

ATHLETIC PARTICIPATION IN HIGH SCHOOL SPORTS:  
A SPATIAL ANALYSIS

By

PHILLIP DEAN ADRIAN

Bachelor of Arts  
Wichita State University  
Wichita, Kansas  
1965

Master of Education  
Wichita State University  
Wichita, Kansas  
1968

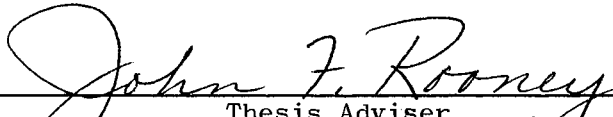
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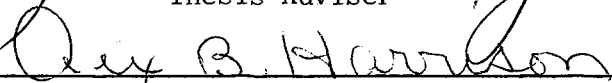
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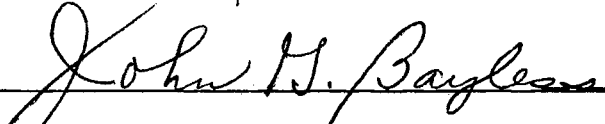
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Thesis Approved:

  
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Thesis Adviser

  
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\_\_\_\_\_  
Dean of the Graduate College

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## CHAPTER I

### INTRODUCTION

In the twentieth century, sport has become an inextricable part of our American society. The implications of sport are prodigious as they are reflected in religions, political, economic, and cultural ways of life. That American sport is a multi-billion dollar industry indicates a proclivity toward "bigger and better" things. Politicians are aware of this salient aspect of American life; many visit the winning locker rooms after games that just coincidentally are being viewed by a nationwide audience. For many citizens of the United States, sport is a religion. It is read about in the morning, talked about at work, participated in sometime during the day, seen last on television at night, and attended on Sunday.

Because sport has assumed such importance in one's life, it is pertinent to this study to define the term both in relation to society and to this investigation. According to Webster, sport is recreation, a form of diversion from daily activities. Sport also exists as a means of self-amusement. It is physical activity engaged in for pleasure, or it can be a particular activity, such as hunting or an athletic game.

Sport can range from a festive atmosphere of play where fun and frolic are the salient features, or it can assume qualities of commercialism found most apparent in professional athletics. However, many people view sport as play, and consequently, sport has implied

triviality. Sport assuming the role of play is most apparent in the recreational sense where it becomes a diversion for the participant. It is not highly organized, it is relaxing, and it is engaged in for the sake of pleasure.

For many people, the meaning of sport is commensurate with the term athletics. According to Keating, "The radical difference between sport and athletics exists not so much in the game, the mechanics, or the rules, but in the attitude, preparation and purpose of the participants."<sup>1</sup> The professional athlete is seriously motivated because he must win or else his livelihood will suffer. The system is based then both on excellence and winning at all costs.

As professional athletics have developed, they are oriented to today's achievement - production society. One can see the attitude of the participant in organized athletics as being competitive. Elements of sportsmanship can disappear in the competitive struggle for supremacy on the field or court. To participate in sport requires very little preparation, but participation in competitive athletics requires hours of preparation.

Baker defines sport as activities involving participation by individuals who are not necessarily athletes while athletics are those physical activities engaged in by athletes.<sup>2</sup> The athlete is the one who has trained strenuously and has developed a high degree of physical skill in some area as a result of his training.

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<sup>1</sup>James W. Keating, "Paradoxes in American Athletics," in Athletics in America, ed. Arnold Flath (Corvallis, Oregon, 1972), p. 12

<sup>2</sup>Terry Baker, "Athletics---A Drive For Excellence," in Athletics in America, ed. Arnold Flath (Corvallis, Oregon, 1972), p. 12.

Sport, as viewed by the sociologist Gerald Kenyon, "consists of the totality of those institutionalized games whose actions are dependent upon physical prowess."<sup>3</sup>

The American sports scene presents a wide and varied spectrum of activities. It ranges from the highly organized and spectator oriented professional sports of football, basketball, and ice hockey to the games played on the various playgrounds, streets, alleys, and vacant lots of America. Sports activities are sponsored by schools, churches, industrial and business organizations, armed forces, and recreational agents. Sports can be a form of entertainment and showmanship, or they can be strictly for enjoyment and personal values achieved by the individual.

This varied American sports scene includes aspects that can be traced back to earlier civilizations. Forms of present day American sport were emphasized many generations ago. Primitive man undoubtedly felt the urge to play, and often he took part in games as part of his religious observances. Sport also served a very practical purpose, for man had to practice skills that were essential for survival. Contests were held using the club, spear, and a bow and arrow. Running, fighting, wrestling, horse racing, and swimming were other highly useful activities needed in the struggle for survival.

In all of the early civilizations, similar sports and recreation were part of life to a greater or lesser degree. The Egyptians exercised in gymnastic activities and field sports.. In Babylonia and Assyria, the skills of hunting and fishing received preference. The

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<sup>3</sup>Gerald Kenyon, "Sport and Society: At Odds or in Concert?" in Athletics in America, ed. Arnold Flath (Corvallis, Oregon, 1972), p. 34.

Chinese were active sportsmen and excelled in activities for swordsmanship. During other eras, popular activities were wrestling, jiu-jitsu, and boxing.

The Athenian Greeks saw sports as an integral part of national life. The Athenian ideal was to unite the "man of action" and "the man of wisdom" into a single, well-integrated personality.<sup>4</sup> The early Greeks put more emphasis on the formation of character than on the development of strength and athletic abilities. As the Greek civilization progressed, the young men spent more time in the palestra undergoing training procedures; over specialization was the result. "Talented boys were selected for advanced preparation, a move that possibly ushered in the era of the athletic scholarship."<sup>5</sup>

In the Greek culture, a variety of festivals and games were conducted at various levels of society. The most famous of the Panhellenic games were the Olympic Games held first at Olympia in 776 B.C. These games were considered very important. The pentathlon was the most important event; and it included the broadjump, discus throw, stadium sprint, and wrestling. Other events included boxing, running races, horse races, and chariot races.

As the decline of this great era in sport began, intellectualism increased and physical fitness dropped in importance. Amateur athletics lost influence, and professional athletics gained stature. This

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<sup>4</sup>Deobold B. Van Dalen, A World History of Physical Education and Sport (Englewood Cliffs, New Jersey, 1971), p. 47.

<sup>5</sup>Earle F. Ziegler, Problems in the History and Philosophy of Physical Education and Sport (Englewood Cliffs, New Jersey, 1968), p. 104.

professionalism of the athlete emphasized athletic specialization.

There was a great amount of hero worship placed on the athlete.

The Romans were a more practical, industrious people and lacked the athletic genius and capacity for intellectual contemplation of the Greeks. Festivals and games were an integral part of Roman life. The Romans were more interested in horse and chariot races and gladiator contests than athletic contests. The games and festivals were of great value politically rather than athletically.

The decline and fall of these two great empires resulted from an increased emphasis of sport professionalization based upon personal pleasure and group entertainment. The goals of overall harmonious development of the individual were lost.

Sport and athletics in the Middle Ages were dominated by asceticism and scholasticism, and participation in recreational sport for physical pleasure was frowned upon. Intellectual and philosophical life was dominated by Christian dogmatism which suppressed athletic expression and almost all types of sporting activity.

During the Renaissance and the Reformation, the attitude toward participation in sport gradually changed. In England, there seemed to be a resurgence of interest in athletics.

In the United States, early sport was emphasized as physical training to prepare for military fitness during and after the Revolutionary War. During the early part of the nineteenth century, many changes were taking place in the lives of the people due to increasing industrialization and urbanization. The many arduous activities of frontier life were beginning to give way to game and sporting activities. The early influence was British, and some of the early sports were more appropriate

for the well-to-do individuals who were able to afford their own social and athletic clubs.

After the Civil War, interest in athletics expanded. The war indicated the need for physical training. The Turners were successful in promoting German gymnastics in the public schools. Many athletic leagues, both amateur and professional, were formed.

Between 1850 and 1870, intercollegiate sports were organized to some extent; and competition was conducted in rowing, baseball, football, and track and field. After 1870, intercollegiate sport grew very rapidly. To help promote sound intercollegiate athletic programs, the National Collegiate Athletic Association was organized in 1905, initially known as the Intercollegiate Athletic Association of the United States.

The Amateur Athletic Union was organized in 1888 by a group of interested sportsmen in order to maintain a sound program of athletics. The A.A.U. accepted the traditional viewpoint that "an amateur athlete is one who engages in sports for the pleasure and physical, mental, and social benefits he derives therefrom and to whom sport is nothing more than an avocation."<sup>6</sup>

At the same time, the value of play in the total educative process was being stressed by twentieth-century educators. The literature of the time stressed that participation in sport tended to improve young people's attitudes toward desirable group behavior and citizenship. Sport was an enculterating phenomenon. Thus, sports and games gradually began to rival gymnastic instruction in the school program.

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<sup>6</sup>Ziegler, p. 109.

At the turn of the century high school athletics began, and since they had a pattern of sports to follow, that of colleges and universities, a great sports boom soon developed at the interscholastic level. Eventually state-wide athletic associations were needed, and in 1920 the National Federation of State High School Athletic Associations was organized.

From 1920 to 1930, there was a great increase in sports participation. The athletic programs in high school, college, and professional sport generated tremendous spectator interest. Huge athletic stadiums were built, athletic coaches and playground leaders were needed, and professional preparation programs increased. Problems of subsidization and recruitment began to emerge; and in the report by the Carnegie Foundation in 1929, entitled "American College Athletics," serious questions concerning practice in men's intercollegiate sports were asked. Semiprofessionalism had arrived in American college sport.

Since 1930, interest in competitive sport and physical recreation has experienced continued growth. In fact, the use of leisure has become an urgent concern. Sports has become more structured and organized at various levels by agencies other than the schools. Baseball has been organized into Pony Leagues, Babe Ruth Leagues, and the American Legion Leagues. In 1930, Pop Warner football was originated. In 1950, Biddy basketball was started. The A.A.U. swimming program, organized in 1950, was a major sport development. The A.A.U. also began a Junior Olympics program.

In the late 1960's, the program for girls' and women's sports gained momentum, and since that time the significance of athletics for women in relation to the men's programs has only begun to be felt.



"The idea of the "Golden Age of Sports" is certainly true for America today although the term now seems a bit hackneyed."<sup>7</sup> Sports participation and interest in athletics at all levels during the 1960's and early 1970's has surpassed any previous period. However, some dark spots do exist in this bright picture. As Van Dalen points out, "The trend toward professionalism may parallel the tragic decline of the ancient Greek and Roman society."<sup>8</sup> Many people have viewed this trend toward professionalism in sports apprehensively. There is presently a great deal of pressure on young athletes to win and set new records. Accordingly, these children are spending great amounts of time in practice and quite possibly could be missing out on other valuable experiences of growing up. Commensurate to this trend of professionalism, competitive athletics for children is increasing despite expressed concern from the medical profession. "Besides damaged knees, concussions, and other injuries, football exacts a costly toll of twenty-five lives each year--a price which is willingly paid."<sup>9</sup>

The sports participation figures at all levels are very impressive in America today. A wide variety of sports are available for participation for everyone from elementary schools to adults. Many agencies, public and private, school and non-school, are sponsoring sports programs for participation. The data relating to these programs are somewhat scattered; however, information concerning high school sports

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<sup>7</sup>Van Dalen, p. 549.

<sup>8</sup>Ibid.

<sup>9</sup>Ibid.

participation is available from the National Federation of State High School Associations in Elgin, Illinois.

### Statement of the Problem

The purpose of this study was to examine participation patterns which characterize interscholastic athletics for boys in the United States. Particular emphasis was focused on the geographical differences which exist. Specific problems included the following:

- (1) What specifically was the participation within each state on a per capita basis for both team and individual sports?
- (2) Just what determination could be made of the spatial participation patterns of each sport on a total and a per capita basis?
- (3) To what extent could an analysis of the years 1953, 1962, and 1971 determine the trends in participation rates and the number of participating schools?
- (4) How strong was the relationship between a state's interscholastic athletic participation and the production of major college athletes?

### Delimitations

The sports participation survey which was used as a basis for this study is compiled by the National Federation of State High School Associations in Elgin, Illinois. All states report their sports participation figures to this office every two years, and the results are published in the Federation's Official Handbook. Each state submits results concerning the total number of schools participating in a

particular sport as well as the total number of participants in a particular sport. Only male participants were included in this study.

The data in the survey pertains to the following sports:

badminton, baseball, basketball, bowling, cross-country, curling, fencing, field hockey, football, golf, gymnastics, ice hockey, lacrosse, riflery, rugby, skiing, soccer, softball, swimming, tennis, track and field (indoor and outdoor), volleyball, water polo, and wrestling.

Trends in participation patterns were determined by data available in the years 1953, 1962, and 1971. Trends concerning the total number of schools were ascertained using all three time periods. However, trends for the number of participants were restricted to 1962 and 1971. In 1953, the survey included only data pertaining to the number of schools.<sup>10</sup>

The problem and sub-problems referred to state data only because data on a school-to-school basis are much too extensive and completely outside the realm of this study. All states and the District of Columbia were included in the study.

#### Limitations

The factors that possibly limited the results of the study relate to the inconsistencies involved in data reported to the National Federation of State High School Associations in Elgin, Illinois.

In a personal telephone conversation with the assistant executive secretary of the Federation, other possible limitations were discovered.

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<sup>10</sup> National Federation of State High School Associations, Sports Participation Survey, 1953, 1962 and 1971. Elgin, Illinois.

For a small percentage of the data, only the tenth through twelfth grades were reported instead of the usual four high school grades. State figures also indicated that a few schools were not members of the Federation. Additionally, some of the figures concerning the number of participants were rounded off. It is assumed that these reporting errors were self-cancelling to a large extent.

### Justification

Because interscholastic athletics have developed in a somewhat haphazard fashion in the United States, the importance of analyzing the geographical and spatial patterns of interscholastic participation is quite significant in terms of educational outcomes. The sports participated in by Americans are a reflection of their value structures. In present day society, the rapid changes that are taking place every day in all phases of life are also significant as they affect the sporting world. There is a need to study sport's participation opportunities, for they are an indicator of the regional importance of certain sports. In America's democratic society, it seems unusual that so few athletes are receiving the opportunity for interscholastic competition. There is a need not only to try to understand the factors that are relevant in a society where the participation is so highly concentrated in a relatively few sports but also to study and analyze sport to determine if equal opportunity does in fact exist for participation in sport for all people.

Before constructive measures can be instituted, the current condition or status of interscholastic athletics must be known. Athletic participation for high school age youth is a very important part of

their life. The importance of athletics in some high schools, as studied by James Coleman,<sup>11</sup> seems to be even more important than academic achievement. With this intense emphasis on athletics in the United States the need for the study and for analyzation of sport is quite apparent.

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<sup>11</sup>James S. Coleman, "Athletics in High School," Sport and American Society, ed. George H. Sage (Reading, Massachusetts, 1970), p. 84.

## CHAPTER II

### REVIEW OF THE LITERATURE

The study or evaluation of sport has only recently been subjected to serious academic inquiry or investigation. This present study has been concerned with only one aspect of American sport, interscholastic sport for males at the high school level.

Various aspects of sport still retain a mysterious quality particularly in regard to the effects of sport on participants, spectators, and society in general. Scholarly consideration has been given to improving aspects of performance for the athlete, but the total sport expression has not been thoroughly studied as it occurs for the individual in his life experience.

This review is concerned mainly with sociological and geographic literature as it pertains to sport. Sociologically, sport is significant as it exists in relation to the total society. Geographically also sport is important in respect to place-to-place variation, in its spatial organization, and in terms of spatial interaction.

#### Sport and Society

As sport exists in contemporary society, it reflects the ideals and values of a society. As America moved from a rural-agrarian to an urban-industrialized society, sport also developed reflecting similar values. Betts has observed that:

Urbanization brought forth the need for commercialized spectator sports, while industrialization gradually provided the standard of living and leisure time so vital to the support of all forms of recreation.<sup>1</sup>

Kenyon examined the relationship between what he calls our high mass consumption society and sport and concluded that sport tends to be in concert with society, albeit conservatively.<sup>2</sup>

Sports can assume the role of shaper or forerunner of society, or sport can reflect an ideology gone by. The British tradition of sport reflects a sacred orientation. Traditional values are maintained and unchallengeable. The sacred orientation is reflected in today's resistance to such innovations as long hair and player involvement in current social movements. The game of baseball reflects in a general way retro-active aspects of American life. According to Axthelm, "Baseball is basically a slow, pastoral experience, offering a tableau of athletes against a green background, providing moments of action amid longer periods allowed for contemplation of the spectacle."<sup>3</sup>

Football, however, is more attractive in contemporary society. The fans are in tune with the violence on the field, and they associate with the warriors on the field as they plot and second guess in relationship to the pre-game, strategic "war plan."

As sport evolved and became such an integral part of the present

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<sup>1</sup>John Richard Betts, "The Technological Revolution and the Rise of Sport, 1850-1900," Sport in the Socio-Cultural Process, ed. M. Marie Hart (Dubuque, Iowa, 1972), p. 116.

<sup>2</sup>Gerald Kenyon, "Sport and Society: At Odds or in Concert?" Athletics in America, ed. Arnold Flath (Corvallis, Oregon, 1972), p. 41.

<sup>3</sup>Pete Axthelm, "The City Game," Sport in the Socio-Cultural Process, ed. M. Marie Hart (Dubuque, Iowa, 1972), p. 187.

mass-consumption society, the sport organizations became more bureaucratic, almost out of necessity. Kenyon noted that "The organizations become efficient and highly differentiated, assign tasks to trained experts who rely on certain authority, and demand considerable discipline with attendant impersonal procedure."<sup>4</sup>

This twentieth century technological society has taken sport and made it an element of mass-consumption. Another consequence has been the concomitant bureaucratization and the increasing demand for the "professionalism" of the player. This rise in professionalism has led to a kind of Roman America. In his study of professionalization of attitudes towards sports, Webb indicated "a dramatic shift from the value of 'fair play' to the value of 'winning' in children as they move from the third grade to the twelfth grade."<sup>5</sup>

The sports system has shifted from amateur ideology to a system based on commercial ideology. The concept of amateurism within the context of the Olympic movement as stated by Pierre de Coubertin is "...not to win, but to take part,...not the triumph, but the struggle,...not to have conquered but to have fought well."<sup>6</sup>

Today, the significance of sport on a commercial level can be seen partially in the great sums of money spent at all levels. This includes equipment, admissions to sport events, and instruction.

Luschen referred also to the strong emphasis on sports in

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<sup>4</sup>Kenyon, p. 36.

<sup>5</sup>H. Webb, "Professionalization of Attitudes Toward Play Among Adolescents," Aspects of Contemporary Sport Sociology (Chicago, 1969), p. 167.

<sup>6</sup>Kenyon, p. 36.



industrialized societies. Indicating a stronger trend towards capitalism in Protestant-dominated countries, Luschen stated "The Protestant culture with achievement of worldly success and asceticism held as the basic values caused industrialization and capitalism."<sup>7</sup> Thus, the need for achievement became a basic value in Protestantism. The dominant values of achievement and asceticism are basic to sport and Protestantism.

In respect to sports participation and social class, Luschen stated "The greatest emphasis on achievement, and thus the highest sports participation is to be found in the upper middle class."<sup>8</sup> This achievement value in sport represents

... a value of collectivity and supposedly power orientation and on the basis of these cultural value orientations, one may explain the uneven distribution of sport as such, and of team sports versus individual sports in certain socio-cultural systems.<sup>9</sup>

In regard to social class and people's use of leisure time, Clark found "that a 'U' curve exists for participation and spectatorship, with more active forms of leisure occurring at the extremes of status than in the middle."<sup>10</sup>

Loy and Kenyon referred to sports opportunities as being unequally distributed, especially in the higher cost individual sports such as

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<sup>7</sup>Gunther Luschen, "The Interdependence of Sport and Culture," Sport in the Socio-Cultural Process, ed. M. Marie Hart (Dubuque, Iowa, 1972), p. 26.

<sup>8</sup>Ibid., p. 34.

<sup>9</sup>Luschen, p. 34.

<sup>10</sup>Gregory P. Stone, "Some Meaning of American Sport: An Extended View," Sport in the Socio-Cultural Process, ed. M. Marie Hart (Dubuque, Iowa, 1972), p. 160.

tennis and, that despite one's resources and one's athletic star system, "many children, especially minority groups, are growing up with few sport opportunities."<sup>11</sup>

According to Sidentop, "Winning in sports can provide a validation of worth; i.e., one's way of life, one's beliefs, one's values are good as they have been proven through contest and victory."<sup>12</sup>

One of the dominant values in this achievement oriented society is that sport reflects the concept of equal opportunity, democracy and ability before social position. However, the reality of the situation referred to by Kenyon is that "Discrimination and lack of equal opportunity still occur in sport on the basis of economics, sex, ethnic group membership, and minority status."<sup>13</sup>

In a study on interscholastic athletics, Rooney found that not only does great variation exist in regard to participation in the major sports but especially the minor sports. He states, "Equal opportunity to participate is far from a reality, and there is a great need for a major geographical reorganization of interscholastic athletics."<sup>14</sup>

Part of the current crisis in American Sport of what Scott calls the "Athletic Revolution" originates from a dichotomy of opinion concerning the purposes of education. Is the purpose of education to

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<sup>11</sup>John W. Loy, and Gerald S. Kenyon, Sport, Culture, and Society (London, 1969), p. 342.

<sup>12</sup>Daryl Sidentop, Physical Education: Introductory Analysis (Dubuque, Iowa, 1968).

<sup>13</sup>Kenyon, p. 39.

<sup>14</sup>John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Massachusetts, in press). See also, "The Geography of Participation in Interscholastic Sport: Toward Equal Opportunity in the United States."

enhance the maturity of each individual student, or is it to enculturate the existing social, political, religious, and cultural values of the people? Shafer states:

Most schools demonstrate a much greater concern for inculcating so called 'correct' attitudes than for fostering inquisitiveness, for teaching the blind following of authority than a desire for actively searching for the truth, for uncritical loyalty to the nation, state and its current leadership than for developing innovations, and for turning out people who base their acceptance of self and others on performance and 'right' attitudes than on intrinsic worth and dignity.<sup>15</sup>

Shafer contended that interscholastic sports are an important mechanism for fostering enculturation and contribute only in a limited way to the maturity of the participants or spectator.

Sage agrees with this concept as he refers to the way America's high school and college coaches are being vigorously attacked by individuals within and outside the field of education. "These attacks have centered on the alleged ruthless methods that athletic coaches use in carrying out the tasks of coaching their teams."<sup>16</sup> He continued, "When an athlete commits himself to a sports team, he commits himself to the will of the coach of that team on all matters which the coach thinks are important."<sup>17</sup>

This is the philosophy that has led to the current "jock liberation" movement on many campuses. It is this attitude toward sport that

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<sup>15</sup>Walter E. Shafer, Sport, Socialization and the School, Paper presented at the Third International Symposium of the Sociology of Sports, Waterloo, Ontario, 1971, pp. 3-11.

<sup>16</sup>George H. Sage, "Machiavellianism among College and High School Coaches," Proceedings Annual Meeting (National College Physical Education Association for Men, 1972), p. 45.

<sup>17</sup>Sage, p. 45.

Scott, Meggyesy, Edwards, Merchant, Parrish are concerned with. Clark Kerr described the athletic situation at the multiversity in the following manner:

The manipulative, authoritarian structure of our giant educational bureaucracies becomes crystal clear when we see that school officials will not even allow high school and college students a meaningful say in their own games-playing---athletics. Instead of carefully nurturing the natural exuberance, passion, commitment, and idealism of youth, our educational institutions dilute and, in the finished products, often eliminate these characteristics.<sup>18</sup>

This revolt by some athletes or this crisis in American sport is part of the student movement, the black liberation movement and the growing counter-culture that began to have an impact on high school and college athletes during the late 1960's. The students involved in the movement were seeking an education toward maturity instead of an enculturing education. They were not from the Lombardi mold, satisfied with, and able to function with, the present sports structure of supreme authority and blind discipline toward the coach.

This counter culture is consistent with Reich's nonviolent revolution in America. If the sports population would adopt the philosophy of "whatever I am, I am," what would happen to American sport?<sup>19</sup> A small change of rules would be necessary. Instead of counting points or medals at the next Olympics, awards would be given to the athletes who have achieved the highest degree of self-actualization. Then the important factor would be "the struggle, not the triumph!"

Even with all of the various movements and conflicting attitudes

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<sup>18</sup>Clark Kerr, The Uses of the University (New York, 1966), p. 57.

<sup>19</sup>Charles A. Reich, The Greening of America (New York, 1970), p. 25.

toward sport and participation in sport, sports participation is at its zenith in the United States.

Many reasons are apparent for this increase in participation. People today have more leisure time and also increased economic security which for some leads to sports participation. Marshall McLuhan emphasized the fact that participation in games must echo our workday life. He stated, "The games that mimic other situations in our lives seem to be enjoyed."<sup>20</sup> Slusher contended that people participate in sport "to find real identification of the true nature of man."<sup>21</sup> Man is actually searching for a dimension of his existence through participation in sport.

Slusher continued by pointing out that in many ways American sports have prostituted the very existence of sport by their emphasis on records, commercialization, and the size of the catch. Man is a pawn in the world of sport; he is a thing that functions. Therefore, "when participation is authentic and it is rid of the superficiality and self-ish desires, man attains being."<sup>22</sup>

Herein lies the important ramifications of sport as it affects participants today. As competition progresses from pee wee leagues and community leagues, to high school, collegiate and professional ventures, man continually gives up a little more of himself to sport. Sport is institutionalized at all levels, and at the higher levels of

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<sup>20</sup>Marshall McLuhan, "Games: The Extension of Man," Sport in the Socio-Cultural Process, ed. M. Marie Hart (Dubuque, Iowa, 1972), p. 148.

<sup>21</sup>Howard S. Slusher, Man, Sport and Existence (Philadelphia, 1967), p. 89.

<sup>22</sup>Slusher, p. 12.

organization, "the greater is the psychic involvement which makes serious impressions on the participant."<sup>23</sup>

When an individual chooses a sport for participation, it becomes an important act of self-expression. Natan stated, "An individual pursues sport of his own choice; the one which he adopts according to his unconscious self-projection is the one to which he will always remain loyal."<sup>24</sup>

Many sports participants believe the activity is there strictly for man's selfish exploitations of himself and others. Sport participation offers the opportunity to fulfill needs on the field while unable to fulfill their needs at home. "For others it might be an attempt to test personal discipline; while still others build security through conquering."<sup>25</sup> McLuhan stated, "Participation in games [affords] dramatic models of our psychological lives providing release of particular tensions."<sup>26</sup>

Another reason for participation in sport is that some participants have been extremely conscious of the health values of vigorous activity. The popularity of the book Aerobics by Kenneth Cooper indicates there is an increasing concern for physical fitness in respect to health factors. Cooper stated, "Many people have realized they are not able to accomplish fairly simple physical fitness tests and that they

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<sup>23</sup>Slusher, p. 136.

<sup>24</sup>Alex Natan, Sport and Society (London, 1958), p. 23.

<sup>25</sup>Slusher, p. 138.

<sup>26</sup>McLuhan, p. 147.

are devoting very little time to activities requiring physical exertion."<sup>27</sup>

Many people, upon receiving medical examinations, have realized they are in the high risk brackets in regard to heart disease, America's number one killer. Many are overweight, smoke too much, have high blood pressure, and have above average cholesterol levels. The Aerobic program was instituted as a concept of exercise; and according to Cooper, "the chief aim of the program is to counteract the problems of lethargy and inactivity that are so widely prevalent in our American population."<sup>28</sup>

This inactivity by many people has been promoted by today's emphasis on professionalism and commercialism. According to Loy and Kenyon as they analyzed the sports scene, "the sporting scene is more of an entertainment system than one based on the aspect of individual participation."<sup>29</sup> For an entertainment system to exist it must have spectators. What are some of the reasons the spectator devotes so much time to watching sports? Millions of Americans have a tremendous insatiable appetite for sports; and Beisser noted, "they will take sports any way they can get them."<sup>30</sup> Reuel Denney declared one of the big reasons for spectatorship as being "The importance to detect in sports mindedness a desire to feed the sources of 100 per cent Americanism,

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<sup>27</sup>Kenneth Cooper, Aerobics (New York, 1968), p. ix.

<sup>28</sup>Kenneth Cooper, The New Aerobics (New York, 1970), p. 4.

<sup>29</sup>Loy and Kenyon, p. 339.

<sup>30</sup>Arnold R. Beisser, The Madness in Sports (New York, 1967), p. 1.

spectator benches, and the star system of the Big Game."<sup>31</sup> Miller and Russell related to the why of this spectator mania as being simply "the right which Jefferson proclaimed in the Declaration of Independence, the right to pursue happiness."<sup>32</sup> George Plimpton who studied the superfan, stated, "It may be the superfan's primary need for identification with a certain team."<sup>33</sup> In this age where the machine has taken over many of the basic duties of man, Lohr stated, "The great sports spectacle allows the spectator to rediscover his identity through the hunter-aggressive endeavors of sports."<sup>34</sup> The teams' names: tigers, falcons, cubs, bears, broncos, giants, vikings, and warriors, help to dramatize the spectators' wish fulfillment.

There are other dimensions that increase interest in spectatorship. Stone indicated: "Members of a sports audience can easily enter into a relationship with each other because they had shared a common critical experience."<sup>35</sup> Beisser spoke of strangers in a mass society who, through sport, found immediate common grounds for communication.<sup>36</sup>

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<sup>31</sup> Reuel Denny, The Astonished Muse (Chicago, 1957), pp. 124-125.

<sup>32</sup> Donna Mae Miller and Kathryn Russell, Sport: A Contemporary View (Philadelphia, 1971), p. 38.

<sup>33</sup> George Plimpton, "The Celestial Hell of the Superfan," Sports Illustrated (September 13, 1965), pp. 104-120.

<sup>34</sup> John Lohr, "The Theatre of Sports," Sport in Socio-Cultural Process, ed. M. Marie Hart (Dubuque, Iowa, 1972), p. 109.

<sup>35</sup> Gregory P. Stone, "Some Meanings of American Sport," Sport and American Society (Massachusetts, 1970), p. 405.

<sup>36</sup> Arnold Beisser, "Modern Man in Sports," in Sport and American Society, ed. George F. Sage (Massachusetts, 1970), p. 238.



Wohl stated, "Sport has the ability to elicit feelings of homogeneity, comradeship, and being a part of a larger entity."<sup>37</sup>

#### Sport and Geography

The geographical implications of participation in high school athletic programs indicate great regional differences within the United States concerning participation in interscholastic sports. The philosophies relating to opportunities for participation are very diverse. Some school athletic programs generate a wide variety of activities, while others offer a very narrow scope of activities. Some are designed to produce "big time" athletes, while others are for the recreational benefit of the athletes and for the community as a whole. In examining relationships between community support for selected high school sports and the community's ability to produce major college and professional athletes, Rooney found that certain areas of the country demonstrated extremely high per capita rates of participation in football, basketball, and baseball. He also found a complex relationship between production of athletes with major college potential and high school participation rates. Some high participation states were low in the output of college-bound athletes. On the other hand, states with a high amount of college-bound athletes had low per capita participation at high school level.<sup>38</sup>

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<sup>37</sup> Andrzej Wohl, "Social Aspects of the Development of Rural Sport in Poland," International Review of Sport Sociology (1966), pp. 109-135.

<sup>38</sup> John F. Rooney, "Participation in High School Athletics and Success at the College and Professional Level," paper presented at the International Symposium for the Sociology of Sport, University at Waterloo, Waterloo, Ontario, (August, 1971).

This same study revealed a great variation in per capita participation between large and small cities and from region to region. Certain areas (Texas, Indiana, California) concentrated mainly on one sport, and other areas supported a varied program. In some areas anyone could participate on a team, while in others (New York, Chicago) only the very best had a chance to compete in varsity athletics.

Although this work by Rooney was primarily concerned with college and professional football, some discussion was devoted to participation. One of the findings concerned the overemphasis of participation in "big time" collegiate sports in the smaller New England states, the South-Atlantic belt, and the Great Plains.<sup>39</sup> The study also dealt with the great regional variation in the development of football players. The size of the school revealed variation as to number of participants. The larger the school, the fewer were the opportunities for participation.

Another study by Rooney concerned the total picture of sport participation in the United States. He pointed out that many cities and towns do not provide well balanced athletic programs. Some areas of the country are out-producing or out-participating other areas. In relation to poorly balanced programs, some areas fail to provide opportunities for certain segments of the school population to develop their potential. Consequently, there is great regional variation in today's high school athletic programs.

He further stated that spatial organization of high school athletics is organized on two levels, mass participation and entertainment. Some of the sports are universally organized such as basketball,

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<sup>39</sup>John F. Rooney, "Up from the Mines and out to the Prairies," The Geographical Review (October, 1969), pp. 471-492.

football, softball, and bowling, while others are regionally concentrated like hockey, lacrosse, and cricket.<sup>40</sup>

A study designed by Robinson concentrated on sports activity or participation across twelve countries on a typical day. The results indicated a general trend of sports activity to be most pronounced on the weekend. High participation was noted for younger people, single people, for the better educated, and for men in lower white collar occupation.<sup>41</sup>

Concerning the sports activities that are gaining in participation, Gallup stated, "The sharpest increases in terms of participation since 1959 have been recorded for swimming, bowling, tennis, and baseball."<sup>42</sup>

Another survey concerning sports participation conducted for the President's Council on Physical Fitness and Sports indicated the four most mentioned interscholastic competitive sports were baseball, basketball, football, and track and field. The other sports of softball, volleyball, soccer, swimming, gymnastics, bowling, wrestling, tennis, handball, and golf, were about evenly split between participation in interschool and intramural sports. The results of the survey also indicated that bowling was the American adult's favorite participatory sport in terms of total number of participants. Twenty percent of American men and women bowl. Swimming ranked second with eighteen

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<sup>40</sup> John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport, in press.

<sup>41</sup> John P. Robinson, "Daily Participation in Sports Across Twelve Countries," The Cross-Cultural Analysis of Sports and Games, ed. Gunther Luschen (Champaign, Illinois, 1970), pp. 156-173.

<sup>42</sup> George Gallup, "Sports 'Gallup' at Fast Pace," Gallup Opinion Index (Princeton, New Jersey, 1972).

percent. "Other popular participatory sports in order of rank, are golf, 9%; softball, 8.5%; tennis, 6%; volleyball, 5%; water skiing, 3%; and skiing, 2%."<sup>43</sup>

A survey conducted by the New York State Public High School Athletic Association demonstrated the variation that can exist within the state in respect to sports participation. Twenty-eight sports were reported in the 1971-1972 registrations. In the past twenty years, remarkable gains were reported in the percentages of schools offering competition in wrestling, golf, cross-country, and football.

The results indicated that the size of the school made little difference in participation for basketball and baseball since they were played by practically every school. The schools were divided into four divisions with respect to size of school. For all four sizes of schools the percentages for participation were similar for soccer, softball, and volleyball. The smaller schools were considerably lower in bowling, cross-country, football, golf, swimming, tennis, and wrestling.

Geographic location did affect athletic competition to some degree. Top percentages for number of sports were reported in the heavily urbanized areas---Nassau and Suffolk County, Genesee Valley, and the St. Lawrence area. Depending on geographic opportunities, certain areas excelled in different activities. Westchester, Putnam, Dutchess Counties excelled in golf and rowing. Western New York excelled in swimming. Rockland, Orange, and Sullivan Counties excelled in skiing.

To determine progress toward a goal of a broad sports program, the

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<sup>43</sup>National Adult Physical Fitness Survey, President's Council on Physical Fitness and Sports, Newsletter, Special Edition, May, 1973, Washington, D.C. 20202. Survey conducted by Opinion Research Corporation of Princeton, New Jersey.

percentage of schools conducting eight or more sports was used as an index. Twenty years ago 51.3% of the schools reported having teams in eight or more activities. Ten years ago the figure was 68.4% and five years ago, 75.3%. The percentage for this past year was 79.7%.<sup>44</sup>

In keeping with the goals of a broad sports program, Park has stated, "Society must afford all its members the opportunity to satisfy their natural desires and must afford these opportunities in all categories of sport."<sup>45</sup> These sports opportunities must also be held in high esteem so that the efforts of all participants will be encouraged.

In conclusion, participation in sports either as an active or passive process is an important aspect of American culture. The life patterns of the spectator and participant are affected by various influences such as increased leisure time, personal needs, the stress on the importance of exercise for health, and a growing affluent society. In turn, these forces have contributed somewhat to various participation patterns of high school athletics.

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<sup>44</sup>John K. Archer, "Sports Report for 1971-1972," New York State Public High School Athletic Association, 1971-1972.

<sup>45</sup>Roberta J. Park, "Raising the Consciousness of Sport," Quest (Published by the National Association for Physical Education for College Women and The National College Physical Education Association for Men, January, 1973), p. 82.

## CHAPTER III

### PROCEDURE

This chapter describes the methods of investigation and areas of concentration. It also outlines the procedures necessary to analyze the data on sports participation for 1971-1972.

To determine the per capita index, information concerning school population in the age group 14-17 years was obtained from the 1960 and 1970 United States Census of the population. Population totals for the United States were obtained for each state. The national average figure was determined by computing a national norm or average based on participation numbers in each sport divided into the total United States population for the fourteen to seventeen year age group.

The next step was to obtain a per capita figure based on state figures of population and participation. For each state and each sport, the number of participants was divided into the state's population for that age group. This yielded an index number which when divided into the national average resulted in the per capita index number. The average for the nation was 1.00. Therefore anything below 1.00 was below average and anything above 1.00 was above average.

The data from the survey were presented in terms of sports, states, number of schools, and number of participants. The national participation patterns were based on information concerning the number of sports, number of schools, and total number of participants per sport.

The spatial patterns of participation in interscholastic sport were subjected to regional or state investigation with regard to the number of sports per state, number of states per sport, and state-to-state variation in participation. The per capita indices were used for analysis of state-to-state variations. A table was constructed indicating the per capita indices for the most popular interscholastic sports. Another table indicating the national average for participation, the total number of participants and leading states was constructed. Maps were then produced to indicate state-to-state variation in per capita participation.

The regional state patterns of participation were explained in respect to school size, settlement density, income, climate, and tradition. To indicate the variation that exists within a state, a case study of New York was used to demonstrate variation in school size, number of sports and geographic patterns.

Another major area of this investigation concerned the trends in sports participation from 1953 to 1971. The national trends were analyzed from 1953 to 1971 for the total number of sports and number of schools per sport. The data were not available for number of participants in 1953, so those trends were determined from 1962 to 1971. At the state level, trends were determined for the same classifications. For each sport from 1962 and 1971, trends were analyzed in respect to the per capita participation figures.

Rank order correlations were computed to determine the relationship between total participation and each state's per capita income, percentage of urbanization, and per capita expenditures for education. The

information for these variables was obtained from the Statistical Abstracts of the United States.<sup>1</sup> Rank order correlations were also determined between per capita participation and major college production in football, basketball, and baseball.

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<sup>1</sup>Statistical Abstracts of the United States, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 1971.



## CHAPTER IV

### ANALYSIS OF DATA AND DISCUSSION OF RESULTS

The purpose of this study was to describe and spatially analyze the participation patterns which characterize interscholastic athletics in the United States. This chapter will relate to the 1971-1972 national participation patterns, the spatial patterns, and the regional state patterns of sport participation. In addition, one specific state will be analyzed in terms of sport participation.

#### The 1971-1972 National Participation Patterns

The national pattern of participation in American sport has been shaped primarily over the past 100 years and is characterized by extreme spatial variation. Participation in American sport is organized at two levels. At one level many "amateur" athletes have the opportunity to participate. At the other level, sport is organized and promoted on an entertainment level where the spectator is catered to in order to realize financial benefits to the "professional" franchise owners. The only athletes participating in this latter environment are the ones who have developed their skills and abilities to the highest degree.

This chapter will deal with the factors that are important in establishing the national patterns of interscholastic sport participation. The type and number of sports are analyzed, as well as the number

of schools participating in the sport. The number of participants is also analyzed at the national scale.

The results of the 1971-1972 Sports Participation Survey are presented in Table I. The total number of sports offered for interscholastic competition in the United States is twenty-six. Fourteen sports are individual in nature while twelve are team sports.

Football, basketball, track and field, and baseball are the most popular sports as measured by the number of schools and number of participants. For example, in the United States there are almost 20,000 secondary schools playing basketball.

However, since basketball requires a smaller team than does football, the number of participants ranks second to football. Football has the greatest number of participants (878,187) which figure does not include the students playing other than eleven man football. Approximately one-half of the secondary schools are participating in wrestling, cross-country, golf, and tennis (Table I).

Approximately twenty percent of the schools offer the sports of swimming, soccer, volleyball, gymnastics, and indoor track and field. The number of participants at this level varies from 40,000 to 91,000. The number of schools for the remaining sports form essentially a regional pattern. Ice hockey, skiing, and curling are regionally concentrated in the northern states. Bowling is apparent only in the eastern United States. Other sports such as badminton, water polo, lacrosse, riflery, rugby, and fencing are regionally distributed within several states because of the small number of schools having an inter-collegiate program.

TABLE I  
1971-1972 SPORTS PARTICIPATION SURVEY

Sports	Individual or Team Sport	Number of Schools	Number of Participants
Football-11 man	T	14,004	878,187
8 man		541	15,727
6 man		109	7,125
9 man		126	3,130
12 man		494	28,522
Basketball	T	19,647	645,670
Track & Field (Outdoor)	I	16,383	642,639
Baseball	T	12,896	400,906
Wrestling	I	7,587	265,039
Cross-Country	I	8,263	166,281
Golf	I	8,645	120,078
Tennis	I	6,312	91,279
Swimming	I	3,078	91,309
Soccer	T	2,290	78,510
Volleyball	T	3,826	63,544
Track & Field (Indoor)	I	1,697	49,761
Gymnastics	I	1,861	40,530
Ice Hockey	T	573	22,656
Bowling	I	785	11,931
Badminton	I	769	9,797
Skiing	I	478	9,787
Water Polo	T	187	6,445
Curling	T	417	4,174
Softball	T	208	3,982
LaCrosse	T	171	3,520
Field Hockey	T	153	2,286
Riflery	I	107	2,085
Rugby	T	69	1,460
Fencing	I	27	324
Decathlon	I	75	233

The 1971-1972 Spatial Patterns of Participation  
in Interscholastic Sport

Participation in American high school athletics is characterized by extreme spatial variation. Certain areas of the country offer nearly unlimited opportunity for students to participate in a wide variety of sports. Other densely populated areas offer limited participation opportunities which enable only the highly skilled to participate.

The population of a state's high school age students is not an important factor in determining the number of sports offered in a particular state. Some highly populated states offer fewer numbers of sports for participation than states that are one-tenth the size. For example, Texas, with a school age population of almost 750,000 students, participates in ten sports. On the other hand, Delaware, with a school age population of 40,000 participates in fourteen sports.

Number of Sports Per State

The number of sports that are offered by a state depends on certain environmental limitations such as the availability of snow and ice, as well as tradition and economic well-being. As stated above, the 1971-1972 Sports Participation Survey indicated a total of twenty-six sports offered for participation. An analysis of the number of sports by state revealed that seventeen sports were offered the most by any one state. The fewest number of sports offered by any state was six (Table II). It is seen here that the two highly populated states of New York and New Jersey are participating in seventeen sports.

Figure 1 shows that the states with fifteen to seventeen sports are

TABLE II  
NUMBER OF SPORTS PER STATE

Number of Sports	States
17	New York, New Jersey
16	Rhode Island, Connecticut, Vermont
15	Arizona, Maryland, Massachusetts, Wisconsin
14	Delaware, Georgia, Kansas, Maine, Michigan, Minnesota
13	Arkansas, California, Hawaii, New Hampshire, Ohio, Virginia
12	Iowa, Missouri, Nebraska, New Mexico, North Dakota, Pennsylvania
11	Louisiana, Kentucky, Illinois, Florida, Colorado, Alabama, Montana, Oklahoma, South Carolina, Washington
10	Indiana, Oregon, Wyoming
9	Tennessee, Utah, West Virginia
8	Idaho, Washington D.C., Alaska, North Carolina, South Dakota, Texas
6	Mississippi, Nevada



almost all characterized by high population density. All are Northeastern states with the exception of Wisconsin and Arizona.

No distinctive pattern exists for the states that have only six to eight sports; Idaho and Nevada in the West, South Dakota in the North Central, Texas and Mississippi in the South, and North Carolina and Washington, D. C., in the Middle Atlantic States.

A survey of the overall number of sports by state indicates that generally the Southern region has the fewest number of sports per state. The Rocky Mountain region provides opportunity in nine to eleven sports with the exception of Arizona at fifteen. Oregon and Washington in the Pacific Northwest are also a part of this group.

The third area pattern is composed of the Central and Northern Plains states. Eleven to fourteen sports comprise this area beginning in the Plains states and moving east along the Ohio River Valley and stopping abruptly in Pennsylvania and Virginia. South of this line there is a general drop in the number of sports, while Northeast of this line in the snow belt the greatest number of sports are offered per state.

#### Number of States Per Sport

Another indicator of participation or popularity of certain sports is the percentage of states that participate in the different sports. As can be seen in Table III, three sports are in the high school programs in all fifty-one states, namely, basketball, football, outdoor track and field, and golf. Tennis, wrestling, and baseball are present in almost all states with cross-country, swimming, and gymnastics next.

There are only two states that do not play tennis; one state is

TABLE III  
 NUMBER OF STATES THAT PARTICIPATE  
 IN RESPECT TO EACH SPORT

Sports	Number that Participate in Sport
Basketball	51
Football 11-Man	51
Track & Field (Outdoor)	51
Golf	49
Tennis	49
Wrestling	48
Baseball	47
Cross-Country	45
Swimming	43
Gymnastics	38
Soccer	24
Volleyball	24
Track & Field (Indoor)	19
Skiing	16
Ice Hockey	14
Bowling	13
Softball	4
LaCrosse	4
Riflery	4
Decathlon	3
Curling	2
Water Polo	2
Badminton	2
Archery	1



Alaska and this is understandable. The other state is Nevada. Nevada is peculiar in that it does not participate in wrestling and cross-country, either. Mississippi and Texas are the other states that do not have wrestling.\*

A group of four Northwestern states (Montana, Wyoming, South Dakota, and Alaska) did not report participation in baseball for 1971. The weather pattern during the spring season could account for this situation.

No real pattern exists for the states that did not have cross-country in 1971 except that four of the six states were from the South where there is an emphasis on football. The four states are Texas, South Carolina, Mississippi, and North Carolina. The other two states are Nevada and South Dakota.

These ten sports comprise the bulk of the interscholastic sports programs in the United States. The remaining sports are offered in fewer than 50% of the states. Soccer, volleyball, indoor track and field, skiing, ice hockey, and bowling are part of the programs in thirteen to twenty-four schools.

Several of these sports present interesting geographical patterns (Tables IV-X). Tables IV-X refer to the numbers of schools that have an active interscholastic program. Participation in soccer is heavily concentrated in the Northeastern United States. The only state that does not have soccer is Massachusetts, and this discrepancy might be due to errors in reporting. Soccer has spread West and South as evidenced by active programs in Ohio, Illinois, Missouri, Arkansas, Alabama,

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\*A few wrestling programs have been established in Texas since 1971.

TABLE IV  
 NUMBER OF SCHOOLS - SOCCER,  
 1971-1972

State	Number of Schools	State	Number of Schools
New York	495	Pennsylvania	235
New Jersey	203	Connecticut	101
Georgia	100	Maryland	97
California	70	Missouri	67
Arkansas	60	New Hampshire	55
Maine	51	Vermont	47
Ohio	35	Illinois	27
Michigan	25	Delaware	21
South Carolina	15	Rhode Island	15
Minnesota	12	Washington, D.C.	10
Alabama	10	Virginia	6
Kansas	1		

TABLE V  
 NUMBER OF SCHOOLS - VOLLEYBALL,  
 1971-1972

State	Number of Schools	State	Number of Schools
Texas	986	New York	542
Ohio	355	Washington	144
Louisiana	115	Pennsylvania	101
Kansas	92	Maryland	80
Oklahoma	80	Arkansas	75
Arizona	59	Michigan	53
Connecticut	41	New Mexico	40
Wisconsin	37	Hawaii	31
Georgia	30	Wyoming	28
South Carolina	25	Nevada	22
Missouri	18	New Jersey	16
Rhode Island	9	Virginia	6
Delaware	3		

TABLE VI  
 NUMBER OF SCHOOLS - INDOOR TRACK  
 AND FIELD, 1971-1972

State	Number of Schools	State	Number of Schools
Iowa	389	Massachusetts	320
Kansas	220	New Jersey	128
New York	121	Wisconsin	100
Virginia	99	Oklahoma	95
Maryland	62	Connecticut	57
Delaware	53	Alabama	40
Arkansas	30	Nebraska	25
Rhode Island	15	Maine	15
New Hampshire	15	Washington, D.C.	14
Vermont	9		

TABLE VII  
 NUMBER OF SCHOOLS - SKIING,  
 1971-1972

State	Number of Schools	State	Number of Schools
New York	72	Michigan	68
Maine	44	New Hampshire	30
Vermont	24	Montana	20
Colorado	20	Wisconsin	18
California	12	Wyoming	11
Rhode Island	4	Arizona	2
New Jersey	1	Minnesota	1

TABLE VIII  
 NUMBER OF SCHOOLS - ICE HOCKEY,  
 1971-1972

State	Number of Schools	State	Number of Schools
Minnesota	93	New York	31
Delaware	28	Michigan	25
Vermont	14	Connecticut	14
New Hampshire	12	Rhode Island	10
Michigan	10	North Dakota	8
Maine	5	New Jersey	4
Kansas	2		

TABLE IX  
 NUMBER OF SCHOOLS - BOWLING,  
 1971-2972

State	Number of Schools	State	Number of Schools
New York	357	New Jersey	145
Ohio	81	Arkansas	48
Iowa	40	Georgia	40
Hawaii	26	Maryland	9
South Carolina	8	New Hampshire	5
Vermont	3	Rhode Island	2

TABLE X  
 NUMBER OF STATES-  
 OTHER SPORTS

Sports	No.	States
Lacrosse	4	New York, New Hampshire, New Jersey, Maryland
Softball	4	North Dakota, Missouri, Delaware, Connecticut
Riflery	4	Arizona, Kentucky, Georgia, Hawaii
Decathlon	3	New Mexico, Tennessee, Florida
Badminton	2	Arizona, Connecticut
Curling	2	Minnesota, Wisconsin
Water Polo	2	California, Hawaii
Archery	1	Arizona

Georgia, and South Carolina. Surprisingly, Georgia has 100 schools participating in soccer.

Volleyball is played by quite a few schools in the South Central region with Texas having 986 schools playing this game. Besides programs in Oklahoma, Kansas, Missouri, Arkansas, and Louisiana, volleyball spread into New Mexico, Arizona, and Nevada. Volleyball is played quite extensively in Wisconsin, Michigan, and Ohio and throughout Pennsylvania and New York.

Climate and topographic conditions are quite evident on the table for skiing. All states are mountainous and are located in the northern part of the country.

Ice hockey presents a similar pattern, but for ice hockey the influencing factor seems to be the Canadian border. From North Dakota to Maine, all states that border Canada have ice hockey in their high school programs. The only exceptions are Connecticut, Rhode Island, New Jersey, Delaware, and Kansas.

The remaining sports: archery, badminton, curling, lacrosse, water polo, decathlon, riflery, and softball present no real pattern because they are not played in enough states at the interscholastic level.

As seen in Table X four states in the northeast participate in lacrosse. Curling is played in Wisconsin and Minnesota.

Table III presents the participation data from another popularity perspective. There are only three sports participated in by all states. Golf is participated in by 49 states and has great carryover participation value into later life for the athlete.

Of the remaining six sports that comprise the top ten, only tennis and swimming could be classified as lifetime sports. The term lifetime

sport means several things; basically it refers to sports that are individual in nature and do not need team organization for participation. Secondly, lifetime sports can be participated in almost anywhere regardless of geographic location. They are the type of sport that can also be participated in and enjoyed by people anytime during their lifetime. Other lifetime sports considered in this survey are bowling which is only present in thirteen states, badminton in two states, and archery in only one state.

#### State-to-State Variations in Participation

There were 3,612,029 boys participating in a total of twenty-nine interscholastic sports during the 1971-72 school year. This means that one of every 4.39 persons (the figure is inflated due to the fact that many boys participated in more than one sport; some in as many as five different activities) in the 14-17 age group was participating in high school athletics.<sup>1</sup> Assigning this ratio a value of 1.00, the scope of participation indices for all sports combined ranged from .44 in North Carolina, Rhode Island, Washington, D.C., to 2.36 in North Dakota. These indices are presented in the total column in Table XI and they are also plotted out on Figure 2.

As can be seen from this map, the North Central states are very high, or almost twice the national average. North Dakota, Nebraska, and Minnesota have double the national average while Iowa, Montana, and Kansas are around 1.75.

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<sup>1</sup>John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Massachusetts, in press).

TABLE XI

PER CAPITA PARTICIPATION IN INTERSCHOLASTIC SPORT, 1971-1972  
(Participation Indices National Average = 1.00)

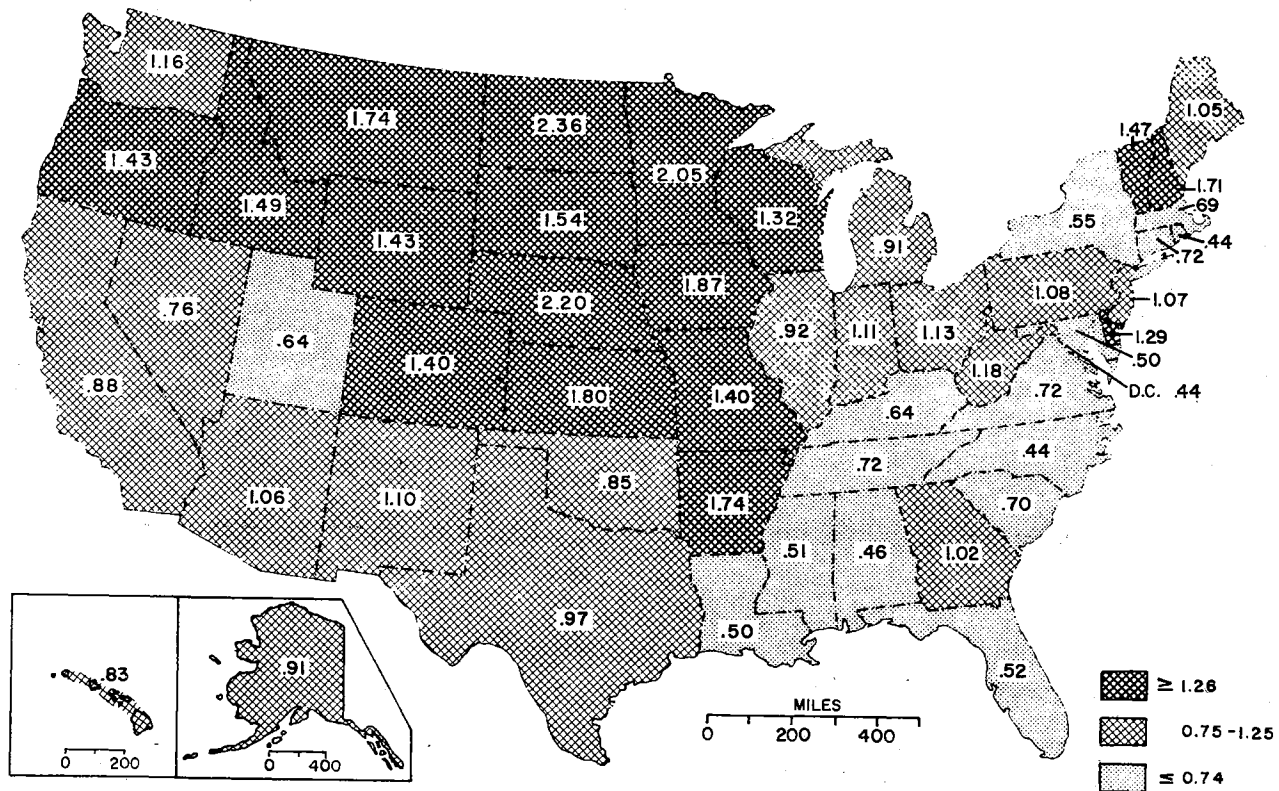
State	Total	Football	Basketball	Baseball	Track	Wrestling	Swimming	Soccer	Golf	Tennis
Alabama	.46	.61	.72	.82	.21	.11	1.01	.14	.37	.22
Alaska	.91	.31	1.28	.00	1.07	2.07	.00	.00	.00	.00
Arizona	1.06	1.30	1.14	1.51	1.18	1.45	1.01	.00	.69	1.54
Arkansas	1.74	1.41	2.47	1.09	1.43	.04	.85	2.36	.83	2.25
California	.88	.96	.64	.92	.84	.88	2.17	.39	.56	1.52
Colorado	1.40	1.10	1.39	1.31	1.55	2.46	1.78	.00	.83	1.19
Connecticut	.72	.54	.51	.81	.54	.36	.56	3.51	.69	.79
Delaware	1.29	1.05	.53	.85	.23	3.07	.85	2.47	.00	1.33
D.C.	.44	.30	.38	.63	.46	N.D.	.00	1.47	.77	N.D.
Florida	.52	.94	.16	.60	.58	.27	.88	.00	.56	.52
Georgia	1.02	.98	1.25	1.30	.86	.46	1.45	2.20	.81	.66
Hawaii	.83	.86	.54	.91	.73	.79	1.57	1.20	.71	1.14
Idaho	1.49	2.17	1.56	.90	1.55	2.62	.00	.00	1.08	2.04
Illinois	.92	.74	.89	1.20	.80	1.24	1.16	.13	1.95	1.24
Indiana	1.11	1.22	1.23	1.26	1.21	.22	1.39	.00	1.49	1.25
Iowa	1.87	1.71	1.66	1.38	2.65	3.18	1.73	.00	2.66	.61
Kansas	1.80	1.37	1.71	.26	2.83	.87	.45	.02	2.66	.93
Kentucky	.64	.59	.95	1.07	.53	.30	.53	.00	1.00	.58
Louisiana	.50	.60	.72	.70	.39	.04	.12	.00	.11	.12
Maine	1.05	.88	1.43	1.68	.07	.39	.80	3.73	1.12	.77
Maryland	.50	.27	.39	.52	.41	.40	.05	2.07	.33	.52
Massachusetts	.69	1.00	.69	1.14	.39	.30	.53	3.05	.92	.99
Michigan	.91	1.18	.67	1.18	.84	.81	1.41	.16	.79	1.16
Minnesota	2.05	2.22	2.15	2.02	1.73	2.95	2.36	.62	2.10	1.80
Mississippi	.51	.92	.36	.79	.66	.00	.00	.00	1.42	.53
Missouri	1.40	1.48	1.91	.98	1.12	1.22	.59	1.30	.97	1.21



TABLE XI (Continued)

State	Total	Football	Basketball	Baseball	Track	Wrestling	Swimming	Soccer	Golf	Tennis
Montana	1.74	1.80	2.98	.00	2.83	2.26	.23	.00	1.30	.33
Nebraska	2.20	1.70	4.15	.50	2.93	2.30	1.48	.00	1.69	.93
Nevada	.76	1.10	.95	.66	.90	.00	.00	.00	.44	.00
New Hampshire	1.71	3.20	2.13	1.52	.60	.08	.00	5.80	.95	.81
New Jersey	1.07	.99	.77	1.19	.87	1.79	.43	4.64	.45	1.10
New Mexico	1.10	1.05	1.63	.96	1.08	.68	.92	.00	.73	.87
New York	.55	.37	.36	.67	.35	.69	.67	2.34	.41	.67
North Carolina	.44	.61	.53	.72	.35	.28	.14	.00	.49	.21
North Dakota	2.36	2.20	4.71	.78	2.51	2.58	.63	.00	1.55	.54
Ohio	1.13	1.28	.107	1.01	1.18	1.51	.75	.13	1.13	1.24
Oklahoma	.85	1.04	.92	1.31	.74	.90	.00	.26	.53	.39
Oregon	1.43	1.24	1.20	2.04	1.72	2.73	1.16	.00	.69	.65
Pennsylvania	1.08	1.44	.85	.99	.97	1.71	1.25	1.58	1.05	.59
Rhode Island	.44	.38	.30	.51	.30	.25	.39	.63	.38	.41
South Carolina	.70	.85	.81	1.10	.82	.16	.06	.27	.46	1.05
South Dakota	1.54	1.40	1.75	.00	2.51	2.98	.00	.09	1.01	.88
Tennessee	.72	1.03	1.06	.93	.55	.45	.00	.00	.66	.50
Texas	.97	1.51	1.07	1.07	1.50	.00	1.46	.00	1.84	1.66
Utah	.64	.47	.77	.66	.67	1.37	1.08	.00	.62	.93
Vermont	1.47	.91	1.40	1.95	.66	.68	.11	9.71	1.10	.52
Virginia	.72	1.14	.77	.71	.57	.63	.06	.08	.41	.51
Washington	1.16	1.10	1.03	1.25	1.00	1.88	.90	.00	1.17	2.46
West Virginia	1.18	2.06	1.66	.97	1.02	.56	.00	.00	.64	.56
Wisconsin	1.32	1.82	1.03	1.05	.86	2.76	1.21	.00	1.11	.97
Wyoming	1.43	1.28	2.25	.00	1.82	2.69	1.12	.00	1.27	.31

Source: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).



AVERAGE PARTICIPATION = 1 PER 4.39 PEOPLE IN THE 14-17 AGE GROUP



SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 2. Per Capita Participation in All High School Sports, 1971-1972

The low states form a pattern beginning with Rhode Island and Washington, D.C., at .44 and running down through Maryland, North Carolina, Alabama, Mississippi, and Louisiana at .50.

The remaining information in this chapter deals with the per capita participation of the sports presented in Table XI and XII along with the maps for each sport. The per capita indices are shown in Table XI. Table XII consists of the national average for participation. For example, one out of every nine boys in the age group 14-17 in the United States is participating in football. On the other hand, only one out of every 807 boys is participating in badminton, one of the lifetime sports. Similarly there are six to eight times as many boys playing football and basketball as opposed to golf and tennis. If one is interested in carryover value, it would seem that some re-evaluation must be made of the present structure of interscholastic sport.

### Football

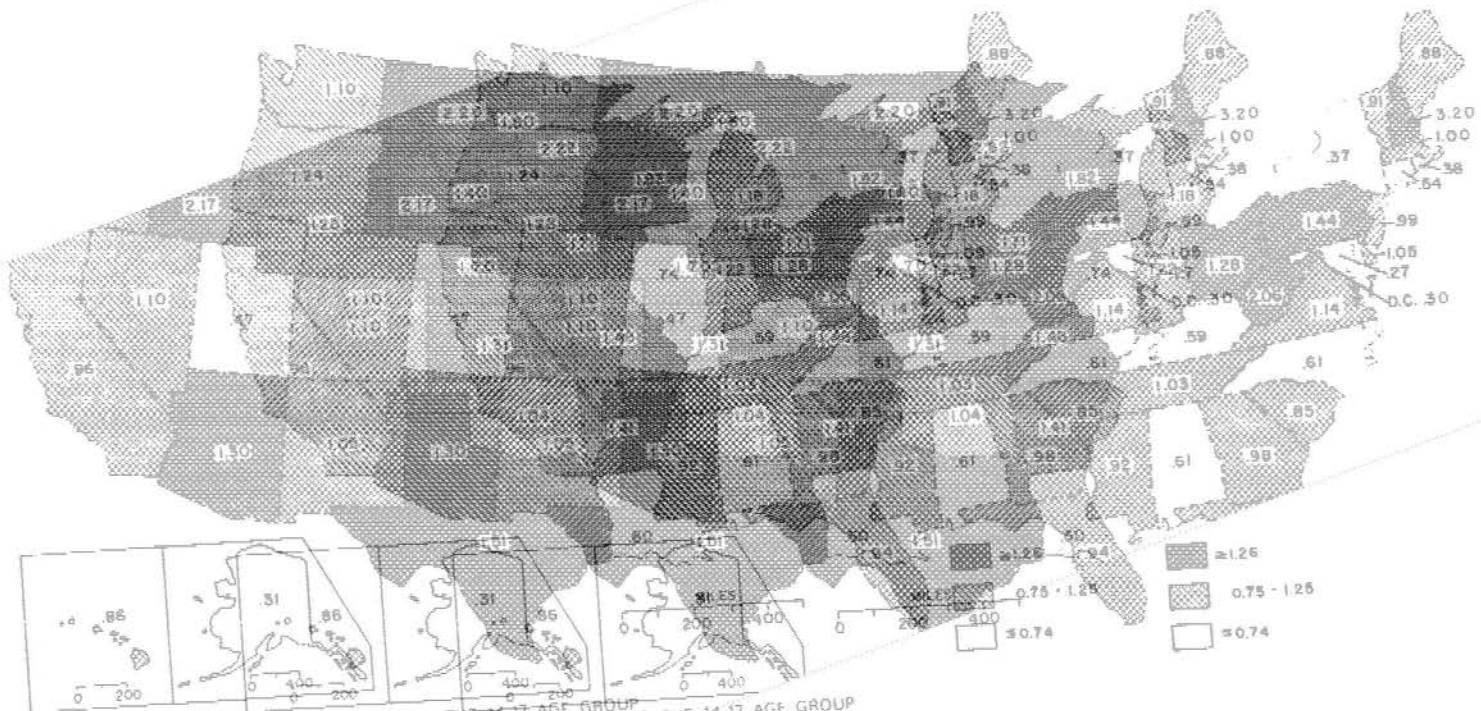
✓ More high school athletes are participating in football, including the six, eight, and nine man varieties, than in any other sport. In fact, one out of every nine boys is playing the game. ✓ The Great Plains and the Northern Middle West have the highest per capita involvement. The northwestern and mountain states have high participation with the one exception of Utah. Outside of this region only West Virginia, Texas, and Arkansas exceed the national average by 50 percent (Figure 3).

The low participation states are Maryland, New York, Rhode Island, and Connecticut. In general, the Southern United States is substantially below normal. In respect to the other sports, this is one sport

TABLE XII

## 1971-1972 PER CAPITA PARTICIPATION IN HIGH SCHOOL SPORT BY MALES

Sport	National Average for Participation (One Boy Per X Number of 14-17 Year Old Males)	Total Number of Participants	Leading States
Football	9	878,187	New Hampshire, Minnesota, North Dakota
Basketball	12	645,670	North Dakota, Nebraska, Montana
Track & Field	12	642,639	Nebraska, Kansas, Montana
Baseball	20	400,906	Oregon, Minnesota, Vermont
Wrestling	30	265,039	Iowa, Delaware, South Dakota
Cross-Country	47	166,281	Alaska, South Dakota, Kansas
Golf	64	120,078	Iowa, Kansas, Minnesota
Swimming	86	91,309	Minnesota, California, Colorado
Tennis	87	91,279	Washington, Idaho, Arkansas
Soccer	101	78,510	Vermont, New Hampshire, New Jersey
Volleyball	125	63,544	Texas, Nevada, New Mexico
Gymnastics	195	40,530	North Dakota, Nebraska, Colorado
Hockey	350	22,656	Minnesota, Massachusetts, Alaska
Badminton	807	9,797	Arizona, Connecticut
Skiing	808	9,787	Vermont, Alaska, New Hampshire



AVERAGE PARTICIPATION = 1 PER 18 PEOPLE IN THE 14-17 AGE GROUP  
 AVERAGE PARTICIPATION = 1 PER 18 PEOPLE IN THE 14-17 AGE GROUP  
 AVERAGE PARTICIPATION = 1 PER 18 PEOPLE IN THE 14-17 AGE GROUP

SOURCE: John J. Rooney, *From Cabin Creek to Anaheim: A Geography of American Sport* (Reading, Mass., in press).  
 SOURCE: John J. Rooney, *From Cabin Creek to Anaheim: A Geography of American Sport* (Reading, Mass., in press).  
 SOURCE: John J. Rooney, *From Cabin Creek to Anaheim: A Geography of American Sport* (Reading, Mass., in press).

Figure 3. Per Capita Participation in High School Football, 1971-1972  
 Figure 3. Per Capita Participation in High School Football, 1971-1972  
 Figure 3. Per Capita Participation in High School Football, 1971-1972

where the Southern states have their best showing.

Football is the most popular national sport, but there still is a great deal of variation. It is surprising that Minnesota and North Dakota have nearly ten times the participation in football as Maryland. It is also hard to explain how two adjacent states like New York and Pennsylvania can be so different. This geographic variation in participation is a result of many variables. Population density, settlement patterns, climate, wealth, and social emphasis on a given sport are some of the variables. For the most part, the highly urbanized states are characterized by low per capita participation. This is mainly caused by the large cities with large high schools that have only one varsity team. The less urbanized states with smaller student bodies per school give relatively more people a chance to make the team. This is how a state with many schools of 200 students gets a much higher per capita participation figure than a state with a lot of schools of 2,000 students. In football, this effect can be seen in virtually all states west of the Mississippi.

Concerning the economic aspects, Rooney states,

The economic well-being of a state plays an important role especially in an expensive sport like football. The Appalachian region is a case in point. Many of these schools forego football because they simply cannot afford it.

Instead they concentrate on less expensive sports like basketball and baseball. On the other hand, the healthy economics of states such as Wisconsin and Minnesota allow even the small communities to field high school football teams providing the opportunities for high school boys to engage in football which has traditionally been accorded high priority in both states.<sup>2</sup>

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<sup>2</sup>John F. Rooney, "The Geography of Participation in Interscholastic Sport: Toward Equal Opportunity in the United States," (unpub. article).

✓ Regional preference is another contributing factor to differences in rates of participation. Most Texans place football on a level high above other sports. Even the small, economically depressed communities support football teams. In many cases they emphasize football at the expense of other sports and educational services. Basketball receives great preference in Illinois, Indiana, and the Kentucky region. Basketball in this area is very similar in emphasis to Texas football.

The social role of sport in a community will affect the participation rate and this role varies geographically. In many cities across the nation, ✓ a successful team or outstanding players yield instant community prestige for these places. ✓ A big "star" athlete from a place like "Padoq, Kansas," puts the town on the map the quickest way possible. The communities that associate with this kind of prestige will, by the time the boys are in high school, have relegated the less skilled to the sidelines or cheering sections while the most skilled get the opportunity to participate. Also, the promising athletes are groomed and much time is spent with these individuals to make them attractive to the college scouts, which in turn yields additional prestige to the community when the local students go on to college. When this attitude is evident within states, a lower rate of per capita participation is often the result. ✓

States such as Wisconsin and Minnesota possess a different philosophy toward interscholastic athletics and it is apparent in the football results. These two states are providing playing opportunities at a rate of almost twice the national average. They are giving opportunities to most of the boys that want to play football, and consequently, a much higher percentage are participating.

## Basketball

The highest rates for basketball participation are in the northern plains. North Dakota and Nebraska have indices which are four times the national average. Other leading states in this area are Montana, Wyoming, and Minnesota with participation rates at twice the national average. The only other states participating at twice the national average are Arkansas, Missouri, and New Hampshire which are in other geographic regions. Because all of these states have an abundance of small towns they have a high rate of participation.

The very avid basketball states of Indiana, Illinois, and Kentucky had per capita indices near the national average. The South is characterized by low participation values except for Georgia and Tennessee that are at the national average. Actually, all the seaboard states from Louisiana to Massachusetts are below the national average. Georgia is an interesting state in the South because for almost all sports, it ranks somewhat higher than the other Southern states.

New York with its famed "city game," described by Axthelm, does not compare favorably in participation figures to states like North Dakota and Nebraska (Figure 4).<sup>3</sup> From the figures in New York and New Jersey, it is apparent only the best boys are playing basketball in Megalopolis.<sup>4</sup>

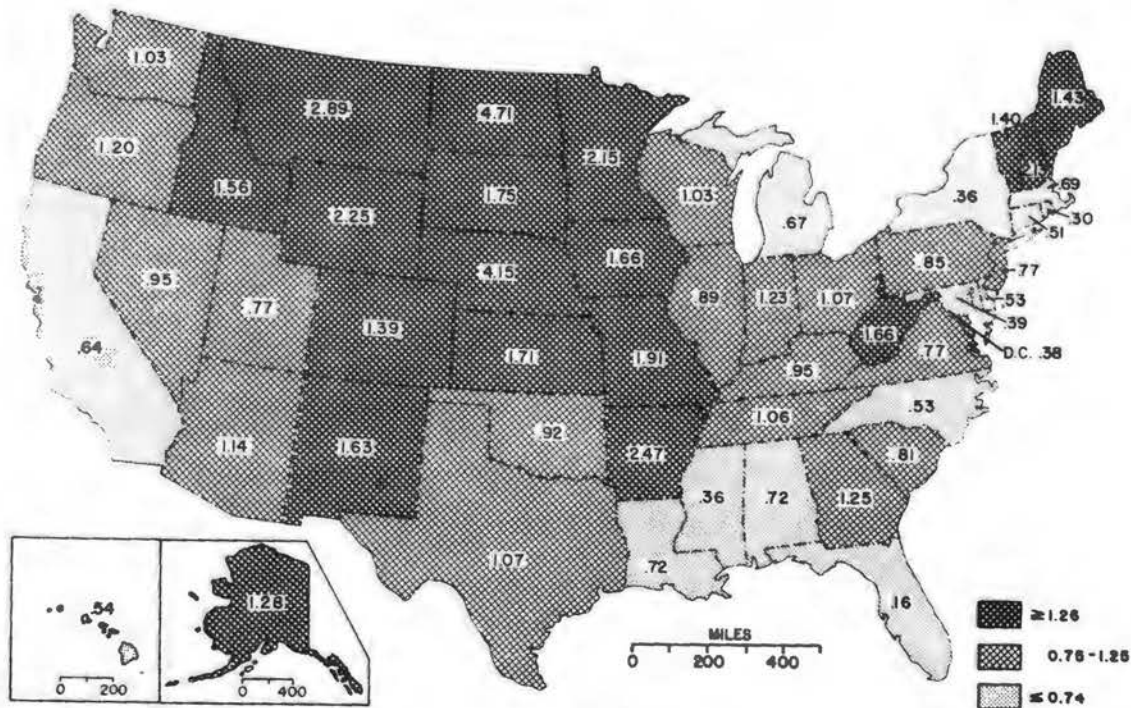
Evidence indicates the drastic difference between city and rural community basketball. In the rural communities, in the states where

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<sup>3</sup>Pete Axthelm, The City Game (New York, 1970), p. 188.

<sup>4</sup>Rooney, From Cabin Creek.





AVERAGE PARTICIPATION = 1 PER 24.5 PEOPLE IN THE 14 - 17 AGE GROUP

SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 4. Per Capita Participation in High School Basketball, 1971-1972

basketball is the major sport, basketball is a vital part of community life.<sup>5</sup>

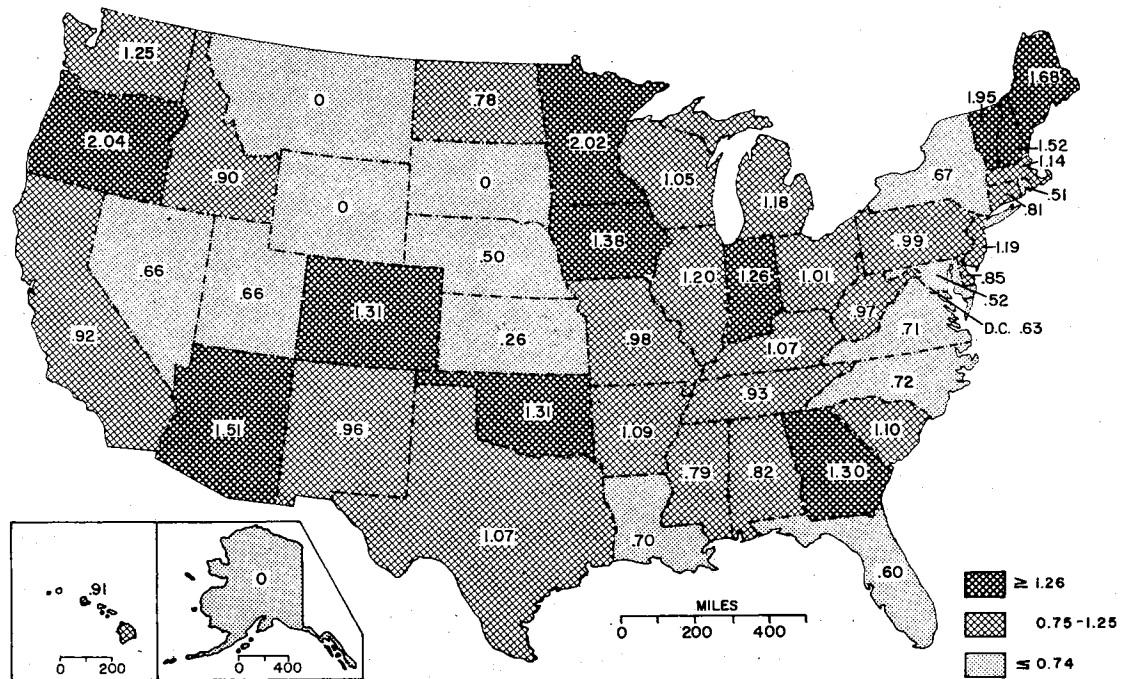
### Baseball

The participation pattern in baseball does not exhibit the pronounced pattern evident in basketball and football (Figure 5). Minnesota, Vermont, and Oregon are the only states with as much as twice the normal participation. Most of the western states are below the national average except for Oregon, Washington, and Arizona. Actually four states: Montana, Wyoming, South Dakota, and Alaska did not even participate in baseball. The low states constituting the South and Atlantic Coast are uniformly low, with Georgia again somewhat higher in respect to the South.

Generally speaking, baseball does not assume the position of importance in interscholastic sports as do football and basketball. An important factor that hurts participation in baseball at the high school level is the decreased interest occasioned by the constant exposure to this sport through the various community opportunities available to participate in baseball. American Legion, Babe Ruth, Pony, and other leagues operate in the summer when school is not in session. In many American communities, baseball interest is highest during grade school and junior high school. Consequently, interest in baseball during high school has deteriorated after enduring the Little Leagues.

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<sup>5</sup>Rooney, From Cabin Creek.



AVERAGE PARTICIPATION = 1 PER 39.5 PEOPLE IN THE 14-17 AGE GROUP

SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 5. Per Capita Participation in High School Baseball, 1971-1972

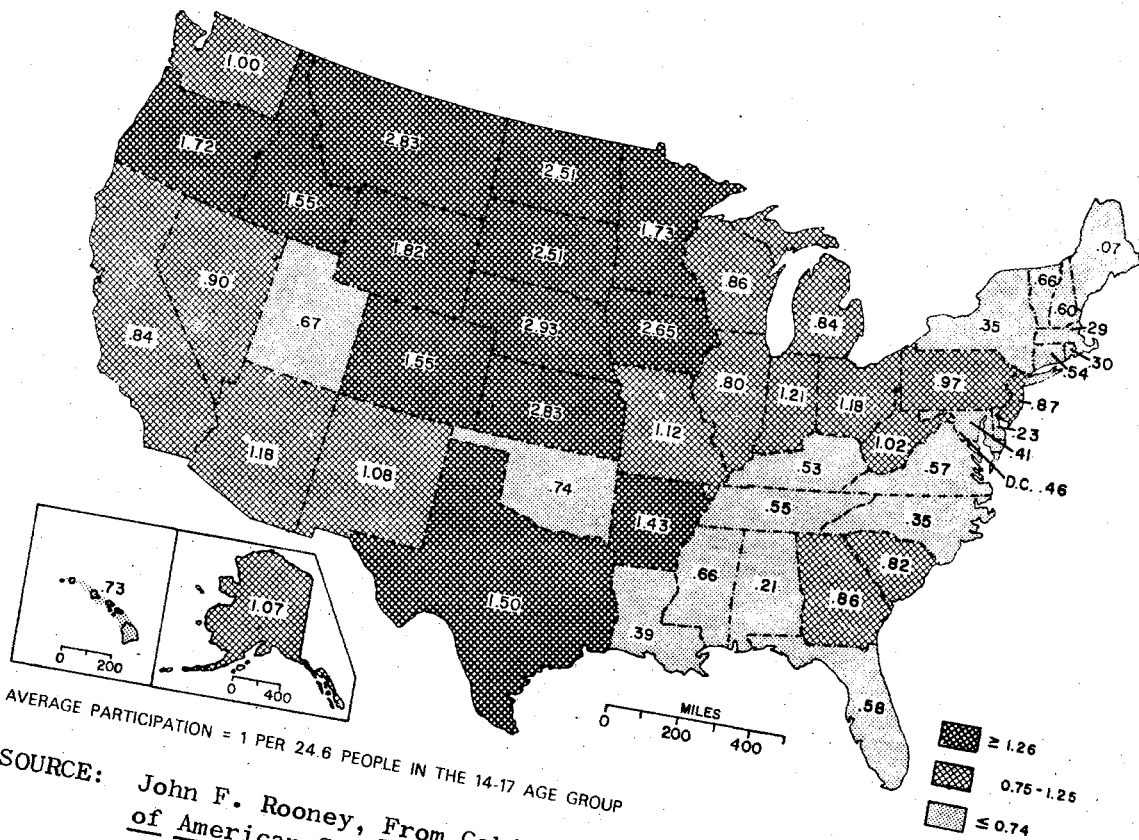
### Track and Field

Participation in track and field forms a distinctive pattern. (Figure 6). The Central and Northern Plains states including Iowa and Montana have doubled the national average. Other states well above the national average in this same region are Oregon, Idaho, Wyoming, Colorado, and Minnesota. The states in the Northeast and South are well below the national average for track and field.

### Wrestling

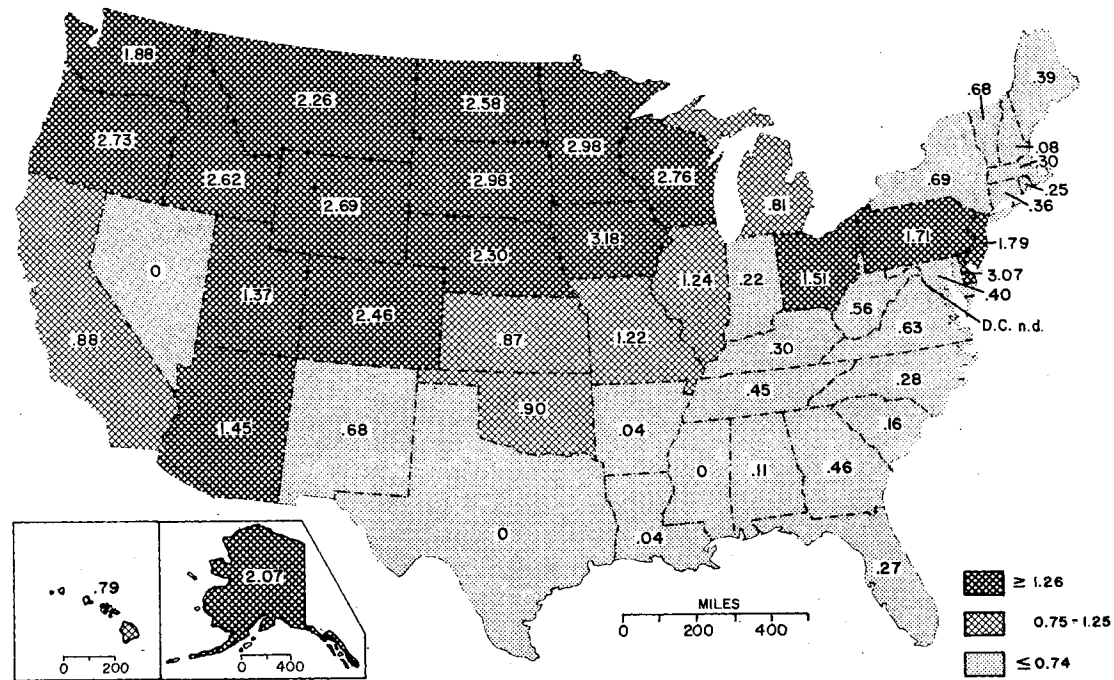
Wrestling has experienced tremendous growth during the past decade in comparison to the other sports. In 1971, wrestling was the fifth leading high school sport on the basis of total participation. The wrestling map indicates extreme variation in provision of wrestling programs in the United States. Thirteen states, led by Iowa, have participation values of two or more times the national average (Figure 7). Interestingly, these form a band from Wisconsin and Iowa moving westward to Oregon. A unique situation exists in New Jersey which has an index of 3.07!

The low per capita opportunities are in the South and the New England states, with the South extremely low. Again, Georgia is atypical, remaining somewhat higher than the rest of the Southern states. Texas and Mississippi reported no wrestling at all, with Louisiana and Arkansas at .04! In the New England area, hockey is the dominant winter sport taking away a lot of participation from wrestling. The other surprising state would be Oklahoma, the pioneer in collegiate wrestling, with a participation value of just .90. However, the great



SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 6. Per Capita Participation in High School Track and Field, 1971-1972



AVERAGE PARTICIPATION = 1 PER 59.8 PEOPLE IN THE 14-17 AGE GROUP

SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 7. Per Capita Participation in High School Wrestling, 1971-1972

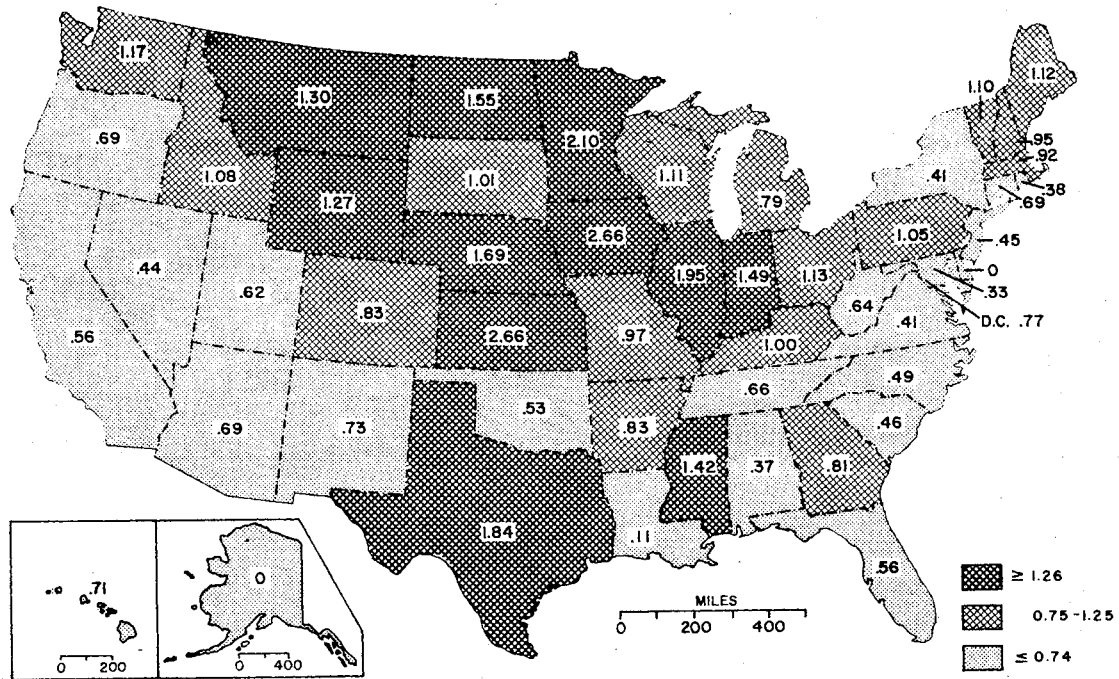
collegiate tradition in Iowa is reflected by a per capita participation index of 3.18.

### Golf

Golf ranks seventh in total participation with over 120,000 males playing at the interscholastic level. Golf is one of the sports that is played in all but two states, Alaska and Delaware. Approximately one out of every sixty-four high school boys participates in interscholastic golf. Three states, Iowa, Kansas, and Minnesota, have indices of 2.00 and surprisingly are not in warm weather areas (Figure 8). Other states which exceed the national average by 50 percent are Illinois, Texas, Nebraska, North Dakota, and Indiana. The South and Northeast are characterized by below average participation. The low participation in the major urban states (New York, Rhode Island, Delaware, Maryland, and New Jersey) could possibly be due to not enough space for golf facilities. In the Southern states, Mississippi has the highest rate instead of Georgia. Mississippi is almost 50 percent above the national average.

### Tennis

The pattern for tennis is very difficult to generalize. There are over 91,000 tennis players in the United States. The highest states are Washington, Idaho, and Arkansas, with all three over twice the national average (Figure 9). Although tennis is doing well in two Northwest states, the pattern of the surrounding states is quite different from the generally high participation values apparent in the Western United States. Nevada does not have tennis, and Montana and Wyoming are at .33 and .31. A "Sun Belt" does exist for the Southwestern states where

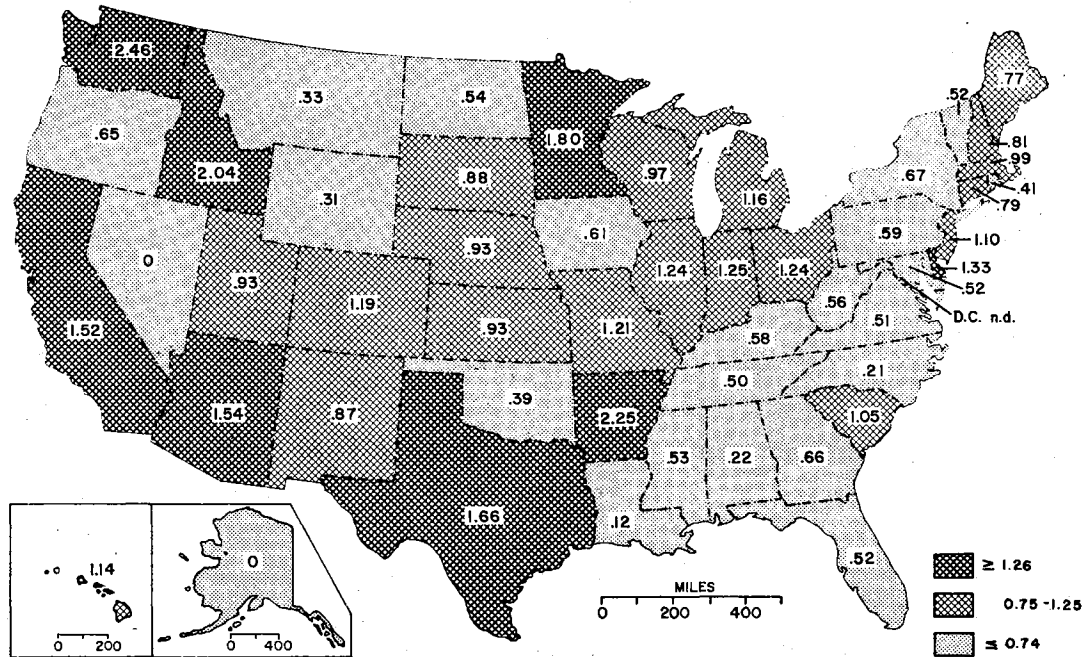


AVERAGE PARTICIPATION = 1 PER 132 PEOPLE IN THE 14-17 AGE GROUP

SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 8. Per Capita Participation in High School Golf, 1971-1972





AVERAGE PARTICIPATION = 1 PER 173.5 PEOPLE IN THE 14-17 AGE GROUP

SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

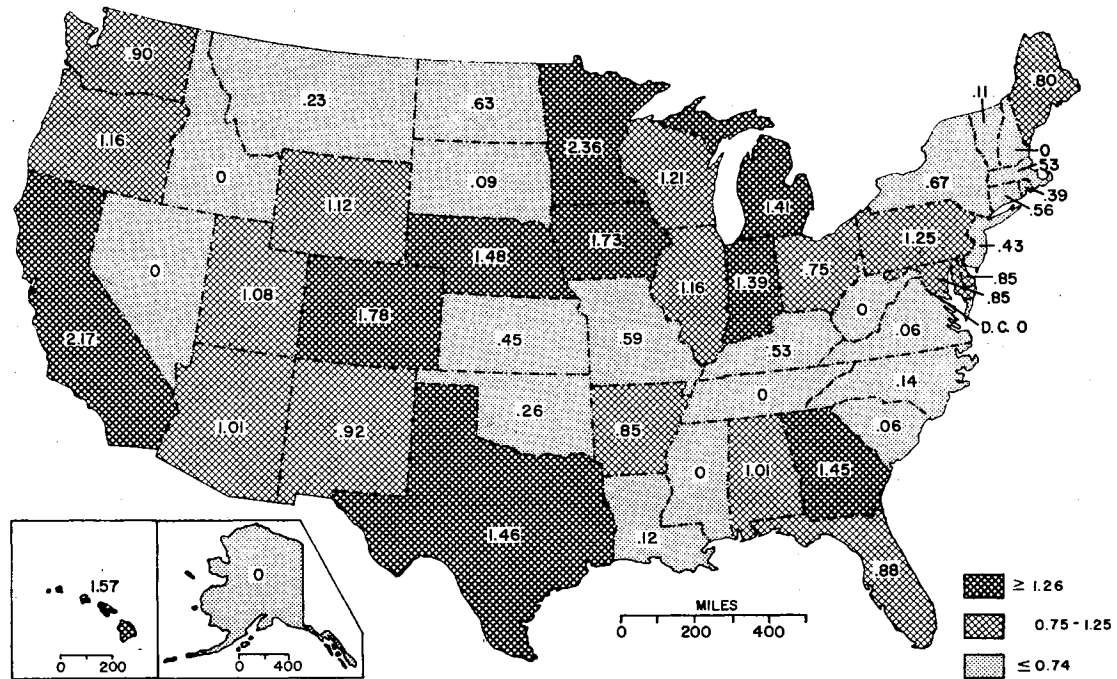
Figure 9. Per Capita Participation in High School Tennis, 1971-1972

California, Arizona, and Texas are 50 percent above the national average. Of this group, New Mexico is just slightly below the national average. The low values in Montana and Wyoming exist in other "Plains States," from North Dakota to Oklahoma. Both are unusually high for other sports but below average for tennis. Quite possibly the windy weather patterns of these plains states account for these low figures. The "Sun Belt" does extend into Arkansas which has an index of 2.25. However, the South is generally far below normal. Ohio, Indiana, Illinois, Michigan, Minnesota, and Wisconsin do, however, present a uniform pattern of participation of about 25 percent above the national average.

#### Swimming

Swimming programs are sponsored in the high schools of all but seven states. Four are Western states and the other three states are from the South. The highest participation states are Minnesota and California. Low participation indices are found in all geographic areas. The Northeast is quite low as is the South except for Alabama, Georgia, and Florida which are at the national average (Figure 10).

Because of the initial construction cost and maintenance of the pool, the swimming program in many schools might be one of the last to be incorporated. For many smaller schools, an additional interscholastic sport such as swimming might take away boys from other sports. Swimming is somewhat of a suburban sport; and as new suburban schools are built, most likely swimming pools will be included for physical education and interscholastic sports. Also, many of the children in suburbia have been exposed to summer swimming programs at an early age.



AVERAGE PARTICIPATION = 1 PER 173.5 PEOPLE IN THE 14-17 AGE GROUP

SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 10. Per Capita Participation in High School Swimming, 1971-1972

## Soccer

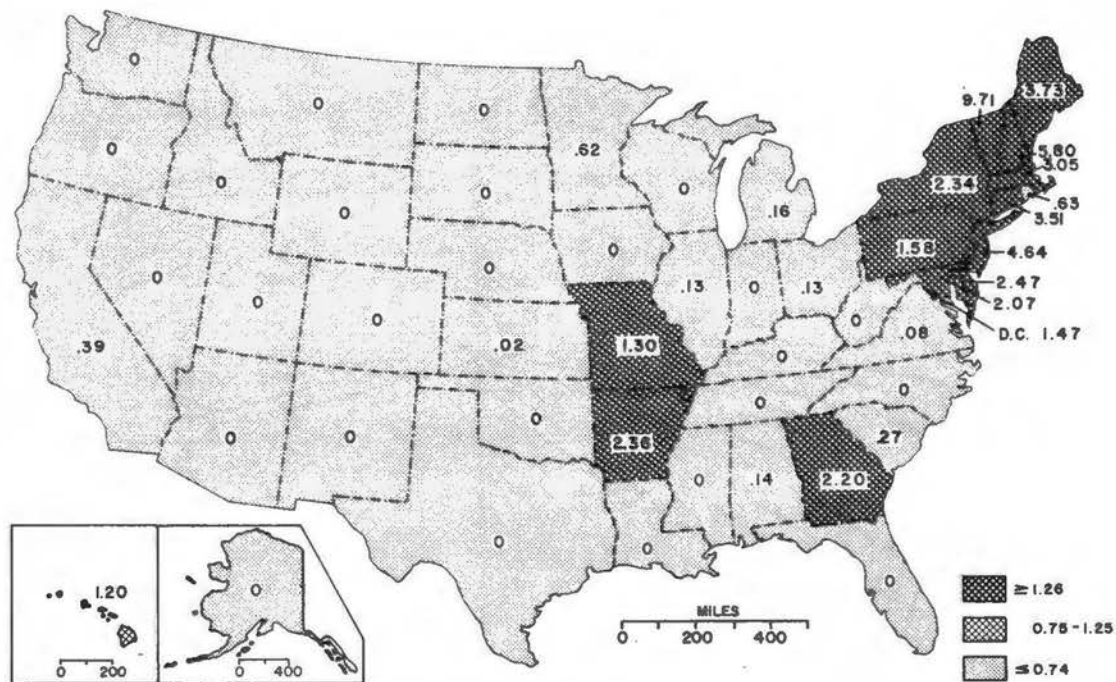
Soccer is regionally concentrated with almost all participation located in the Northeast. One high school boy out of one hundred plays soccer, but twenty-six states reported no soccer competition whatsoever. The leaders are Vermont at 9.71, New Hampshire at 5.80, New Jersey with 4.60, Maine with 3.73, and Connecticut at 3.51 (Figure 11). Even New York and Maryland, characteristically low in most sports, have twice the national average participation in soccer. In the South, Georgia at 2.20 has a very high rate compared to its neighbors. Arkansas and Missouri are the other two states that have high per capita participation figures outside of the basic Northeastern area.

### The 1971-1972 Regional State Patterns of Sport Participation

This section examines the regional and state variations that exist and explanations are presented to explain the many variations that have led to these regional patterns of sport participation. Some of the major factors that contribute to these patterns are school size, settlement density, income, climate, tradition, and the role of women's sport.

The state of New York is analyzed to indicate the regional variation that exists within a state. The New York study demonstrates the level of generalization which results by focusing on state-wide levels of participation.

The relationship between total participation and per capita income, percent urbanization, and per capita expenditure for education is presented in Table XIII.



AVERAGE PARTICIPATION = 1 PER 202 PEOPLE IN THE 14-17 AGE GROUP

SOURCE: John F. Rooney, From Cabin Creek to Anaheim: A Geography of American Sport (Reading, Mass., in press).

Figure 11. Per Capita Participation in High School Soccer, 1971-1972

TABLE XIII  
RANK ORDER CORRELATIONS ON INCOME, EXPENDITURE,  
AND URBANIZATION

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Total Participation and Per Capita Income	.06
Total Participation and Per Capita Expenditure	.13
Total Participation and Percent Urbanization	-.34
Football Per Capita Participation and Football Per Capita Number of Schools	.62

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Very little relationship exists when comparing total participation with per capita income and per capita expenditure for education. However, a low negative relationship does exist for total participation and percent urbanization. A significant relationship exists between football per capita participation and football per capita number of schools which fact suggests the size of school is important insofar as opportunities for participation are concerned.

The pattern of settlement in the Northern Midwest, Great Plains, Rocky Mountains Region, and Northern New England closely approximates the classic, central place model. In this model developed by Walter Christaller, communities exist primarily to serve the needs of the surrounding rural population. The small towns of these regions support high schools which provide opportunities for participation in the basic sports of football, basketball, and baseball. The school enrollments number from 150 to 600 students, and under these circumstances almost anyone is given the opportunity to participate.

Kansas is predominantly a rural state with many small communities and only one high school per town. Prior to 1960 there were many "country schools" servicing the rural students who lived too far from town. After buses became available, all rural students were bused to town. Within the last several years consolidation of schools between several communities has increased the population of the schools and served to lower the per capita participation. Contrast this situation in Kansas and other similar rural states with the New York City school system or other highly urbanized cities with 3,000 or more students per school. In these, only the select few can participate. The remaining students are consequently relegated to fulfilling the role of spectator or they can participate in other activities.

Rooney states: "For these extreme conditions the relationship between settlement pattern, population density, and participation is obvious."<sup>6</sup> However, many situations exist between these extremes, and notable exceptions to this settlement pattern explanation can be made.

Table XIV indicates that there is a high relationship between average school enrollment and per capita participation.

Very high negative relationships were evident for soccer and wrestling while the lowest relationship was for baseball. Overall, these correlations indicate a high degree of relationship between size of school enrollment and per capita participation. In general, the smaller the school enrollment the higher the per capita participation opportunity.

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<sup>6</sup>Rooney, From Cabin Creek.

TABLE XIV  
 RANK ORDER CORRELATIONS BETWEEN AVERAGE SCHOOL  
 ENROLLMENTS AND PER CAPITA PARTICIPATION

Sport	Correlation
Soccer	-.99
Wrestling	-.90
Basketball	-.81
Football	-.81
Swimming	-.79
Track	-.70
Golf	-.76
Tennis	-.76
Baseball	-.60

Generally the agricultural states record high participation rates for the three "national sports" as well as for total participation in the twenty-six for which data were available. The South would be the exception.

The traditions of an area or community are very important in explaining the variations of sports participation at the interscholastic level. The states of Pennsylvania and Ohio are highly urbanized and densely populated states. Yet both are significantly above normal in football participation. The tradition that these states have in football is a dominant factor in the high per capita participation rates in the urban states. "Communities in these states are obsessed with



winning football and the development of highly skilled players." With this kind of societal emphasis, boys are given opportunities to engage in sport at not only the varsity level but also as members of "B" squads, and freshman and sophomore teams.

It would seem that the climate of certain regions would play a significant part in determining variations of sports participation. However, football offers a good example that would contradict such an assumption. The warm Southern states are below the national norm, while the frigid North Central and Northern Midwest have the highest per capita values.

The pattern of participation for baseball is more consistent with climatic conditions. Baseball participation in the Pacific Northwest, the Southwest, and the South is at the national average or above. Oregon, Arizona, Oklahoma, and Georgia reflect some of the higher indices. The Rocky Mountain states are below the national average with Montana and Wyoming not even playing baseball.

Ice hockey and skiing participation occur mainly in the Northern states that border Canada from Minnesota to Maine. In addition to these states Montana, Wyoming, and Colorado have programs for skiing. The climatic conditions are directly related to the sports programs in these states.

Some of the other sports indicate very limited participation. The majority of the participation in bowling occurs in New York and New Jersey. Lacrosse is played in only four states and is concentrated in the Northeast. Curling is played in Minnesota and Wisconsin. Water polo is present in the programs of Hawaii and California. Riflery,

badminton, and softball are played in several states only and form no real pattern.

The patterns for golf and tennis do not reflect climatic conditions because several of the highest values are in northern states.

The role of state income differentials on high school participation is hard to generalize. The low income states of the South have low overall participation rates. Examples would be Alabama, Louisiana, Mississippi, and South Carolina. However, the wealthy states of New York, Connecticut, and Rhode Island are also low on the participation scale.

Therefore, it would appear that in the absence of a strong tradition surrounding a given sport such as Pennsylvania football, Illinois basketball, and California swimming, that the settlement and density of the population are more important than the level of wealth and climatic conditions.

The role of women's sport has affected participation at the interscholastic level. In general, states that value overall participation (Minnesota, Iowa, Wisconsin) also include an active sports program for women. The Midwest area values participation and this same area is offering opportunities for women's sport.

Viewing existing conditions at the college and university level makes one realize that there is now and will continue to be a major revision concerning intercollegiate programs for women. According to recent laws there must be equal opportunity for women to participate and function within a competitive sports system.

Generally, where participation is valued by the community, there has also been a place for girls athletic programs. If women's sports

continue to increase, there might well develop a financial crisis that could very possibly limit or restrict the participation for men's competition. However, if the community accepts the importance of participation for both men and women, increased financial support will have to be made available. If financial support remains the same, the boys interscholastic participation will probably suffer.

The Relationship Between Per Capita Participation  
in High School Sport and the Per Capita  
Production of Major College  
Athletes

This section will examine the relationship that exists between per capita participation in high school sport and the per capita production of major college athletes. The sports under consideration are football, basketball, and baseball. Baseball will be analyzed at the professional level because the data is more accurate and concise. The per capita participation and per capita production figures were used to determine the rank order correlations instead of gross participation figures for each state. In this way the population of the large states is presented in a more equal manner in relation to the sparsely populated states. For example, in football, New York produced 625 players and had a .47 per capita index while Utah produced only 119 players, but had a 1.67 per capita index.

TABLE XV  
RANK ORDER CORRELATIONS ON PER CAPITA PARTICIPATION AND  
PER CAPITA MAJOR COLLEGE PRODUCTION

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High School Football and College Football	.05
High School Basketball and College Basketball	.26
High School Baseball and Professional Baseball	-.12

---

All correlations presented in Table XV indicate very slight or no relationship with the exception of basketball. The correlation for basketball was .26 which indicated a low relationship. These correlations perhaps indicate that some areas or programs stress a more balanced program which produces an all around athlete. This type of person generally is a skilled performer in two or three sports but has not specialized in one sport. Rooney has stated that in other programs promising athletes are singled out early, usually at age ten or eleven, and are groomed from then on toward specialization in one sport.<sup>7</sup> When athletes are singled out for early specialization, the degree of competition is increased greatly. Since only so many positions are available, only the best are able to play. Big city basketball would be an example of this concept. Consequently, the ability of this type of program to produce college material is much greater. In between these two extremes of a well balanced program of wide participation and,

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<sup>7</sup>Rooney, From Cabin Creek.

early specialization in one sport are the majority of the other schools. This would be one explanation of the low relationship that existed between high school participation and major college production.

#### New York Case Study

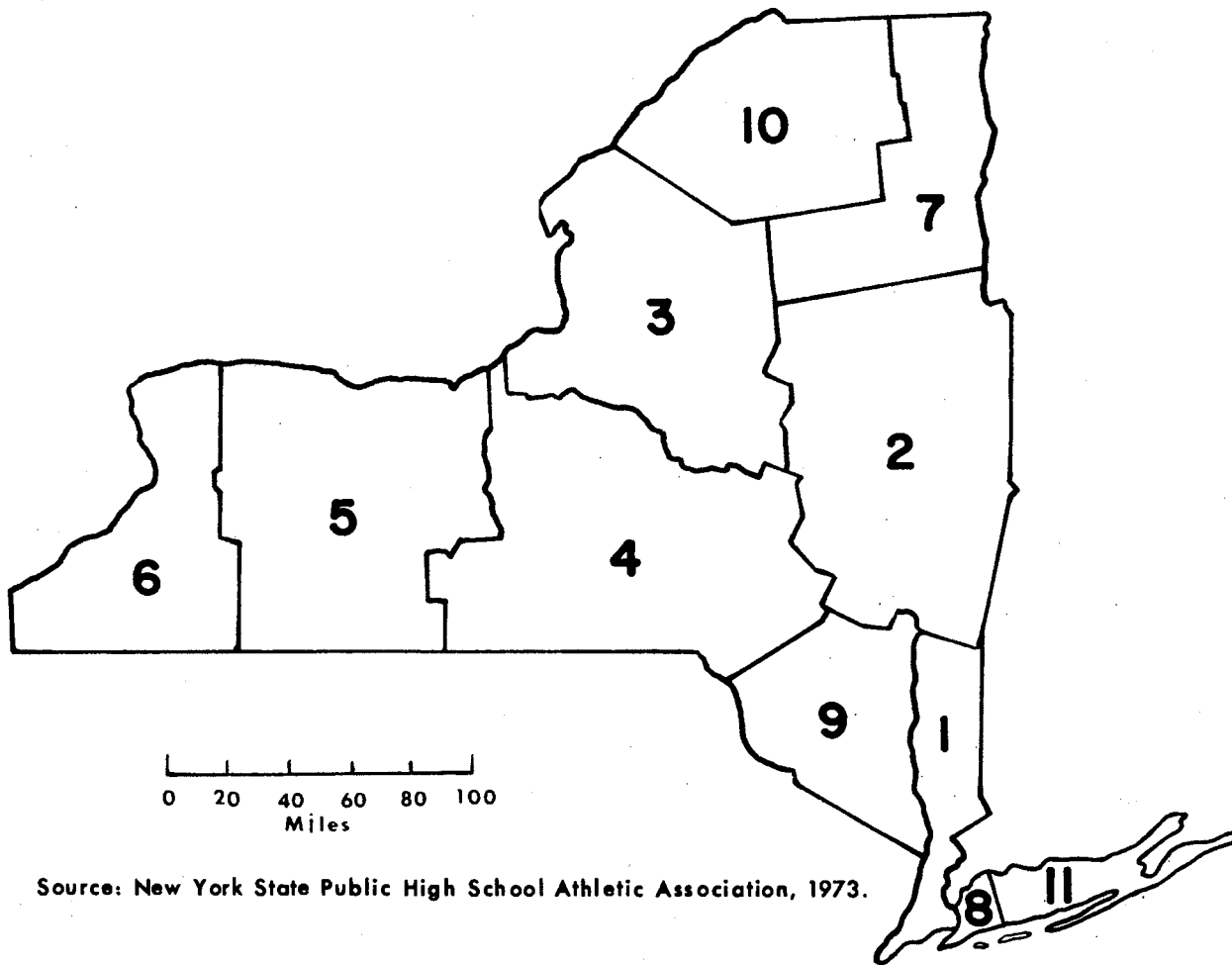
The New York State Public High School Athletic Association published a sports report for the school year 1971-1972.<sup>8</sup> This report on New York sports participation indicates the number of sports for participation, the percentage of schools competing in competition over a twenty year interval and during certain years, the relationship of the size of school in participation, and the effect of geographic location on athletic competition.

This variation of sports participation demonstrates quite vividly how the main content of this investigation is highly generalized. However, the term interschool competition is used to describe the competition in New York which might possibly differ somewhat from the term interscholastic sport. This would account for the differences that are present in the data.

Figure 12 indicates how the state of New York is divided into eleven different areas. In 1971-1972 the member schools reported twenty-eight sports for interschool competition. Results were not reported for the greater New York City area. Sections eight, eleven, six, and five would be the heavily populated areas. The least populated or mostly rural areas of New York state were sections seven and ten.

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<sup>8</sup> John K. Archer, "Sports Report for 1971-1972," New York State Public High School Athletic Association, 1971-1972.



Source: New York State Public High School Athletic Association, 1973.



Figure 12. Geographic Areas of New York State

Table XVI refers to the competition by section and sport. The results in respect to competition by section and sport as taken from the New York study are as follows:

Top percentages for twelve boys' sports are reported above by Section 8 schools (Nassau County). Tied for second place with the highest percentages in three sports are: Section 5 (Genesee Valley), Section 10 (St. Lawrence area), Section 11 (Suffolk County). Section 1 (Westchester, Putnam, Dutchess Counties) excels in golf and rowing; Section 6 (Western New York) in swimming; Section 9 (Rockland, Orange, Sullivan, Ulster Counties) in skiing). The largest number of sports (24) is reported by Section 3 (Central New York), followed closely by Section 4 (Southern Tier area) with twenty-three. Section 2 (Capital District) reports nineteen sports, and Section 7 (Lake Champlin area) has sixteen sports.<sup>9</sup>

Almost all schools in the heavily populated sections around New York City participated in football with the addition of sections six and three (Figure 13). The lowest percentages were reported for sections seven and ten which are the least populated areas.

There are not as many schools participating in wrestling as in football (Figure 14). Sections eight and eleven have the highest percentages. All the other sections, with the exception of seven and ten, fall in the range of sixty-six to seventy-nine percent of schools participating in wrestling.

The figure on soccer presents some interesting characteristics (Figure 15). Again section eight and eleven are very high in percentages of schools playing soccer. Section seven has the third highest percentage for soccer which is unusual. Section ten is also quite high in comparison to the other maps. One reason for these higher percentages in section ten and seven might be that the cost of playing soccer is considerably lower and consequently the area can afford to field

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<sup>9</sup>Ibid., p. 3.

TABLE XVI

1971-1972 PERCENTAGES OF SCHOOLS REPORTING BOYS  
COMPETITION BY SECTION AND SPORT

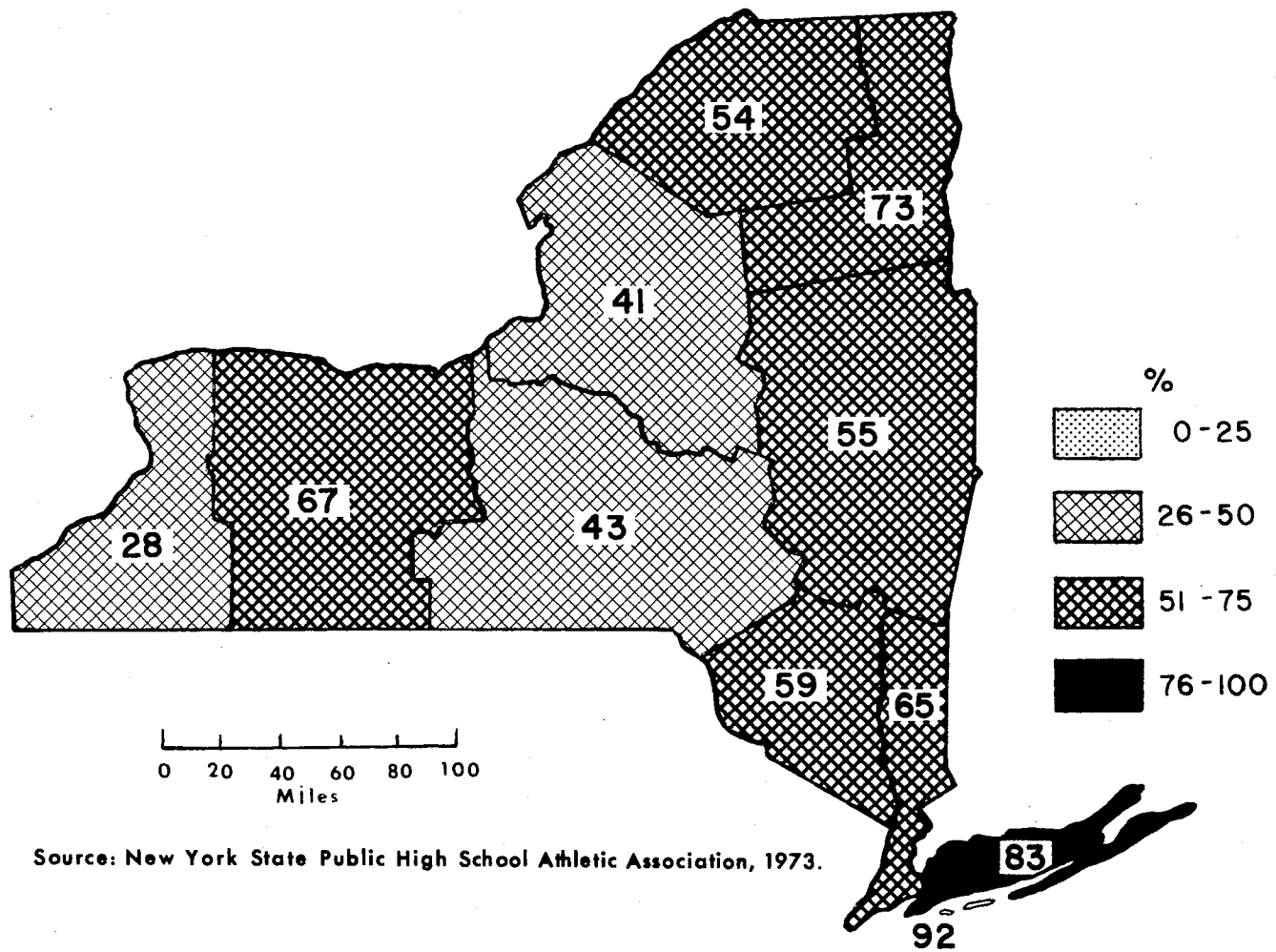
Sport	Sections										
	1	2	3	4	5	6	7	8	9	10	11
Archery	-	-	-	1	1	-	-	-	2	-	4
Badminton	-	-	21	8	33	1	-	-	16	4	-
Baseball	100	99	97	99	98	97	97	100	100	100	98
Basketball	100	99	99	100	98	100	100	100	100	100	100
Bowling	36	52	43	39	58	35	17	71	34	29	48
Cross-Country	88	73	68	59	68	76	-	98	80	43	85
Fencing	2	-	-	-	-	-	-	5	-	-	17
Football - 11	95	68	80	61	62	95	33	100	84	39	85
Football - 8	3	7	5	13	-	1	3	-	-	18	-
Golf	88	58	74	67	63	59	43	68	73	36	75
Gymnastics	28	6	20	8	13	10	0	36	5	-	48
Ice Hockey	11	1	10	1	5	3	3	2	5	32	2
Lacrosse	16	-	21	3	13	-	3	69	14	-	37
Riflery	13	2	7	17	3	19	3	46	5	14	8
Rowing	5	-	1	-	-	1	-	-	-	-	-
Skiing	27	11	8	1	16	2	7	-	39	7	-
Soccer	65	55	41	43	67	28	73	92	59	54	83
Softball	8	2	3	3	4	5	-	5	11	14	4
Shuffleboard	-	-	3	-	-	-	-	-	-	-	-
Swimming	34	15	26	24	42	57	3	24	27	18	12
Table Tennis	-	-	28	13	55	1	-	-	41	18	2
Tennis	77	50	54	43	76	70	23	92	55	7	65
Track & Field	94	77	82	79	92	93	33	98	86	50	87
Volleyball	9	21	49	31	77	42	3	5	48	68	8
Winter Track	50	7	21	4	9	-	-	68	30	14	44
Wrestling	77	68	75	68	79	69	27	90	66	43	85
Number of Sports	22	19	24	23	22	21	16	19	22	20	21







Figure 14. Percentage of Schools Reporting Boys' Wrestling



Source: New York State Public High School Athletic Association, 1973.



Figure 15. Percent of Schools Reporting Boys' Soccer

more teams. Section six is quite unique with its low percentage of twenty-eight when compared to the other maps.

Most of lacrosse in New York is being played in sections eight and eleven. Sections ten, two, and six did not play any lacrosse at all (Figure 16).

Participation in ice hockey presents a totally different pattern than has been presented for the other sports under consideration in New York (Figure 17). The usual leaders, sections eight and eleven, are among the lowest sections. Actually all sections are very low in participation for ice hockey with the striking exception of section ten with thirty-two percent of the schools reporting the sport of ice hockey.

This case study of New York indicates the variety of regional patterns that can emerge from within a state. Factors of population density and settlement patterns account for many of the variations. When all these factors are presented as a state-wide pattern as a whole for New York, the results become quite generalized.

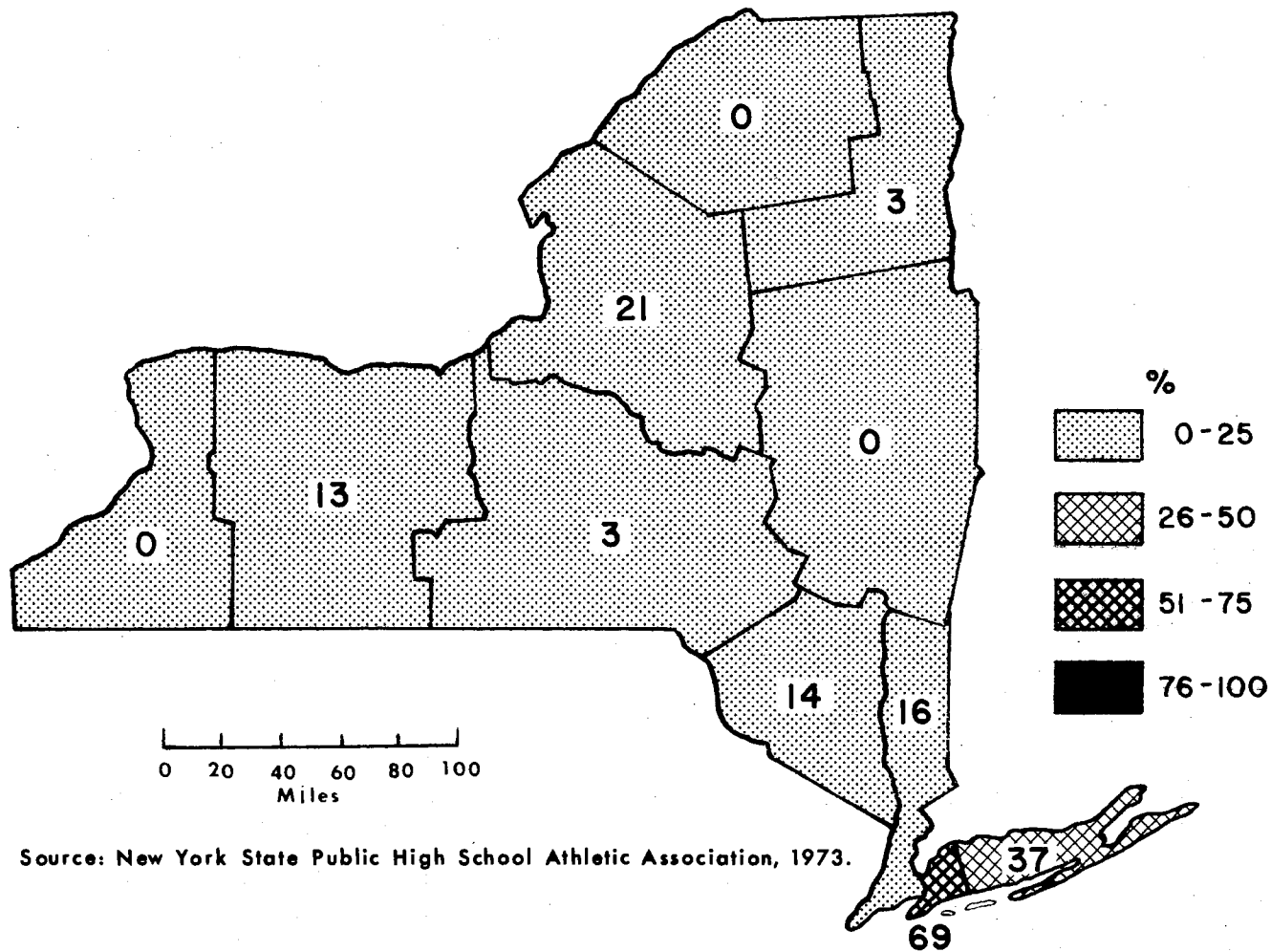
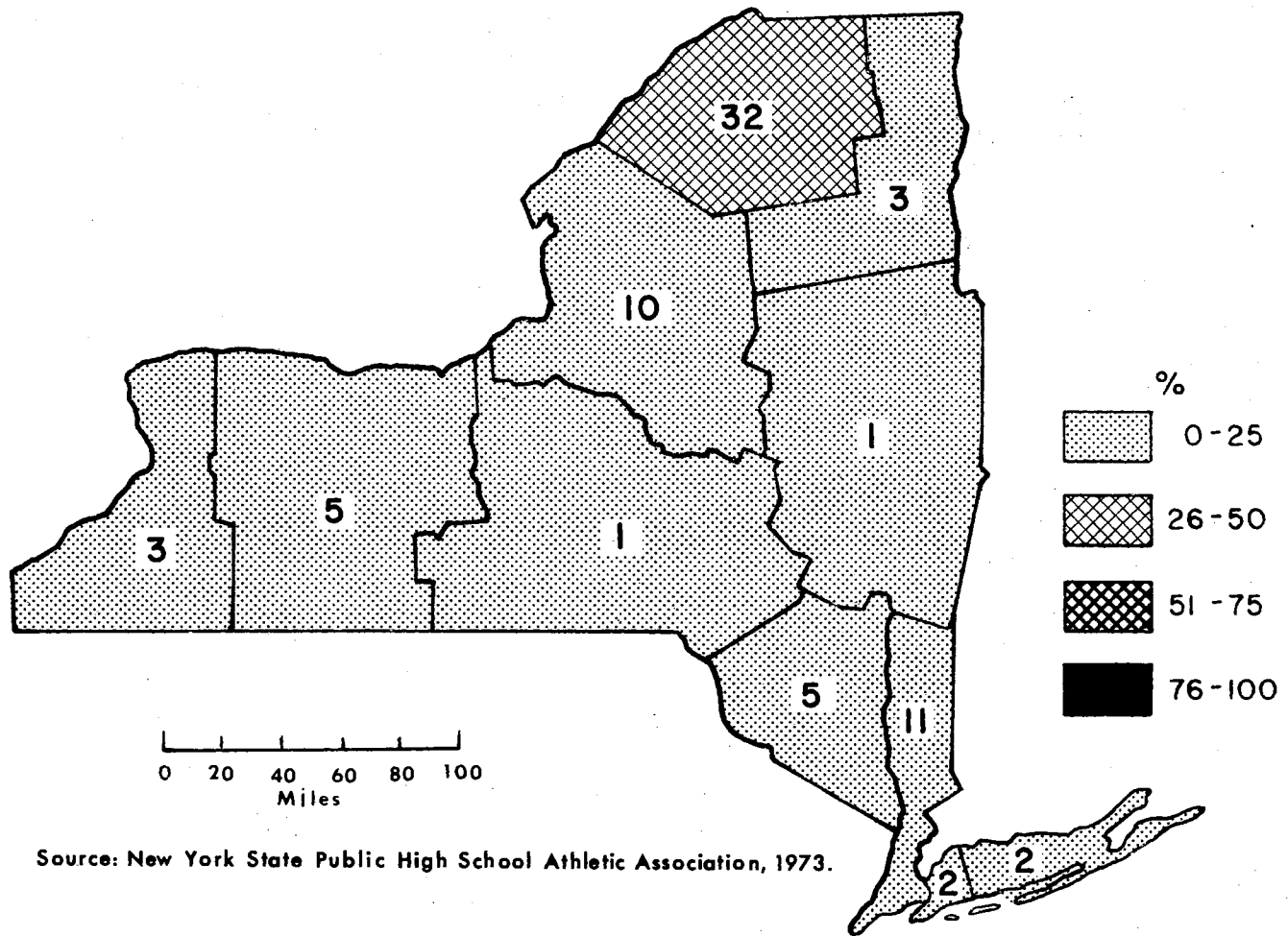


Figure 16. Percent of Schools Reporting Boys' Lacrosse



Source: New York State Public High School Athletic Association, 1973.



Figure 17. Percent of Schools Reporting Boys' Ice Hockey

## CHAPTER V

### TRENDS IN PATTERNS OF PARTICIPATION

The trends in participation are analyzed in relation to the years 1953, 1962, and 1971. Trends are determined on a national as well as state basis. For these two levels, the number of sports, number of schools per sport, and total number of participants are determined. Data are presented for all three time periods except for the number of participants in 1953. Participation trends were determined from 1962 to 1971.

#### National Trends for 1953-1962-1971

##### Number of Sports

In 1953 there were five reported sports at the interscholastic level, including both six and eleven man football. Basketball was the leader in terms of number of schools, with baseball second and football third. The "big three" sports were dominant during this time period.

During the nine years from 1953 to 1962, an additional sixteen sports were incorporated within the interscholastic athletic spectrum. The list of sports is presented in Table XVII for 1953, 1962, and 1971. Of this list of twenty-one sports in 1962, some of the more popular sports were cross-country, golf, tennis, swimming, volleyball, wrestling, and soccer. Other sports participated in on a more regional

TABLE XVII

## INTERSCHOLASTIC ATHLETICS IN 1953, 1962, and 1971

1953*	1962	1971
Football	Football	Football
11 Man	11 Man	11 Man
6 Man	8 Man	8 Man
Basketball	6 Man	6 Man
Baseball	Basketball	9 Man
Track	Baseball	12 Man
Softball	Track & Field	Basketball
	Softball	Baseball
	Cross-Country	Track & Field
	Golf	Softball
	Tennis	Cross-Country
	Swimming	Golf
	Volleyball	Tennis
	Wrestling	Swimming
	Track (Winter)	Volleyball
	Soccer	Wrestling
	Skiing	Track (Winter)
	Sailing	Soccer
	Riflery	Skiing
	Ice Hockey	Riflery
	Gymnastics	Ice Hockey
	Curling	Gymnastics
	Bowling	Curling
	Badminton	Bowling
		Badminton
		Decathlon
		Fencing
		Field Hockey
		Lacrosse
		Rugby
		Water Polo

\*In 1953, the survey was only concerned with the five sports.



basis were skiing, sailing, ice hockey, riflery, gymnastics, curling, bowling, and badminton.

In the 1971-1972 Survey, a total of twenty-six sports was at the high school level. Sailing was left out in 1971; but fencing, field hockey, lacrosse, rugby, and water polo were added.

According to the New York Sports Report, interschool competition was also provided in table tennis, archery, speedball, shuffleboard, and rowing. However, these additional sports may have been for interschool competition and not actually interscholastic athletics.

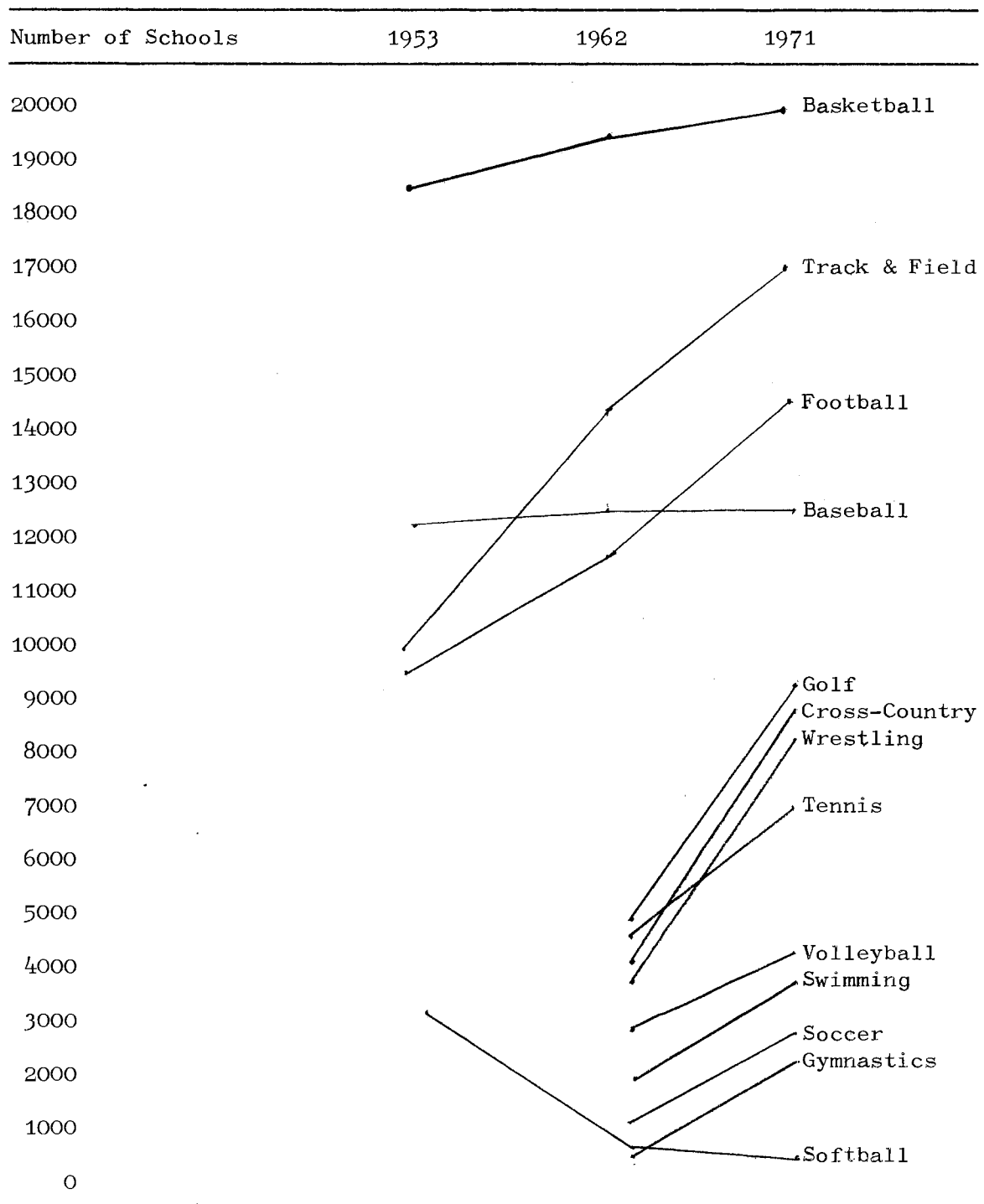
The number of sports opportunities provided for interscholastic competition has increased tremendously in the last twenty years. In 1953 all reported sports were team games, and by 1971 a few more team sports were added into the program, but the majority of the sports added were individual in nature. Approximately one-half of the "newer" sports were participated in by the majority of the states, while the other one-half were regionally distributed.

#### Number of Schools Per Sport

Considering the number of schools that offer sports programs, the tendency as presented in Table XVIII is toward increasing competition involving more schools. The sports that recorded the greatest growth in number of schools were wrestling and cross-country. Each more than doubled. Golf increased approximately eighty percent. Football, track and field, tennis, volleyball, swimming, soccer, and gymnastics all increased by about 60 percent. Basketball, already within most of the schools, showed a very slight increase in the number of schools.

The only sport that suffered a downward trend from 1953 to 1962

TABLE XVIII  
 NUMBER OF SCHOOLS PER SPORT  
 1953, 1962, and 1971



was softball. From 1962 to 1971, baseball experienced a very drop in the number of schools, whereas softball continued a v drop. It must be noted that baseball and softball are also team type games. Significantly, a recent Gallup Poll found team sports decreasing in popularity. The poll also indicated that baseball yielded to football as the nation's number one sport.

This table on the number of schools indicates that instead of the "Big Three" sports, there are four big sports on the interscholastic scene.

Football, baseball, and basketball are truly team oriented, while track and field consists of more individual events within a team scoring construct. Ironically, within the professional spectrum of spectator sports, track and field has only recently initiated its professional tour or season. As a paying spectator sport, track and field has not achieved the levels that characterize football, baseball, and basketball.

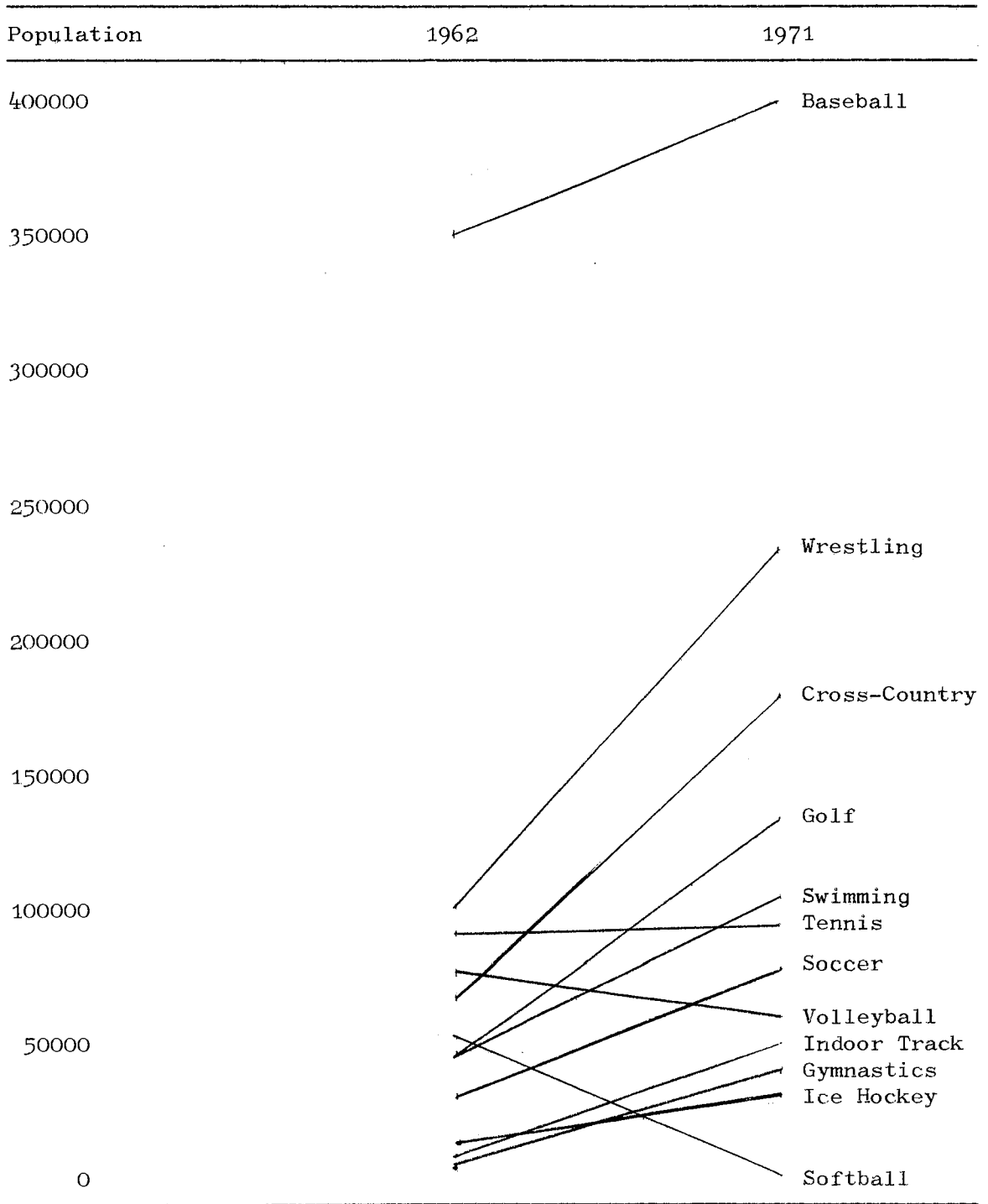
This increasing trend of more schools offering more activities is very encouraging as it reflects a philosophy of developing a broad sports program with increasing opportunities of participation.

#### Total Participation Per Sport

This indicator of participation per sport is a more accurate barometer of the importance of sports. To make Table XIX more illustrative or readable, the participation figures for football, basketball, and track and field were deleted.

In respect to participation, the "Big Three" would be football, basketball, and track and field. Football is the leader going from 720,180 in 1962 to 878,187 in 1971. In second place is basketball with

TABLE XIX  
 TOTAL PARTICIPATION PER SPORT  
 EXCEPT "BIG FOUR"  
 1962-1971



633,235 increasing to 645,670. In third place for both years is track and field, significantly going from 477,103 to 642,670, a 40 percent increase. This increase in the number of participants is about the same increase that football experienced. Baseball increased from 352,529 to 400,906.

The table showing number of schools indicated a steady increase for most sports except baseball and softball. However, Table XIX indicates the same trends are not taking place in total participation. Softball did decrease in participation from 1962 to 1971 but so did ice hockey and volleyball, two team games.

The trend in tennis remained almost the same in 1971 as it was in 1962. This is somewhat questionable when golf, cross-country, and swimming increased substantially. Tennis should have increased simply because there were fifty percent more schools offering tennis programs.

The number of schools participating in wrestling more than doubled, the increase in participation from 1962 to 1971 being 300 percent! Wrestling participation went from 94,896 to 265,039, and now is fifth on the list of total participation.

Cross-country and golf experienced substantial increases in participation while swimming, soccer, indoor track and field, and gymnastics had moderate increases of participation.

The participation table does indicate that team sport participation is declining while participation in the individual sports is growing.

#### Average Number of Participants Per School

The general trend concerning the average number of participants per school from 1962 to 1971 has indicated a slight increase. Out of the



TABLE XX  
 AVERAGE NUMBER OF PARTICIPANTS PER SCHOOL

Sport	1962	1971	Difference
Football	59	62	+3
Basketball	32	32	0
Baseball	26	31	+5
Track and Field	32	39	+7
Wrestling	29	34	+5
Swimming	29	29	0
Soccer	23	34	+11
Golf	9	13	+4
Tennis	18	14	-4
Cross-Country	18	20	+2
Volleyball	32	16	-16
Gymnastics	17	21	+4
Softball	48	19	-29

North Dakota and West Virginia doubled their rates and New Hampshire tripled their participation. Iowa, Virginia, and Nebraska increased values by about fifty percent. Texas and Alabama are the only states that indicated a loss of .50 or more. In general, the trends in participation for football remained constant.

### Baseball

The trends in baseball are similar to the ones for football. Baseball demonstrates a more constant or stable pattern of participation than any other sport. Surprisingly, North Dakota, Oklahoma, and Texas lost approximately twice the value they had in 1962. The only states that increased significantly were Minnesota and Oregon. Considering the history of baseball as reflecting more stable values and opposition to change, this general concept is also reflected in the changes that have occurred at the high school level.

### Track and Field

Again no real pattern emerges for track and field except that the South shows a slightly downward trend. Minnesota doubled its value while Montana, North Dakota, and Pennsylvania increased participation by about fifty percent.

### Basketball

The trends in basketball are somewhat different. A downward pattern in the South emerges with almost all states declining in participation values. Texas, Oklahoma, Mississippi, Alabama, and Florida all lost fifty percent of their participation. Conversely, Wyoming and



South Dakota went from very high participation values to twice the national average. Three states doubled their participation values: Montana, Minnesota, and New Hampshire. All other basketball states remained at about the same levels from 1962 to 1971.

### Wrestling

The increase in wrestling at the interscholastic level is quite apparent. Ten states in the South and Northeast did not have wrestling programs in 1962 but added wrestling by 1971. Maryland showed the biggest increase in their per capita participation. The index went from .67 to 3.07. Montana, Minnesota, and Iowa showed substantial increases. The states that decreased their participation indexes by fifty percent or more were Oregon, Utah, Arizona, Colorado, Illinois, and Alabama. All other states remained at or near the same levels.

### Tennis

The increase in tennis interest by 1971 is very apparent. Almost all states showed an increase in per capita participation. Only Oregon, Arizona, Texas, North Dakota, Michigan, and New York showed a downward trend. The states that showed the biggest increase were Minnesota, Illinois, South Dakota, North Carolina, and Tennessee.

### Golf

Participation in golf remained at somewhat the same level in 1971 when compared to 1962. Participation in Kansas and Mississippi increased by one hundred percent. Other states which gained fifty percent were North Carolina, Minnesota, Iowa, and Nebraska. New York, Florida,

and South Dakota showed the largest decrease in per capita participation.

### Soccer

In 1962 the states in the New England area had very large per capita participation figures. In 1962 fifteen states played interscholastic soccer. By 1971 an additional twelve states included soccer as an interscholastic sport. However, most of these new states in 1971 had very low participation figures. The degree to which soccer is played in the Northeastern section of the United States is apparent by very high participation figures. Maine, Vermont, New Hampshire, Massachusetts, Connecticut, New Jersey, and Maryland had values of over 3.00 in 1971.

## CHAPTER VI

### CONCLUSIONS AND RECOMMENDATIONS

The conclusions based on the results of this investigation of interscholastic athletics for boys are as follows:

- (1) Generally the upper Midwest and North Central states of Minnesota, Wisconsin, Iowa, and North Dakota had a wide variety of interscholastic sports to offer its citizens. Greater opportunity for participation existed in these states.
- (2) The Southeastern states are characterized by a general overall pattern of low participation opportunities and a limited variety of sports opportunities. Other areas that demonstrate below average opportunity for participation are the Middle Atlantic and Southern New England states.
- (3) Overall, the highly urbanized states of New York, New Jersey, and Washington, D.C., showed a distinct tendency for low participation opportunities.
- (4) The rural states of Montana, Wyoming, Idaho, North Dakota, and South Dakota demonstrated overall above average opportunity available for sports participation.
- (5) According to the number of participants, the interscholastic sports scene was characterized not by the

"big three"; football, basketball, and baseball, but by the four major participant sports including track and field.

In the past, the term "Big Three" suggested college and professional sport because of the spectator appeal.

- (6) Within the interscholastic sports scene, there was a basic group of ten sports participated in by most large schools, namely, football, basketball, track and field, golf, tennis, wrestling, baseball, cross-country, swimming, and gymnastics.
- (7) Some of the remaining sports demonstrate distinct regional concentration. Soccer was very popular within the schools in the Northeast. Ice hockey participation was highly influenced by the cold weather in these Northern states.
- (8) Badminton, bowling, and archery were relatively absent on the interscholastic sport scene.
- (9) The trend from 1953 to 1971 had been for the high schools to offer a greater number of sports for interscholastic participation. Most of the increase could be attributed to the greater participation in the individual sports. However, team sport opportunities have remained fairly constant.
- (10) The trend from 1962 to 1971 indicated that the number of schools offering baseball and softball decreased whereas those offering all other sports increased. Golf, cross country, and wrestling showed the biggest gains from 1962 to 1971.
- (11) The trends in total participation per sport showed all

sports except volleyball and softball experienced increased athletic participation.

- (12) The average number of participants per school had also increased from 1962 to 1971. However, volleyball and softball showed a decreasing number of participants per school.
- (13) The basic trends for per capita participation were similar for the top ten sports. In the period from 1962 to 1971, only a few states experienced substantially higher or lower participation rates. The main exception to this trend was tennis, in which almost all states had higher rates in 1971 than they had in 1962.
- (14) The relationship between per capita participation in high school sport and the per capita production of major college athletes was very weak. No relationship existed for football and baseball. However, the relationship for basketball was low. The different levels of competition seemed to be a major contributing factor for these weak relationships.

The variation that exists for interscholastic athletics in the United States was very difficult to explain. The size of the school was the best indicator of per capita participation that existed in relation to interscholastic participation.

#### Recommendations

The role and nature of sport were integral aspects of this society.

Today, sport is being analyzed from many different perspectives, including psychological, sociological, and geographical. Rooney recommends that future research must be conducted concerning the role of sport in the total leisure time behavior of a community. If a community places heavy emphasis on excellence in a few sports, how does this attitude affect the future recreational behavior of the players and the community in general? What about the effect of other recreational sports, such as hunting, fishing, surfing, and skiing, on the development of high school athletics?

To answer these questions, additional research must be conducted at the state, county, and community level. The research conducted during this investigation characterized sport mainly at the national and state levels which led to general implications. To avoid such generalizations in future research, the variables of settlement patterns, population factors, economic conditions, and geographic implications must be singled out and be related to participation.

Similar studies at the state level analyzing counties or geographic areas according to population density could be a basis for future research. Specifically, future research in this area could be a comparison of, for example, a rural community and an urban community in Kansas as well as a comparison of the same type communities in New York. In other words, future studies must deal in depth instead of the breadth as in this investigation.

One of the conclusions of this investigation related to the inequity of opportunity that exists at the interscholastic level of competition. Future research must take a look at the present structure and then offer recommendations that would provide for a more equitable

situation of participation to exist. The results of this study indicated a need for an evaluation of high school interscholastic competition in order that equal opportunity exist for America's sports participants. The large high schools in major cities of the United States at the present time must offer a greater variety of sports that would provide the types of experiences the students need both now and in the future.

The opportunity to play basketball at the small high school was much greater than it was at the large high school for the average student. Consequently, more opportunities, possibly in the form of more than one varsity team per school, should be available in order that equal opportunity exist. Why must there be only one varsity team per school?

A major revision of the structure and organization of high school athletics should include a stronger emphasis and opportunity for participation in the individual sports which would better prepare the individual for lifetime activity. According to the Adult Physical Fitness Survey, the favorite participation sports are bowling, swimming, golf, softball, tennis, volleyball, water skiing, and skiing. These sports, with the exception of tennis and golf, were receiving little attention at the interscholastic level. This recommendation is especially critical in view of the fact that today's society is becoming more and more sedentary and, consequently, there was a need for lifelong activity for each individual. The individual sports with lifetime carryover value must become an integral part of today's interscholastic sports programs.

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VITA <sup>2</sup>

Phillip Dean Adrian

Candidate for the Degree of

Doctor of Education

Thesis: ATHLETIC PARTICIPATION IN HIGH SCHOOL SPORTS: A  
SPATIAL ANALYSIS

Major Field: Higher Education

Minor Field: Health, Physical Education, and Recreation

Biographical:

Personal Data: Born in Hutchinson, Kansas, October 11, 1942, the  
son of Mr. and Mrs. N. F. Adrian.

Education: Graduated from Buhler High School, Buhler, Kansas,  
in May, 1960; received Bachelor of Arts degree in Physical  
Education from Wichita University in 1965; received Master  
of Education in Physical Education from Wichita State  
University in 1968; enrolled in doctoral program at Oklahoma  
State University, 1971-1974; completed requirements for the  
Doctor of Education degree at Oklahoma State University in  
May, 1974.

Professional Experience: Graduate teaching assistant, Department  
of Physical Education, Wichita State University, 1965-1966;  
instructor in Physical Education, Wichita State University,  
1966-1971; graduate teaching assistant, Oklahoma State  
University, Department of Physical Education, 1972-1973;  
instructor in Physical Education, Wichita State University,  
1973-1974.