



Sport and Its Participants

AAAS Symposium • 26–28 December 1968

Dallas, Texas

Every culture, it seems, has games of some kind. Archeologists are uncovering considerable evidence that there were team contests with balls and bats even in prehistoric times. Few activities seem to interest both children and young men as much as sports do. Few attract so many spectators, rich and poor. Men speak today of the mass appeal of television, but a good part of it is due to the fact that at the hours when large audiences are available the programs concentrate on the presentation of athletic events. Until recently, though, trained investigators had done little careful or detailed work on the characteristic nature, problems, aims, and achievements of athletes and their activities.

Even though the great philosophers claimed to take all knowledge and being as their province, none made more than a passing reference to sport. Their neglect is due in part to the fact that they thought that what pleased the vulgar was not worth sustained study by the leisured. Psychology and sociology concentrated on forms of social behavior other than that exhibited in games since these activities were not seen as a type of social system. Over most of its long history and despite its great popularity, sport has not been either critically examined or systemati-

cally investigated. Fortunately, in the last decade or so there has been a sudden surge of interest in it by students of diverse disciplines.

There is now an extensive literature on the physiology of athletes. Something is known about the effects of their training, and of the chemical changes that are produced by exercise. A number of excellent studies are now available in the field of sports medicine. Though there is no significant difference in the longevity of athletes in contrast with the rest of the population, athletes are now known to make better use of oxygen; to have a slower resting heart rate and a higher production of lactic acid; and to be able to perform well and without undue strain in sports for which they were not specifically prepared. Problems relating to physical fitness in particular have been studied with care at research centers in such leading universities as Illinois and Michigan. Coaches have improved their teaching of skills and have made better athletic performances possible by taking account of the results of laboratory tests and experiments. Interval training and weight lifting are now seen to be relevant to many different types of sport. Comparatively fewer studies, though, have been devoted to the examination of the motivation of athletes,

of the rhythm and aims of contests and games, or of the meaning of team play. Even less has been done to get general principles into focus or to make evident the import of games and sport for man and his drives.

The comparatively few experimental physiologists, psychologists, sociologists, and philosophers who have interested themselves in sport do not often refer to one another's work. There has been too little cross-fertilization, too little cross-stimulation, too little cross-checking. Thus, the symposium—Sport and Its Participants—is an experiment in understanding a single field from a number of rather dissimilar vantage points and is designed in part to overcome these limitations. The symposium will take place 26–27 December 1968, during the Annual Meeting of the American Association for the Advancement of Science in Dallas, Texas.

A game occurs in a segment of time and space, cut off from the rest. It is governed by rules which are fulfilled in

Figure legends (left to right). Washington Redskin Charley Taylor outbattles a New Orleans Saint for the ball [Paul Fine Photo]; forward dive by Suzy Manske of Sacramento, California [Swimming World Publications]; spring training [New York Yankees]; Billie Jean King [Russ Adams Productions, courtesy of U.S. Lawn Tennis Association].

Speakers and Topics

26 December

The Scientific Basis for Athletic Performances

- Erwin Straus—*The Philosophical Point of View.*
J. J. Gruber—*The Psychological Point of View.*
E. Jokl—*The Physiological Point of View.*
E. Jokl, *Discussant and Chairman.*

27 December

Conditioning the Human Body: Fitness for Sports and Life

- T. K. Cureton, *Chairman.*
T. K. Cureton—*Scientific Principles for Conditioning the Human Body.*
William Heusner, C. E. Silvia, and J. S. Counsilman—*Conditioning in Aquatics.*
J. Bosco and L. Weiser—*Conditioning in Gymnastics.*
R. V. Ganslen—*Conditioning in Track and Field.*
B. Rothemel and J. Breen—*Conditioning in Baseball and Team Sports.*
R. Pohndorf and P. Fardy—*Conditioning in Football, Soccer, and Associated Team Sports.*

Girls and Women in Play and Sport

- Warren Johnson—*Introduction.*
John Paul Scott—*Implications of Aggression Theory for Play and Sport for Women.*

Emma McCloy Layman—*Psycho-Social Implications of Play and Sports for Girls and Women.*

Thomas Boslooper—*Physical Fitness and Femininity.*

Warren Johnson, Bruce Fretz, and Julia Johnson—*Effects of Developmental Play on Neuromotor Perceptual Organization and Psycho-Social Skills of Girls.*

Abdel Ischmail—*Effect of Physical Activity on Personality Variables in Girls.*

E. James Lieberman, *Discussant.* W. Johnson, *Chairman.*

28 December

Psychology and Sociology of Sport

Gunther Luschen—*Structural Relationships between Cooperation and Competition.*

Ralph Stogdill—*The Team as an Organized Group.*

Gregory Stone—*Sports, Fandom, and Urban Identification.*

Richard E. Emerson—*Games: Rules, Outcomes, and Motivation.*

Dr. Roberts—*Expressive Self-Testing in Games.*

Gerald Kenyon and Brian Sutton-Smith, *Discussants.*
Marcia Guttentag, *Chairman.*

Sports and Games

Robert Fogelin—*Sport: The Diversity of the Concept.*

Robert Ehman—*Play and Games.*

Kenneth Schmitz—*Suspending the Ordinary: Sport and Play.*

Paul Weiss, *Discussant and Chairman.*

individual ways by dedicated, well-trained men. The athlete in action makes use of a psychology and a physiology which set him off from other men—even those engaged in equally difficult ventures. The first session of the symposium, devoted to a study of athletic performance, takes account of these facts.

Men perform well only after they have gone through a course of training and practice. All athletes, whether concerned with individual or team events, give themselves to arduous and often boring exercise periods. They need coaching by experts, and must master equipment which has a structure and power that is alien to their bodies and organs. They are sometimes said to require a special diet, though there is no unanimity as to just what this should be. What is quite clear is that their bodies must be conditioned, well before the time they engage in contests,

otherwise there is little hope that they will approach maximum speed, strength, endurance, or accuracy. The second session deals with these issues.

A regrettably neglected field of investigation is women in sports. Too little is known of their motivations or of their distinctive needs and possible achievements. Most studies treat women as though they were truncated men; almost all of the games in which they participate were designed by using this questionable idea as a guide. The role of aggression in women's activities also deserves discussion. No one yet knows what bearing their careers as athletes have on their femininity—and conversely—in fact or in attitude. The third session is devoted to these and related problems.

A game can be viewed as a social system in miniature, exhibiting a well-defined set of rules for competitive and cooperative conduct. It offers a natural field experiment in which it is possible to watch groups acting over time, and against which we can check the out-

come of controlled laboratory experiments. The rules of a game can ground a study of the nature of deviant behavior, conformity, group cohesiveness, and other social phenomena. It is now possible to become a little more precise about the way in which spectators at games differ from audiences at concerts, plays, and dances; the relationship of spectators to participants exemplifies distinctive identification and reference group processes. These matters are discussed in the fourth session.

In the final session philosophers define and relate play, games, and sport—areas not always clearly distinguished or well described. It is their task to explore the bearing these different activities have on our understanding of man. The philosophic discussion relates the previous studies to one another, and brings into prominence the distinctive contribution that sport makes to man and to civilization.

PAUL WEISS

Yale University, New Haven,
Connecticut

See Science, 30 August 1968, for details about registration, hotel reservations, and preliminary program of AAAS Annual Meeting.