual sports	313	50.7
Team sports	304	49.3

No definition was provided for the respondents to enable them to associate particular sports to each category. This dichotomization, however, is relatively prevalent in the popular press and other media, and little trouble was expected with the question nor was any evidence of such difficulty found in the data.

The major social variables which were found to provide significant differences in the response selections were religion, socio-economic background, and father's educational attainment. Non significant differences were evident when all other social variables utilized in this study were introduced as independent variables.

It was found that there was a strong tendency for members of the Protestant faiths to favour the individual types of participative sporting activities. This result was consistent with the religious philosophy advanced by Calvin which Weber expressed as:

In practice this means that God helps those who help themselves. Thus the Calvinist, as it is sometimes put, himself creates his own salvation, or, as would be more correct, the conviction of it.¹⁵⁴

This doctrine led to the great stress upon individualism in the early Protestant faiths, and it was a manifestation of a survival of this characteristic which appeared to

¹⁵⁴Max Weber, The Protestant Ethic and the Spirit of Capitalism, trans. by Talcott Parsons (New York: Charles Scribner's Sons, 1958), p. 115.

be behind the greater Protestant support for individual sports. The relationship with the philosophical position may appear tenuous, but the statistical relationship between religious belief and sport type was strong (Table 60).

Table 60. Religion and the preference for individual or team sports as a participant (N=543).

Religion	Individual sport preference	Team sport preference	TOTAL
Protestant (N=381)	53.0	47.0	100
Catholic (N=162)	41.4	58.6	100

$$\chi^2 = 6.182, p \text{ less than } .02.$$

There is some justification for the belief that members of the higher socio-economic levels of society have stronger preferences for individual sports. Both Webb¹⁵⁵ and Petrie¹⁵⁶ showed that athletes receiving grants-in-aid at Mid-Western Universities could be differentiated on parental socio-economic status. The individual sport athletes were significantly more likely to come from middle-to upper-occupational status families, while the team sport

¹⁵⁵Harry Webb, "Social backgrounds of M.S.U. athletes", pp. 14-16.

¹⁵⁶Brian M. Petrie, "Social backgrounds of athletes awarded grants-in-aid at Big Ten Universities from 1960-1963", pp. 34-37.

athletes came from predominantly middle- to lower-occupational status families. These relationships were supported by the data drawn from the normal student body of Michigan State University (Table 61).

Table 61. Parental occupational status and the preference for individual or team sports as a participant (N=606).

Parental occupational status	Individual sport preference	Team sport preference	TOTAL
White-collar (N=383)	55.1	44.9	100
Blue-collar (N=223)	43.5	56.5	100

$$\chi^2 = 7.580, p \text{ less than } .01.$$

Additional support was provided when father's educational attainment was employed as an independent variable in relation to the sport type preference. In this case, it was found that the respondents whose fathers had higher educational attainments gave greater support for individual sports (chi square = 9.2247, df = 2, p less than .01). These two findings supported the hypothesis that the higher the level of the parent in the occupational hierarchy, the greater would be the respondent's preference for participating in individual sports.

Social factors related to the professionalization of
attitudes toward play¹⁵⁷

The question, "What do you think is most important in playing a game; to play it as well as you are able; to beat your opponent; or to play it fairly?", was drawn from a questionnaire developed by Webb to determine the attitudes held by school students towards games and sports.¹⁵⁸ Webb utilized this item as a means of determining the relationship between attitudes held toward play and attitudes appropriate to later participation in adult occupational roles. He proposed that the three values of skill, success, and fairness exist as factual components in sporting situations, while appearing as ideology in the economy. Because success and skill are emphasized in the economic practice to the expense of equity, the development of a similar hierarchy of values in sports situations would indicate that the individual had developed an attitudinal pattern which, if carried over from the game situation, would provide him with a good preparation for his adult role in the economic situation. Such a development would, however, be contrary to the ideals of play. Webb termed this developing correspondence between play and occupational values the professionalization of attitudes toward

¹⁵⁷Harry Webb, "Professionalization of attitudes toward play among adolescents."

¹⁵⁸Ibid.

play.¹⁵⁹

Webb found that among students from Grades 3 to 12 in the public and parochial school systems of a mid-western city, there was an age related diminishment in the ranking of fairness, an increased ranking for skilful play, and an increasing level of support for winning. He developed an index from the permutations of the rankings of the three items and placed these permutations on a continuum from a play orientation to a professional orientation.¹⁶⁰

The index is shown in Table 62.

Table 62. Professionalization index developed by Webb.¹⁶¹

Play orientation			Professional orientation		
1	2	3	4	5	6
Fair	Fair	Play	Play	Beat	Beat
Play	Beat	Fair	Beat	Fair	Play
Beat	Play	Beat	Fair	Play	Fair

When the rankings for the three items were converted to an index score and related to various social factors, Webb found that there was an increasing development of profession-

¹⁵⁹Ibid., pp. 161-165.

¹⁶⁰Ibid.

¹⁶¹Ibid., p. 166.

alization with age; that males scored higher on the scale than females; that Catholics scored higher than Protestants; and that there was a tendency for those whose parents were in the upper occupational levels to score higher than those with lower occupational status backgrounds.¹⁶²

In the present study, the question was put to a university group, and although some degree of the social desirability factor may have been expected to be present in the responses, it was believed that the trends observed by Webb would be continued in the older group.

The response patterns for the three items making up the professionalization index are shown in Table 63.

Table 63. Response pattern to the question, "What do you think is most important in playing a game?" (N=625).

Item	No response	Rank order given by respondents			TOTAL
		1	2	3	
Play	0.64	64.48	33.76	1.12	100
Beat	1.12	3.04	4.48	91.36	100
Fair	1.12	32.16	60.48	6.24	100

When the three choices were collated and placed on the professionalization scale, the results indicated that there

¹⁶²Ibid., pp. 167-178.

was major clustering on the third level, with endorsements for the items ranked in order of; play-fair-beat (Table 64).

Table 64. Responses expressed on the professionalization scale (N=625).*

Index level	N	Per cent of total
1	196	31.36
2	4	0.64
3	375	60.00
4	24	3.84
5	3	0.48
6	15	2.40

*No response = 8 (1.28 per cent).

In the Webb study, school children in Grades 3, 6, 8, 10 and 12 were sampled. Webb reported the mean ranks for each of the three components of the professionalization index and the data for the present study was converted in order that some degree of comparability could be achieved. On the play item there was a tendency for the college students to provide a higher mean ranking than the Grade 12 students. For the beat item, the college students gave lower mean rankings, while for the fairness item, the college students gave higher mean rankings than the Grade 12 students.¹⁶³

¹⁶³Ibid., p. 167.

Various reasons may be advanced to account for the fact that there were reversals in the trends seen by Webb among school children. First, it is possible that an entirely different normative system was in operation at the university level which led to a greater emphasis upon fairness and playing to the level of one's skill. Second, it is possible that the school results reflected a situation that was unique to that city. Third, it is possible that the Michigan State University group did not have as great a level of cultural diversity as the school system studied; certainly, the university group would have a higher median intelligence level as well as a higher level of academic potential than the heterogeneous school group. Finally, it is possible that the university group provided socially desirable rankings to the items.

When the ranking systems for each item were analyzed in relation to particular social variables, the only factors which were found to differentiate between groups were sex and strength of religious conviction. In these analyses, it was found that the rankings for the play and beat items were distributed in such a way that dichotomization was frequently necessary. Where dichotomization was used, the second and third ranks were grouped into one category.

The relationships between sex and each of the items regarded as important in playing a game are shown in Table 65.

Table 65. Sex and the rankings of the responses to the question; "What do you think is most important in playing a game?"

Rank	Play		Beat		Fair	
	Male	Female	Male	Female	Male	Female
1	71.80	58.23	5.6	0.6	23.1	41.6
2	(	)	7.9	1.3	65.7	56.8
3	(28.20	41.77)	86.5	98.1	11.2	1.6
	(	)				
	100	100	100	100	100	100
Total N	305	316	304	314	303	315
χ^2	11.9664		29.520		40.917	
p	.001		.001		.001	

The significantly higher male support for "playing as well as you are able" and "to beat your opponent" were in agreement with other results that showed a masculine preference for skill- and success-related items. The female support for the item "to play it fairly" adds a further dimension to the sex differences in attitudes toward play, although it would appear to be related to the values of companionship and social interaction which were provided with higher rankings by the women who responded to the questionnaire.

These results were also evident when sex was analyzed in relation to the scores on the Professionalization Index. In this analysis, the scores were dichotomized with the first, second, and third levels (indicative of play orientations) grouped together, and the other three levels (the professional orientations) combined to form the second category. The females had significantly lower scores on the Professionalization Index, a finding which was similar to that determined by Webb in his school study for Grade 12 children.¹⁶⁴ The results of this test of association are presented in Table 66.

Despite the emphasis provided by the male and female respondents at the lower levels of professionalization, there was still a higher level of support by the males for achievement criteria as major elements in evaluating the importance of particular values in games. This support was seen in the

¹⁶⁴Ibid., p. 169.

Table 66. Sex and scores on the Professionalization Index (N=617).

Sex	Level on Professionalization Index		TOTAL
	1, 2, 3	4, 5, 6	
Male (N=303)	87.8	12.2	100
Female (N=314)	98.4	1.6	100

$$\chi^2 = 27.409, p \text{ less than } .001.$$

higher proportion of males scoring at the middle to upper levels of professionalization, and the almost total rejection of such response combinations by the women.

The proportion of males evaluating games in terms of a professional orientation was much lower than was expected. This was surprising as the respondent group was in the process of being prepared for positions in the upper levels of the occupational hierarchy where the acceptance of such values is generally believed to be high. Nevertheless, there were significant differences between the rankings of the male and female respondents, and the source of these differences lay in the greater emphasis on the achievement criteria inherent in the professional orientation among the males.

When the strength of religious conviction was employed as an independent variable in association with the rankings of the question responses and with the Professionalization

Index, it was found that those with strong positive convictions were more likely to endorse the ethical component in the game situation. Those respondents with lower levels of religious conviction provided significantly higher rankings for the success-related component (Table 67).

In the analysis of the relationship between the strength of religious conviction and the value components of the game situation, it was necessary to dichotomize conviction into strong and weak categories with the rankings for the play and beat items. It was also necessary, in view of the polarization of the responses, to group the second and third ranks as one category with the same two items. No collapsing of categories was found to be necessary with the fairness item.

From the results, it was obvious that possession of strong religious convictions provided for a diminished emphasis upon the achievement oriented value components of the game situation. The religious ideal of respect for man and the accent upon performing one's duties in a way which did not operate to the detriment of others would appear to reinforce the values associated with sportsmanship in the more specific milieu of games. This pattern of response was also responsible for the greater emphasis provided by the strongly religious for the play orientations of the Professionalization Index (Table 68).

No other social variables led to differences in rank-

Table 67. Strength of religious conviction and the rankings of the responses to the question; "What do you think is most important in playing a game?"

Rank	Play		Beat		Fair			
	Strong	Weak	Strong	Weak	Deep	Moderate	Indifferent	Opposed
1	64.46	66.18	1.97	5.34	42.86	32.68	30.99	20.59
2	(			)	57.14	62.29	59.06	67.65
3	(35.54	33.82	98.03	94.66)	0.00	5.03	9.94	11.76
	(			)				
	100	100	100	100	100	100	100	100
Total N	408	207	406	206	49	358	171	34
χ^2	0.1115		4.0982		12.9012			
p	NS		.05		.05			

ings or in scores on the Professionalization Index.

Table 68. Strength of religious conviction and Professionalization Index (N=611).

Strength of conviction	Level on Professionalization Index		TOTAL
	1, 2, 3	4, 5, 6	
Strong (N=406)	95.32	4.68	100
Weak (N=205)	88.78	11.22	100

$$\chi^2 = 8.1078, p \text{ less than } .01.$$

Social factors related to the explanation of
spectator involvement with sports

With this question, the respondents were asked to rank in terms of their personal preferences, four common reasons given for watching sporting events. These reasons were; excitement; companionship; escape from routine; and to see skilful performances. The resultant ranking scheme is shown in Table 69.

The greatest degree of support was provided for the reasons associated with the desire for excitement and the viewing of the manifestation of human skill. Escape from the normal routines of life, and attendance at spectator events as a way of achieving enjoyment through association with others was given considerably less support by the respondents.

Table 69. Response pattern to the request, "People watch sports for many reasons; rank the reasons of excitement; companionship; escape from routine; and to see skilful performances" (N=625).

Spectator preference	No response	Rank order given by respondents				TOTAL
		1	2	3	4	
Excitement	0.16	43.36	35.04	16.16	5.28	100
Companionship	0.32	9.28	14.72	31.84	43.84	100
Escape from routine	0.16	16.96	18.56	30.40	33.92	100
To see skilful performance	0.32	30.24	31.36	21.44	16.64	100

Investigation of the relationship between these ranking systems and particular social variables indicated that there was a degree of homogeneity in the data regardless of the introduction of most group factors. Sex and home town size provided for some differentiation between the rankings of groups, while the number of siblings in the family and father's educational attainments provided for isolated differences.

The introduction of sex as an independent variable had no significant influence upon the rankings for excitement, and escape from routine as reasons for spectator interest. Significantly higher rankings were provided by the women for companionship as a reason for spectator

involvement while the men gave significantly greater support for the watching of skilful performances (Table 70).

It was of interest to note that the strong support provided by the female respondents for social reasons for participation in sports carried over as a strong reason for spectator involvement. The support by the male respondents for skilful performances was also consistent with the previously determined rankings for such participant activities.

It was obvious that the cathartic experience of excitement as a part of the spectator situation was central, in view of the support provided by both sexes in the upper rank levels.

The size of the home town of the respondent provided for a significant differentiation in the rankings for excitement and the watching of skilful performances. Although it was apparent that respondents from larger cities provided the greatest support for the desire for excitement ($\chi^2 = 14.356$, $df = 6$, p less than .05), and that the residents in small towns gave significantly greater support for watching skilful performances, ($\chi^2 = 16.356$, $df = 6$, p less than .02) the results appeared to have little theoretical significance because of the curvilinearity of the distributions.

The number of older siblings and the level of the father's educational attainment both accounted for differ-

Table 70. Sex and the rankings for particular reasons for spectator involvement with sports.

Rank	Excitement		Companionship		Escape from routine		To see skillful performances	
	Male	Female	Male	Female	Male	Female	Male	Female
1	42.8	44.0	5.2	13.2	16.3	17.6	35.6	25.2
2	35.0	35.2	12.1	17.4	18.6	18.6	34.3	28.7
3	17.0	15.4	31.4	32.5	34.0	27.0	17.6	25.2
4	5.2	5.3	51.3	36.9	31.0	36.8	12.4	20.8
	100	100	100	100	100	100	100	100
Total N	306	318	306	317	306	318	306	317
χ^2	0.302		21.075		4.133		17.844	
p	NS		.001		NS		.001	

ences in the rankings for the escape from routine response. Respondents who were first in the birth order were more likely to provide high rankings for the item (chi square = 13.3265, $df = 6$ p less than .05). Analysis of the observed and expected frequencies, however, revealed that the relationship was inconsistent at each of the rank levels.

When father's educational attainment was used as an independent variable in association with the escape from routine response, it was determined that those students whose fathers had the least educational experience provided the strongest support for this item at each of the three upper levels (chi square = 18.4037, $df = 6$, p less than .01). The determinants of this association were not apparent and would appear to require further investigation. It is possible, though, that the relationship was due to a random fluctuation in the data.

No other social variables made any difference when introduced as independent variables in relation to each of the ranking systems.

Social factors related to preferences for individual
or team sports as a spectator

In this question, the respondent was asked to make a direct choice between individual or team sports as the preferred spectator interest. The results are shown in Table 71.

Table 71. Response pattern to the question, "When you watch sports, which type do you prefer?" (N=619)

Preference	N	Per cent of total
Individual sports	103	16.6
Team sports	516	83.4

Despite expectations that there would be differences on the basis of the relative masculinity and femininity of the family, and the total number of siblings in the family, sex was the only factor that provided for a separation in the preferences that was statistically significant. The male respondents, having a much wider range of selection of team sports available to them, and a stronger degree of peer support for involvement in such activities, gave significantly greater endorsement to team sports as preferred spectator activities. The finding of Brookover et al.,¹⁶⁵ that a norm existed at Michigan State University that made attendance at football games a required social activity and attendance at all other campus sporting events optional, was believed to partially explain the high level of support for team sports by both male and female respondents even

¹⁶⁵Wilbur B. Brookover, Joel Smith and Donald Conrad, "Student athletic activities at Michigan State University," pp. 30-33.

though there were significant differences between their levels of support (Table 72).

Table 72. Sex and the preference for individual or team sports as a spectator (N=619).

Sex		Individual sport preference	Team support preference	TOTAL
Male	(N=306)	10.5	89.5	100
Female	(N=313)	22.7	77.3	100

$$\chi^2 = 16.674, p \text{ less than } .001.$$

No other group variables provided for a significant separation between the choices of these items.

CHAPTER VIII

SOCIAL CLASS IDENTIFICATIONS WITH SPORTS

Sport Preferences of the Respondents

In the body of the section of the questionnaire dealing with attitudinal components of physical activity involvement, two questions were asked concerning the specific sports which the respondents most enjoyed playing and those they most enjoyed watching. The most popular sports for participation are shown in Table 73.

Table 73. The most popular participant sports (N=625).

Sport	Number of endorsements	Per cent of total
Tennis	95	15.20
Swimming and water sports	74	11.84
Baseball	57	9.12
Basketball	53	8.48
Football	49	7.84
Golf	38	6.08
Bowling	34	5.44

The sports listed appeared to be more readily identified with males, so the data were separated on the basis of

sex. The most preferred participant sports endorsed by the male and female respondents are shown in Tables 74 and 75.

Table 74. The most popular participant sports listed by the male respondents (N=306).

Sport	Number of endorsements	Per cent of total
Football	43	14.05
Tennis	41	13.40
Basketball	37	12.09
Baseball	33	10.78
Golf	27	8.82

Table 75. The most popular participant sports listed by the female respondents (N=319).

Sport	Number of endorsements	Per cent of total
Swimming	60	18.81
Tennis	54	16.93
Bowling	26	8.15
Baseball	24	7.52
Badminton	19	5.96
Volleyball	19	5.96
Softball	17	5.33
Basketball	16	5.02

The major spectator sport preferences were then determined and listed, first as an overall summation, and secondly as a differentiation between the listings made by the male and female respondents (Tables 76, 77 and 78).

Table 76. Most popular spectator sports (N=625).

Sport	Number of endorsements	Per cent of total
Football	318	50.88
Basketball	64	10.24
Baseball	55	8.80
Ice hockey	45	7.20

Table 77. Most popular spectator sports listed by male respondents (N=306).

Sport	Number of endorsements	Per cent of total
Football	189	61.76
Ice hockey	27	8.82
Basketball	27	8.82
Baseball	19	6.21

Table 78. Most popular spectator sports listed by female respondents (N=319).

Sport	Number of endorsements	Per cent of total
Football	129	40.44
Basketball	37	11.60
Baseball	36	11.29
Swimming	19	5.96
Ice hockey	18	5.64

It was of interest to note the discrepancy between the number of sports enjoyed as a participant against the number enjoyed as a spectator. A total of 49 sports were listed as favorite participant activities; 37 different sports being endorsed by the male respondents, and 35 by females. In contrast, only 32 sports were identified as favourite spectator sports; 22 by the male respondents, and 28 by the females. The degree of support given to spectator sports appeared to be closely related to the amount of actual spectator support in the sporting events held at Michigan State University, although the listings were not restricted to such activities alone.

Social Class and Sport

In attempting to determine the perceptions of the members of the sample regarding the relationships between social class and particular sports, the problem was dealt

with in three ways. First, the members of the sample were requested to identify, using an open-ended response mode, the particular participant sport they most associated with members of the following groups:

1. Upper class
2. Middle class
3. Working class
4. Lower class

It has been stated by Ossowski¹⁶⁶ that the term "working class" is generally used in the United States as a means of avoiding the classification of a section of the population as belonging to a "lower" socio-economic class grouping. The two terms were employed in this study in order to attempt to separate the conceptions of the members of the sample from a unitary, middle class identification with sport. No attempt was made to provide a definition of each of these terms for the respondents. It was believed that the terms are relatively commonly used and that, although each individual's definition may be somewhat variable, a group consensus could be expected.

Second, the respondents were requested to identify, once again through the open-ended response technique, the particular spectator sport they most associated with the

¹⁶⁶Stanislaw Ossowski, Class Structure in the Social Consciousness, trans. by Sheila Patterson (New York: The Free Press of Glencoe, 1963), p. 46.

same four social class groups.

Third, a list of twenty-one common sports were listed vertically, and the respondents were requested to identify the social class group to which the players mainly belonged by placing a check mark in one of the following response categories:

1. Upper class
2. Middle class
3. Working class
4. Lower class
5. Can't decide

These response categories were spaced horizontally across the page of the survey.

1. Social Class Identifications with Participant Sports

The stimulus employed to determine the social class identifications held by the respondents about participant sports was phrased in the following manner;

"In your opinion, what participant sport do you most identify with each of the following groups?"

The names of the four social class groups were listed vertically below this stimulus question, and the respondents were asked to write the name of the sport on the space provided beside the name of the group. The instructions included in the stimulus stated that the respondent could write the name of the sport beside the name of two social class groups if

he wished. This was done to allow individuals, who could not separate the social class identification of a particular sport into one category, to indicate that they believed that there was an overlapping class association.

The sports most frequently identified by the respondents as upper class participant activities are shown in Table 79.

Table 79. Upper class participant sports identified using the non-directive response mode (N=610).

Sport	Proportion of respondents identifying this sport with the upper class	N
Golf	33.60%	210
Tennis	20.64%	129
Polo	11.84%	74
Sailing	8.16%	51
Horse Riding	5.60%	35

In all, 30 sports were identified as being associated with upper class participants by the respondents, but only the five sports listed were endorsed by more than 5 per cent of the group.

Where the respondent wrote in more than one sport for this or any of the other categories concerning social class identifications with sport, only the first mentioned

sport was coded. The rationale here was that the first mentioned sport would be the one that first came to mind, and could be expected to be the one that was more strongly associated with the social class group than the others.

The sports listed by more than 5 per cent of the respondents as being identified with middle class participants are shown in Table 80.

Table 80. Middle class participant sports identified using the non-directive response mode (N=605).

Sport	Proportion of respondents identifying this sport with the middle class	N
Golf	44.64%	279
Baseball	10.08%	63
Tennis	10.08%	63
Football	8.96%	56
Skiing	6.24%	39
Bowling	5.12%	32

A total of 21 sports were identified by the respondents for this social class grouping. It may be noted that the sports of golf, and tennis were frequently identified with both the upper-, and middle-class groups. Of all the sports associated with each of the four social classes as participant activities, only polo, which was identified

with the upper class, was given considerable support in only one category.

Table 81 shows the participant sports associated by the respondents with the working class.

Table 81. Working class participant sports identified using the non-directive response mode (N=603).

Sport	Proportion of respondents identifying this sport with the working class	N
Bowling	41.44%	259
Baseball	23.52%	147
Football	12.32%	77

A total of 27 different sports were selected as being associated by the respondents with working class participants, but only the three listed were given more than 30 endorsements (5 per cent). It may be noted that, although bowling was most frequently endorsed as a working class participant sport, the proportion of respondents who indicated baseball or football as their choice actually increased over the middle class selections.

Participant sports associated with the lower socioeconomic class group are listed in Table 82.

A total of thirty-one selections were made of sports associated by the respondents with participants from the

Table 82. Lower class participant sports identified using the non-directive response mode (N=588).

Sport	Proportion of respondents identifying this sport with the lower class	N
Baseball	25.12%	157
Billiards, pool	13.92%	87
Bowling	11.04%	69
Boxing	7.84%	49
Basketball	7.52%	47
Football	5.60%	35

lower class. It is of interest to note that a total of 42 respondents indicated that the participant sports activities of the lower class included street games and games of low organization (kick-the-can, stickball, tossing pennies, etc.); non-sporting activities (drinking, rioting, street watching, etc.); general non-specific activities (hardly any, simple games, rough sports, etc.); were "undecided", or had "no association"; or, wrote that they could associate no sports with this socio-economic group. Although some of these responses may have been made with genuine ignorance of the play and sporting activities of this group, it would appear that some of the respondents were indicating their acceptance of a negative stereotype of the lower class.

2. Social Class Identifications with Spectator Sports

In order to identify the perceptions held by members of the university undergraduate community concerning their identifications of particular social class groups with particular spectator sports, the following open-ended question was asked;

"In your opinion, what spectator sport do you most identify with each of the following groups?" The response mode consisted of listing the four socio-economic class groups vertically, and space was left beside each listing to allow the respondent to write in the name of the sport. It was specifically stated that if the respondent identified the same sport as being associated with two social class groups, he could write the name of that sport in each place.

The sports identified by the respondents with upper class spectators are shown in Table 83. Only those sports endorsed by 30 or more respondents (5 per cent) are listed.

Table 83. Upper class spectator sports identified using the non-directive response mode (N=594)

Sport	Proportion of respondents identifying this sport with the upper class	N
Football	17.92%	112
Tennis	14.56%	91
Horse Racing	13.76%	86
Golf	13.12%	82
Polo	12.64%	79

A total of 27 different sports were associated with upper class spectators, of which football, tennis, horse racing, golf and polo were given the most support. It was assumed that the upper class spectator involvement with horse racing would be mostly concerned with watching the performance of the horses owned by the members of the upper class and their friends, with winning money through chance as a secondary interest. The difference assumed here was not one concerned with the desire to gamble, but with the primary degree of involvement: with the upper class, social considerations were expected to be predominant. Where the respondents included more than one sport in any category, only the first sport named was coded for use in the study. This procedure was the same as was discussed in relation to the participant sports, and the rationale for making this decision was the same as before.

When the identifications of social class to particular spectator sports of the middle class were analyzed, 16 different sports were found to have been listed by the respondents. The most frequently endorsed of these are listed in Table 84.

It was seen that horse racing, tennis and polo, though strongly associated with the upper class, received little support as middle class sports.

There were 15 sports identified by the respondents as being associated with working class spectators. These

sports given 30 or more endorsements are shown in Table 85.

Table 84. Middle class spectator sports identified using the non-directive response mode (N=605)

Sport	Proportion of respondents identifying this sport with the middle class	N
Football	60.16%	376
Baseball	21.60%	135
Golf	5.60%	35

Table 85. Working class spectator sports identified using the non-directive response mode (N=603).

Sport	Proportion of respondents identifying this sport with the working class	N
Baseball	53.60%	335
Football	29.44%	184

Golf, then, remained a middle and upper class spectator sport, while ice hockey was strongly identified with the middle class alone. Basketball was not endorsed to a major degree by the respondents as a working class spectator sport, but horse racing again came into consideration. Here,

it was expected that the primary involvement was with the gambling dimension of the sport of horse racing. The low proportion of responses for bowling as a spectator sport was thought to be surprising, in view of the fact that bowling was the sport most identified with working class participants. Also, bowling is a professional sport, and would be expected to draw the majority of its support from among those most strongly associated with the sport.

The sports identified with lower class spectators are shown in Table 86.

Table 86. Lower class spectator sports identified using the non-directive response mode (N=592).

Sport	Proportion of the respondents identifying this sport with the lower class	N
Baseball	36.64%	229
Boxing	18.56%	116
Football	13.44	84
Wrestling, Professional	9.28%	58

Twenty different activities were identified by the respondents as lower class spectator sports. Only 19 respondents associated games of low organization, non-specific activities, or no sports at all, with members of

the lower class spectator group.

The selection of baseball, boxing, football, and professional wrestling as major spectator sports of the lower class does seem to have face validity, as these sports are those most frequently mentioned as opportunities for upward social mobility. If such assertions are correct, it would be normal for the members of this social class to wish to watch the sports that give members of their group a chance for success, or to watch the performances of sporting heroes drawn from among their own ranks.

3. Social Class Identifications with Particular Participant Sports

In this question, the respondents were asked;

"With which social class group would you mainly associate the players of the following sports?" The response mode allowed a choice to be made between the four social class groupings previously employed, and provision was made, through the use of a "Can't Decide" response category, for those who could not select one category alone for a particular sport.

The particular sports chosen for inclusion in this question were selected on the basis of the perceived importance of each in the United States, with this perception corrected during the interview and pre-test phases of the study.

Where a respondent placed more than one check mark

for a particular sport, or placed his check mark between two categories, his response was coded as "Can't decide". The results of the question are shown in Table 87, indicating the degree of identification of each sport with each social group.

This particular method of structuring the response pattern and indicating the sports which the respondents were to consider, was more successful in discriminating between social class identifications than the open-ended, or non-directive mode.

In identifying only those sports which were checked by over 50 per cent of the respondents in any one category, the following groupings were observed;

Upper class participant sports:

Polo (91.5% endorsement in this category)
 Sailing (78.4%)
 Fencing (77.3%)
 Horse riding (76.7%).

Middle class participant sports:

Figure skating (71.1%)
 Skiing (70.7%)
 Basketball (59.7%)
 Football (56.7%)
 Tennis (52.9%)
 Baseball (51.6%)
 Track (50.7%).

Table 87. Proportions of responses for each sport in each social class grouping.

Sport	N	Social class group					Total
		Upper	Middle	Working	Lower	Can't Decide	
Baseball	611	2.9	51.7	34.4	4.1	6.9	100
Basketball	610	1.5	59.7	22.0	9.7	7.2	100
Bowling	610	1.5	30.7	56.2	7.9	3.8	100
Boxing	606	0.7	5.3	26.6	63.4	4.1	100
Fencing	607	77.3	15.0	1.3	0.2	6.3	100
Field Hockey (women)	605	9.8	42.6	22.0	5.5	20.2	100
Figure Skating	609	21.7	71.1	2.0	0.2	5.1	100
Football	607	2.8	56.7	30.8	2.6	7.1	100
Golf	610	48.4	47.4	0.3	0.0	3.9	100
Horse Riding	610	76.7	15.9	2.1	0.7	4.6	100
Ice Hockey	607	2.1	45.9	44.2	3.0	4.8	100
Polo	610	91.5	4.1	0.8	0.3	3.3	100
Pool	603	3.8	18.4	34.7	35.2	8.0	100
Sailing	610	78.4	18.2	0.3	0.2	3.0	100
Skeet Shooting	606	49.2	30.9	11.2	0.2	8.6	100
Skiing	611	23.7	70.7	0.8	0.0	4.7	100
Soccer	609	13.6	47.5	25.6	2.6	10.7	100
Tennis	611	41.1	52.9	1.1	0.0	4.9	100
Track	608	0.7	50.7	32.1	7.2	9.4	100
Weight Lifting	611	0.2	19.5	48.9	20.6	10.8	100
Wrestling Amateur	610	0.2	22.1	39.2	31.1	7.4	100

Working class participant sports:

Bowling (56.2%); this was the only sport which was identified by over 50 per cent of the respondents in this category.

Lower class participant sports:

Boxing (63.4%); this was the only sport to receive over 50 per cent support for belonging to this category.

The degree of difficulty the respondents had in classifying particular sports may be seen in the proportion of responses contained in the "Can't decide" category. Field hockey for women received a particularly high response frequency in this category, as did weight lifting, soccer, track, skeet shooting, and pool. To a certain extent, this confusion would be due to ignorance of these sports, although a genuine failure to decide on one category would have contributed to the size of this response.

CHAPTER IX

SUMMARY AND CONCLUSIONS

Two central purposes guided this study. The first problem was to develop a system of classification which would permit the investigation of the motivations for participation and spectator involvement in the physical activities known as play, games, and sports. The second problem was to investigate the social factors which were believed to act as significant differentiating variables on each motivation for involvement with physical activity.

The three conceptualizations of physical activity which were regarded as important in the development of the classification scheme were those of Caillois, McIntosh, and Kenyon. The first two were not submitted to empirical evaluation by their authors, while the latter schema was evaluated cross-culturally among secondary school students of several modern industrial societies. The evaluative instrument utilized here, employed a combination of the various sub-domains believed to be relevant motivators for physical recreation by the authors concerned.

The underlying assumption behind the development of this classification scheme was the belief that the reasons for participating in physical activities are inherent in

the individual, and that social and cultural factors modify such preferences. It was not believed that there was a universal or common classification which grew out of the nature of man; that is, without reference to culture. Therefore, it was felt that the essential condition was that the classification system should be relevant to the population studied, and that, prior to any future use of the schema, extensive pre-testing should be employed to incorporate changes deemed necessary for the new group. The fact that there was such a difference between the preferences of the respondent group and those found in other groups by different studies indicates the importance of such a course of action.

The development of the classification system was an essential pre-condition to the investigation of those social and cultural factors which were believed to be important modifiers of preference patterns. The variable of sex was hypothesized to be of particular significance, especially as there appeared to be considerable strength in the identification of sex-appropriate behaviour in relation to physical activities. Factors present in the structure of the family itself, such as the number of siblings, ordinal position, and sex composition, were expected to be important modifiers of behaviour in relation to activity motivations. The inter-related religious factors of religious faith, strength of religious conviction, and type of high school attended were

expected to allow specification of the relationship between ideological variables and the preferences expressed in the model. Such factors as parental income, parental occupational status, and parental educational attainment, all components of the socio-economic status of the family, were believed to account for some of the variability in response, while residence was also expected to be a key variable in the analysis of motivations for participation in physical activity.

Several sub-problems were incorporated into the study in order that the factors relevant to the conceptual structures could be evaluated. These included attitudinal factors related to participation and spectator involvement in physical activities, and identification of particular games and sports with particular social groups.

The sample comprised a randomly selected group of 988 undergraduate students enrolled at Michigan State University for the 1968-1969 academic year. Of these students, a total of 624 replied to the questionnaire submitted to them. This response represented a return rate of 63.16 per cent. Although there were non-significant differences between the respondents and the members of the sample drawn on the variables of undergraduate class and program level, there were statistically significant differences when sex and local residence were considered. There was a much greater likelihood for women, and those students living in on-campus

dormitories to respond to the survey. In view of these difficulties, the less than total response received, and the level of measurement of much of the data, all analyses were performed using non-parametric statistics.

Among these respondents, the following conclusions were found to be justifiable;

1. The evaluation of the theoretical models: When the sub-domains identified as motivational factors for participation in physical activities by Caillouis, McIntosh, and Kenyon were grouped together in the same instrument, it was found that all received some degree of support by the respondents. These sub-domains were the motivation for participation in physical activities as a way of pursuing risk, thrills, and personal danger; as a way of meeting people in social situations; as a way of matching skill with a weapon against a target or quarry; as a way of improving the health and fitness of the body; as a way of involving the individual against "chance" and "luck"; as a way of having fun and enjoyment; as a way of expressing ideas and feelings in movement; as competition involving skill as the predominant part of the performance; as competition involving combat as the predominant part of the performance; and as competition against the natural environment.

The respondents were asked to choose the five statements they most favoured, and to rank them from 1 to 5 in order of preference. The motivations concerned with fun, the

development of health and fitness, competition involving skill, and social situations, were the only ones which received first-rank support by more than 5 per cent of the respondents. All the statements received some degree of positive evaluation when the endorsements were considered regardless of ranking, but those motivations concerned with "chance" and "luck", skill with a weapon, and competition involving combat received the least support.

The sub-domains identified by Kenyon received the greatest degree of support as determining factors for involvement in physical activities by these respondents. The models developed by Caillois and McIntosh were found to be too restrictive and not fully capable of encompassing the various factors leading these students to participate in play, games, and sport.

2. Social factors leading to the differential evaluation of the motivational statements concerning participation in physical activities: In terms of participant involvement in physical activities, only sex provided a consistent basis for discrimination between the ranking systems for the statements describing each of the motivational sub-domains. Women gave significantly higher rankings for the motivations involving participation to gratify a desire for social involvement, for aesthetic expression, and to have fun and excitement. The male respondents gave higher rankings for the statements concerned with the fulfillment of the desire

for competition on the basis of skill, for competition involving combat, for competition against the natural environment, for the pursuit of risk and danger, and for the demonstration of skill with a weapon. There were no other significant differences in the rankings for the various motives for participation in physical activities when sex was employed as an independent variable.

The use of the social variables; religious denomination, strength of religious conviction, marital status, number of brothers in the family, father's educational attainment, and home town size, led to the determination of several additional associations between social factors and the rankings provided for the motivational statements.

3. Social factors leading to the differential evaluation of the motivational statements concerned with spectator involvement with physical activities: With minor changes, the ten statements describing the sub-domains for participatory involvement in physical activity were employed to investigate the social factors relevant to spectator involvement. All of the statements received strong support as determinants of such involvement, although only those concerned with excitement, competition involving skill, dangerous activities, and the expression of ideas and feelings in movement received first-rank support by over 5 per cent of the respondents.

Again, sex was the only variable which consistently

accounted for a significant separation of the ranking systems. The men gave higher levels of support for statements concerned with the desire to see activities in which risk, thrills, and danger were present, and where competition on the basis of combat was the predominant element. The women in the respondent group gave significantly higher levels of support for such motivations for spectator attendance at physical activities as social interaction, health and fitness, and the expression of ideas and feelings in movement.

Although there were some significant differences revealed in the rankings for particular motivational statements when various other social factors were introduced as group variables, the clearest tendency was seen for homogeneity in the response patterns regardless of social background variables. It was believed that this homogeneity was a manifestation of a group norm developed among the members of the university population which led to the eradication of many social differences through peer-group socialization.

4. Attitudinal statements concerned with participant and spectator involvement in physical activities: In almost all questions, the consistent differentiating factor was sex. There was a consistent rejection by the female respondents of attitudinal statements concerned with manifestations of competition, domination (success and winning), the exploitation of skill, and similar values related to the

ideological bases of the economic sector. The female respondents gave significant levels of support to the values of companionship, fairness, and relaxation and fun as bases for participatory and spectator involvement in games and sports. They also showed a greater preference for social and cultural activities in their leisure.

The male respondents provided significantly greater support for physical recreation, and for the competition and success-oriented values as motivators for involvement in games and sports.

These results, combined with those relating sex to the motivational statements drawn from the theoretical models, provided evidence of the effect of socialization practices on the inculcation of sex-appropriate values for later involvement in adult society, and the halo-effect that these practices have on activities that are not related to the economic sector.

5. Preferred sports for participatory and spectator involvement: The male respondents indicated their greatest support for football, tennis, basketball, baseball, and golf as participant sports. Football, ice hockey, basketball, and baseball were most frequently listed as favourite spectator sports.

The female respondents gave their greatest support to the participant sports of swimming, tennis, bowling, and baseball. They listed football, basketball, baseball, and

swimming as their favourite spectator sports.

6. Social class identifications with sports: Although open-ended and forced-choice listings were provided for the determination of the relationships between particular sports and socio-economic status, the fixed-choice mode gave the greater degree of discrimination. Majority support was provided for the assessment of polo, sailing, fencing, and horse riding as upper class participant sports. Figure skating, skiing, basketball, football, tennis, baseball and track were identified as middle class sports. Bowling was the only sport given majority support as being identified with the working class, while boxing was the only sport identified with the lower class by at least 50 per cent of the respondents.

Play, games, and sport, then, were found to be subject to considerable variation with the introduction of actual and perceived social variables. The sex role, however, was found to be the one social factor which provided for consistent attitudinal and motivational differentiation for involvement with such physical activities.

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APPENDIX A

THE QUESTIONNAIRE

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

COLLEGE OF EDUCATION • ERICKSON HALL

May 9, 1969.

Dear Colleague,

The School for Advanced Studies of the College of Education, with the approval of the Office of Institutional Research of Michigan State University, is conducting a study of the sociological influences on the use of leisure time.

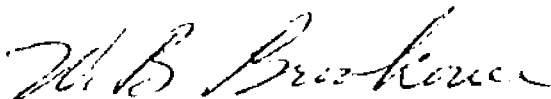
This study is being made to determine the reasons people have for taking part in physical activity, games and sports during their leisure time, and, with the information gained, it is hoped that programs can be designed to encourage greater leisure participation by professional people in the future. The study will be repeated with other groups of people as well; people from all walks of life.

Your name was one of 1,000 selected at random from among the undergraduate population of M.S.U. You can provide us with the information we need to help plan for future recreation needs.

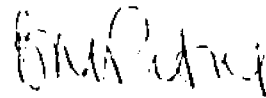
Enclosed is a short questionnaire. Please answer the questions and return the questionnaire within a week - - it should take only 20 to 30 minutes to complete. We assure you that the information you give will be treated as confidential. The questionnaire is to be returned through CAMPUS MAIL, and no stamp is required if you give the secretary of your College or Department the envelope so that it may be forwarded to this Office.

Your cooperation is not only appreciated, it is the necessary ingredient for the success of this project. Thank you in advance.

Sincerely,



Dr. W. B. Brookover,
Professor of Education and Sociology.



Mr. B. M. Petrie,
Project Coordinator.

TO RETURN THE QUESTIONNAIRE: Replace the questionnaire in its original envelope. Place the enclosed address label over the tag showing your own name and address. Return through CAMPUS MAIL, by giving the envelope containing the questionnaire to the Secretary of your College or Department.

QUESTIONNAIRE ON PHYSICAL ACTIVITY PREFERENCES IN LEISURE

DIRECTIONS: All of the questions can be answered by circling a number, checking an answer, writing in a number, or writing in a reply. Please read all of the instructions given for the various kinds of questions.

The numbers at the right edge of the paper refer to IBM card column numbers, and may be ignored.

Study ID Number _____ IBM No. _____
 Card Number 1 (1-4)
 (5)

Part 1. Attitude Questions

1. In which kinds of activities would you rather spend your time; leisure activities or work activities? CHECK (X) ONE OF THE CHOICES BELOW.

_____ Leisure activities
 _____ Work (Study) activities (31)

2. In which type of activity would you prefer to spend your leisure time? RANK THE CHOICES FROM 1 TO 3. PUT A ONE (1) BESIDE YOUR FIRST PREFERENCE, A TWO (2) BESIDE YOUR SECOND PREFERENCE, AND A THREE (3) BESIDE YOUR THIRD PREFERENCE.

_____ Cultural Activity
 _____ Social Activity
 _____ Physical Activity (32-34)

3. In the activity most preferred in No. 2, do you prefer to watch others or do things yourself? CHECK (X) ONE OF THE CHOICES BELOW.

_____ Watch Others
 _____ Do Things Myself (35)

4. Considering the physical activities that you do in your leisure time, what type of involvement do you prefer? RANK THE CHOICES FROM 1 TO 3. PUT A ONE (1) NEXT TO THE CHOICE YOU MOST PREFER, A TWO (2) BESIDE YOUR SECOND PREFERENCE, AND A THREE (3) BESIDE YOUR THIRD PREFERENCE.

_____ As a Participant

_____ As a Spectator

_____ As Both Participant and Spectator

(36-38)

5. When you participate in games, what gives you the most satisfaction? RANK THE CHOICES FROM 1 TO 3. PUT A ONE (1) BESIDE THE CHOICE THAT GIVES THE MOST SATISFACTION, A TWO (2) BESIDE THE CHOICE THAT GIVES YOU THE SECOND MOST SATISFACTION, AND A THREE (3) BESIDE THE CHOICE THAT GIVES YOU THE LEAST SATISFACTION.

_____ Winning

_____ Companionship

_____ Demonstrating Your Skill

(39-41)

6. Below are some words that are often used to explain why a person plays a game. RANK THE CHOICES FROM 1 TO 6. PUT A ONE (1) BESIDE THE CHOICE YOU THINK IS MOST IMPORTANT, PUT A TWO (2) BESIDE YOUR SECOND MOST IMPORTANT CHOICE, AND CONTINUE UNTIL YOU FINISH BY PUTTING A SIX (6) BESIDE THE CHOICE THAT IS LEAST IMPORTANT TO YOU.

_____ Competition

_____ Companionship

_____ Excitement

_____ Prestige

_____ Self Satisfaction

_____ Relaxation and Fun

(42-47)

7. When you participate in sports, which type do you prefer, individual or team sports? CHECK (X) ONE OF THE FOLLOWING CHOICES

_____ Individual Sports

_____ Team Sports

(48)

8. What sport do you most enjoy playing? WRITE THE NAME OF THE SPORT ON THE LINE BELOW.

(49-50)

9. How did you first learn to play your favorite sport? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ My parents taught me
 _____ My brothers or sisters taught me
 _____ Friends at home taught me
 _____ Friends on campus taught me
 _____ My physical education instructors or teachers taught me
 _____ No one taught me

(51)

10. What do you think is most important in playing a game? RANK THE CHOICES FROM 1 TO 3. PUT A ONE (1) BESIDE THE CHOICE YOU THINK IS MOST IMPORTANT, PUT A TWO (2) BESIDE YOUR SECOND MOST IMPORTANT CHOICE, AND PUT A THREE (3) BESIDE THE CHOICE YOU THINK IS LEAST IMPORTANT.

_____ To play it as well as you are able.
 _____ To beat your opponent.
 _____ To play it fairly

(52-54)

11. People watch sports for many reasons. Four of these reasons are listed below. RANK THEM FROM 1 TO 4. PUT A ONE (1) BESIDE THE ONE YOU THINK IS THE MOST IMPORTANT REASON FOR YOU, PUT A TWO (2) BESIDE YOUR SECOND MOST IMPORTANT CHOICE, PUT A THREE (3) BESIDE YOUR THIRD MOST IMPORTANT CHOICE, AND PUT A FOUR (4) BESIDE THE CHOICE THAT IS THE LEAST IMPORTANT REASON FOR YOUR WATCHING.

_____ Excitement
 _____ Companionship
 _____ Escape from routine
 _____ To see skillful performances

(55-58)

12. When you watch sports, which type do you prefer, individual or team sports? CHECK (X) ONE OF THE CHOICES BELOW.

_____ Team Sports
 _____ Individual Sports

(59)

13. What sport do you most enjoy watching? WRITE THE NAME OF THE SPORT ON THE LINE BELOW.

(60-61)

Card Number. 2

(5)

Part 2.******* READ THIS ENTIRE PAGE BEFORE ANSWERING.**

14. Ten Statements are given below as reasons for participating in physical activity. CHOOSE THE FIVE (5) STATEMENTS THAT ARE MOST IMPORTANT TO YOU IN YOUR SELECTION OF ACTIVITIES TO PLAY. RANK THESE FIVE STATEMENTS FROM 1 TO 5. PUT A ONE (1) NEXT TO THE STATEMENT YOU THINK IS MOST IMPORTANT FOR YOU; A TWO (2) NEXT TO THE SECOND MOST IMPORTANT; AND SO ON UNTIL YOU HAVE PUT A NUMBER NEXT TO EACH OF THE FIVE STATEMENTS YOU SELECTED. THE NUMBER FIVE (5) SHOULD BE NEXT TO THE STATEMENT YOU CONSIDER TO BE LEAST IMPORTANT OF THOSE YOU SELECTED.

- | | | |
|-------|--|------|
| _____ | Physical activity as a way of pursuing personal risk, thrills and danger. | (31) |
| _____ | Physical activity as a way of meeting people in social situations. | (32) |
| _____ | Physical activity that matches your skill in the use of a weapon against a target or quarry. | (33) |
| _____ | Physical activity as a way of improving the health and fitness of the body. | (34) |
| _____ | Physical activity as a way of involving the individual against "chance" or "luck" in an attempt to win an object or money. | (35) |
| _____ | Physical activity as a way of having fun and for pure enjoyment. | (36) |
| _____ | Physical activity as a way of expressing ideas and feelings in movement. | (37) |
| _____ | Physical activity as competition involving SKILL as the predominant part of the performance. | (38) |
| _____ | Physical activity as competition involving COMBAT as the predominant part of the performance. | (39) |
| _____ | Physical activity as competition against part of the natural environment (water, mountain, snow, etc.). | (40) |

***** READ THIS ENTIRE PAGE BEFORE ANSWERING.

15. Ten statements are given below as reasons for being a spectator, viewer, or onlooker of physical activities. CHOOSE THE FIVE (5) STATEMENTS THAT ARE MOST IMPORTANT TO YOU IN YOUR SELECTION OF ACTIVITIES TO WATCH. RANK THESE FIVE STATEMENTS FROM 1 TO 5. PUT A ONE (1) NEXT TO THE STATEMENT YOU THINK IS MOST IMPORTANT TO YOU; PUT A TWO (2) NEXT TO THE SECOND MOST IMPORTANT STATEMENT FOR YOU; AND SO ON UNTIL YOU HAVE PUT A NUMBER NEXT TO EACH OF THE FIVE STATEMENTS YOU SELECTED. THE NUMBER FIVE (5) SHOULD BE NEXT TO THE STATEMENT YOU CONSIDER TO BE THE LEAST IMPORTANT OF THOSE YOU SELECTED.

- | | | |
|-------|---|------|
| _____ | Watching people involved in dangerous, thrilling and risky activities. | (41) |
| _____ | Watching people involved in physical activities which are enjoyed for purely social reasons. | (42) |
| _____ | Watching a person match his skill in the use of a weapon against a target or quarry. | (43) |
| _____ | Watching people involved in activities that improve the health and fitness of the body. | (44) |
| _____ | Watching people involved against "chance" or "luck" in an attempt to win an object or money. | (45) |
| _____ | Watching physical activities that give you a feeling of excitement. | (46) |
| _____ | Watching the expression of ideas and feelings in physical movement. | (47) |
| _____ | Watching competition involving SKILL as the predominant part of the performance. | (48) |
| _____ | Watching competition involving COMBAT as the predominant part of the performance. | (49) |
| _____ | Watching people in competition against part of the natural environment (water, mountain, snow, etc.). | (50) |

The following questions are concerned with your background, as well as with some of your future plans.

Part 3. Background Questions.

18. How old were you on your last birthday? WRITE IN ON THE FOLLOWING LINE _____ (7-8)

19. What is your sex? CHECK (X) ONE OF THE FOLLOWING.

_____ Male

_____ Female

(9)

20. What is your current marital status? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ Single (never married)

_____ Single (divorced)

_____ Single (widowed)

_____ Separated

_____ Married (once only)

_____ Married (remarried)

(10)

21. Are you an American citizen? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ Yes

_____ No

(11)

22. How many living brothers do you have? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ One

_____ Two

_____ Three

_____ Four or More

_____ None

(12)

23. How many living sisters do you have? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ One
 _____ Two
 _____ Three
 _____ Four or More
 _____ None

(13)

24. How many living brothers and sisters are older than you? CIRCLE ONE OF THE FOLLOWING.

1 2 3 4 5 6 7 8 9 10 10+ None.

(14-15)

25. What do you consider yourself to be? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ Deeply Religious
 _____ Moderately Religious
 _____ Indifferent to Religion
 _____ Opposed to Religion

(16)

26. In what religion were you raised? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ Protestant
 _____ Catholic
 _____ Jewish
 _____ Other
 _____ None
 _____ No Answer

(17)

27. What type of high school did you attend? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____ Public High School
 _____ Parochial High School
 _____ Private High School

(18)

28. In what College are you studying? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____	Agriculture and Natural Resources
_____	Arts and Letters
_____	Business
_____	Communication Arts
_____	Education
_____	Engineering
_____	Home Economics
_____	Human Medicine
_____	James Madison
_____	Justin Morrill
_____	Lyman Briggs
_____	Natural Science
_____	Social Science
_____	University College
_____	Veterinary Medicine

(19-20)

29. In what specific academic area are you specializing? WRITE THE TITLE OF YOUR MAJOR ON THE LINE BELOW.

(21-22)

30. What was the total gross income of your parents last year (from salaries and all other sources)? CHECK (X) ONE OF THE FOLLOWING CHOICES.

_____	\$0 to \$2,790
_____	\$2,791 to \$4,790
_____	\$4,791 to \$6,490
_____	\$6,491 to \$8,999
_____	\$9,000 to \$12,000
_____	\$12,001 to \$15,000
_____	\$15,001 to \$20,000
_____	More than \$20,000
_____	Not Known

(23)

31. Who was the major provider (financially) for the family when you were in High School? CHECK (X) ONE OF THE FOLLOWING RESPONSES.

_____	Father
_____	Mother
_____	Other (Please specify _____)

(24)

32. What was the occupation of the person who financially provided for your family while you were in High School? WRITE THE TITLE OF THE OCCUPATION ON THE LINE BELOW.

(25)

33. Describe as accurately as possible what the person mentioned in No. 31 and No. 32 did while engaged in his occupation. For example; he supervised the work of others, he sold door to door, he was a General Practitioner, etc. WRITE YOUR RESPONSE ON THE LINES BELOW.

(26)

34. What was the highest level of education attained by this person? CHECK (X) ONE OF THE FOLLOWING CHOICES.

☐	Graduate School
☐	College Degree
☐	Attended College
☐	High School Graduate
☐	Attended High School
☐	Grade 9
☐	Attended Junior High School
☐	Grade 6
☐	Attended Elementary School
☐	Not Known

(27-28)

35. What is the size of the population of your home town? CHECK (X) ONE OF THE FOLLOWING CHOICES.

☐	Less than 5,000 people
☐	5,001 to 10,000 people
☐	10,001 to 25,000 people
☐	25,001 to 100,000 people
☐	100,001 to 500,000 people
☐	500,001 to 1 Million people
☐	Over 1 Million people

(29)

36. What type of job do you plan to take when you finish your College education? WRITE DOWN A DESCRIPTION OF THIS JOB ON THE LINES BELOW.

(30)

Card Number 3Part 4.

37. In your opinion, what participant sport do you most identify with each of the following groups? YOU MAY WRITE IN THE SAME SPORT TWICE IF YOU THINK IT IS APPROPRIATE. WRITE THE NAME OF THE SPORT BESIDE THE NAME OF THE GROUP.

Upper Class _____

Middle Class _____

Working Class _____

Lower Class _____

(31-38)

38. In your opinion, what spectator sport do you most identify with each of the following groups? YOU MAY WRITE IN THE SAME SPORT TWICE IF YOU THINK IT IS APPROPRIATE. WRITE THE NAME OF THE SPORT BESIDE THE NAME OF THE GROUP.

Upper Class _____

Middle Class _____

Working Class _____

Lower Class _____

(39-46)

39. With which social class group would you mainly associate the players of the following sports? TO INDICATE YOUR CHOICE, PLACE AN "X" IN THE APPROPRIATE COLUMN. CHECK ONLY ONE ON EACH LINE.

	1	2	3	4	5	
	Upper	Middle	Working	Lower	Can't	
	Class	Class	Class	Class	Decide	
Baseball	_____	_____	_____	_____	_____	(47)
Basketball	_____	_____	_____	_____	_____	(48)
Bowling	_____	_____	_____	_____	_____	(49)
Boxing	_____	_____	_____	_____	_____	(50)
Fencing	_____	_____	_____	_____	_____	(51)
Field Hockey (women)	_____	_____	_____	_____	_____	(52)
Figure Skating	_____	_____	_____	_____	_____	(53)
Football	_____	_____	_____	_____	_____	(54)
Golf	_____	_____	_____	_____	_____	(55)
Horse Riding	_____	_____	_____	_____	_____	(56)
Ice Hockey	_____	_____	_____	_____	_____	(57)
Polo	_____	_____	_____	_____	_____	(58)
Pool	_____	_____	_____	_____	_____	(59)
Sailing	_____	_____	_____	_____	_____	(60)
Skeet Shooting	_____	_____	_____	_____	_____	(61)
Skiing	_____	_____	_____	_____	_____	(62)
Soccer	_____	_____	_____	_____	_____	(63)
Tennis	_____	_____	_____	_____	_____	(64)
Track	_____	_____	_____	_____	_____	(65)
Weight Lifting	_____	_____	_____	_____	_____	(66)
Wrestling (amateur)	_____	_____	_____	_____	_____	(67)

THANK YOU FOR CONTRIBUTING TO OUR STUDY. FOR INSTRUCTION FOR RETURN, SEE THE COVER LETTER.

APPENDIX B

FOLLOW UP CARDS

First Follow-up Card

201 Erickson Hall.
Michigan State University.

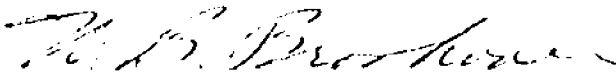
Dear Colleague,

Last week, a questionnaire concerning your attitudes toward leisure and physical activity, was mailed to you.

This card is to remind you of the importance of the project, and to ask that you complete and return the questionnaire as soon as possible.

If you have already returned the questionnaire, please accept our thanks for your participation in the study.

Sincerely,



Dr. W. B. Brookover.
Professor of Education and Sociology.



Mr. B. M. Petrie.
Project Coordinator.

Second Follow-up Card

201 Erickson Hall.
Michigan State University.

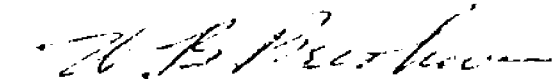
Dear Colleague,

On May 9 a questionnaire concerning your attitudes toward leisure and physical activity was mailed to you.

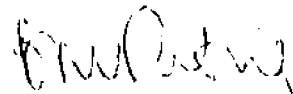
This card is a further reminder of the importance of the study, and we ask that you complete and return the questionnaire as soon as possible.

If you have already returned the questionnaire, we thank you for your willingness to participate in the study.

Sincerely,



Dr. W. B. Brookover.
Professor.



Mr. B. M. Petrie.
Project Coordinator.

APPENDIX C

DETAILED TABLES USED FOR SUMMARIZATION OF RESULTS

Table 88. Sex and the motivation for participation in physical activity as a way of pursuing personal risk, thrills, and danger (N=625).

Sex	Did not rank item	Ranked item	TOTAL
Male (N=306)	65.69	34.31	100
Female (N=319)	84.95	15.05	100

$$\chi^2 = 30.3263, p \text{ less than } .001.$$

Table 89. Sex and the motivation for participation in physical activity as a way of meeting people in social situations (N=625).

Sex	Did not rank item	Rank order given by respondents					TOTAL
		1	2	3	4	5	
Male (N=306)	39.54	3.92	8.82	10.46	18.63	18.63	100
Female (N=319)	22.26	9.09	21.94	20.69	14.73	11.29	100

$$\chi^2 = 56.3848, p \text{ less than } .001.$$

Table 90. Sex and the motivation for participation in physical activity that matches skill in the use of a weapon against a target or quarry (N=625).

Sex	Did not rank item	Ranked item	TOTAL
Male (N=306)	84.97	15.03	100
Female (N=319)	90.91	9.09	100

$$\chi^2 = 4.6740, p \text{ less than } .05.$$

Table 91. Sex and the motivation for participation in physical activity as a way of improving the health and fitness of the body (N=625).

Sex		Did not rank item	Rank order given by respondents					TOTAL
			1	2	3	4	5	
Male	(N=306)	9.80	21.57	27.45	20.59	11.11	9.48	100
Female	(N=319)	8.15	15.99	27.27	26.02	13.17	9.40	100

$\chi^2 = 5.5922$, not significant at $p .05$.

Table 92. Sex and the motivation for participation in physical activity as a way of involving the individual against "chance" or "luck" in an attempt to win an object or money (N=625).

Sex		Did not rank item	Ranked item	TOTAL
Male	(N=306)	85.62	14.38	100
Female	(N=319)	89.03	10.97	100

$\chi^2 = 1.3480$, not significant at $p .05$.

Table 93. Sex and the motivation for participation in physical activity as a way of having fun and pure enjoyment (N=625).

Sex		Did not rank item	Rank order given by respondents					TOTAL
			1	2	3	4	5	
Male	(N=306)	5.88	43.79	19.93	16.01	8.17	6.21	100
Female	(N=319)	1.57	61.13	19.44	12.54	3.45	1.88	100

$\chi^2 = 31.5237$, p less than $.001$.

Table 94. Sex and the motivation for participation in physical activity as a way of expressing ideas and feelings in movement (N=625).

Sex		Did not rank item	Ranked item		TOTAL
			1, 2, 3	4, 5	
Male	(N=306)	65.69	13.73	20.59	100
Female	(N=319)	36.05	30.72	33.23	100

$$\chi^2 = 56.499, p \text{ less than } .001.$$

Table 95. Sex and the motivation for participation in physical activity as competition involving skill as the predominant part of the performance (N=625).

Sex		Did not rank item	Rank order given by res- pondents					TOTAL
			1	2	3	4	5	
Male	(N=306)	16.99	16.99	17.32	17.97	17.97	12.75	100
Female	(N=319)	24.45	5.64	10.34	16.30	22.26	21.00	100

$$\chi^2 = 35.6225, p \text{ less than } .001.$$

Table 96. Sex and the motivation for participation in physical activity as competition involving combat as the predominant part of the performance (N=625).

Sex		Did not rank item	Ranked item	TOTAL
Male	(N=306)	83.99	16.01	100
Female	(N=319)	95.92	4.08	100

$$\chi^2 = 23.5902, p \text{ less than } .001.$$

Table 97. Sex and the motivation for participation in physical activity as competition against part of the natural environment (N=625).

Sex		Did not rank item	Ranked item		TOTAL
			1, 2, 3	4, 5	
Male	(N=306)	46.08	25.49	28.43	100
Female	(N=319)	49.84	13.79	36.36	100

$$\chi^2 = 14.4341, p \text{ less than } .001.$$

Table 98. Sex and the motivation for watching people involved in dangerous, thrilling, and risky activities (N=625).

Sex		Did not rank item	Ranked item		TOTAL
			1, 2, 3	4, 5	
Male	(N=306)	29.41	43.79	46.80	100
Female	(N=319)	52.35	22.26	25.39	100

$$\chi^2 = 42.1850, p \text{ less than } .001.$$

Table 99. Sex and the motivation for watching people involved in physical activities which are enjoyed for purely social reasons (N=625).

Sex		Did not rank item	Ranked item	TOTAL
Male	(N=306)	75.49	24.51	100
Female	(N=319)	62.38	37.62	100

$$\chi^2 = 11.8978, p \text{ less than } .001.$$

Table 100. Sex and the motivation for watching a person match his skill in the use of a weapon against a target or quarry (N=625).

Sex	Did not rank item	Ranked item	TOTAL
Male (N=306)	78.43	21.57	100
Female (N=319)	83.70	16.30	100

$\chi^2 = 2.4962$, not significant at p .05.

Table 101. Sex and the motivation for watching people involved in activities that improve the health and fitness of the body (N=625).

Sex	Did not rank item	Ranked item	TOTAL
Male (N=306)	78.43	21.57	100
Female (N=319)	62.07	37.93	100

$\chi^2 = 19.1694$, p less than .001

Table 102. Sex and the motivation for watching people involved against "chance" or "luck" in an attempt to win an object or money (N=625).

Sex	Did not rank item	Ranked item	TOTAL
Male (N=306)	67.32	32.68	100
Female (N=319)	72.41	27.59	100

$\chi^2 = 1.6920$, not significant at p .05.

Table 103. Sex and the motivation for watching physical activities that give you a feeling of excitement (N=625).

Sex		Did not rank item	Rank order given by respondents					TOTAL
			1	2	3	4	5	
Male	(N=306)	8.17	35.95	25.16	14.05	10.78	5.88	100
Female	(N=319)	6.27	41.69	22.88	12.23	11.60	5.33	100

$$\chi^2 = 3.0223, \text{ not significant at } p .05.$$

Table 104. Sex and the motivation for watching the expression of ideas and feelings in physical movement (N=625).

Sex		Did not rank item	Ranked item		TOTAL
			1, 2, 3	4, 5	
Male	(N=306)	67.97	14.71	17.32	100
Female	(N=319)	39.18	35.74	25.08	100

$$\chi^2 = 55.8660, p \text{ less than } .001.$$

Table 105. Sex and the motivation for watching competition involving skill as the predominant part of the performance (N=625).

Sex		Did not rank item	Rank order given by respondents					TOTAL
			1	2	3	4	5	
Male	(N=306)	7.84	36.93	27.78	16.67	7.52	3.27	100
Female	(N=319)	4.70	35.74	26.96	18.81	8.15	5.64	100

$$\chi^2 = 5.0181, \text{ not significant at } p .05.$$

Table 106. Sex and the motivation for watching competition involving combat as the predominant part of the performance (N=625).

Sex		Did not rank item	Ranked item	TOTAL
Male	(N=306)	53.59	46.41	100
Female	(N=319)	88.71	11.29	100

$$\chi^2 = 92.8579, p \text{ less than } .001.$$

Table 107. Sex and the motivation for watching people in competition against part of the natural environment (N=625).

Sex		Did not rank item	Rank order given by respondents					TOTAL
			1	2	3	4	5	
Male	(N=306)	41.83	2.94	7.19	13.73	18.63	15.69	100
Female	(N=319)	35.11	3.45	9.40	18.18	16.30	17.55	100

$$\chi^2 = 5.6342, \text{ not significant at } p .05.$$