CHAPTER VI
ATHLETIC PARTICIPATION AND ITS RESULTS

IN the chapter devoted to the control of athletics many matters bearing upon participation inevitably found place. The subject of the present discussion interweaves itself also with the hygiene of training, and indeed with many other topics of the study. In considering it, we shall find the most convenient order of topics to be, first, the forces and motives which lead men and women to engage in college athletics; secondly, the characteristics of these participants; thirdly, an enumeration of the branches of athletics now prevalent in colleges and universities; fourthly, the conditions under which students take part; and, finally, the immediate and the ultimate or deferred results of their participation.

I. What Leads Undergraduates to Participate in Athletics?

Although the reasons for participation in intercollegiate athletics differ somewhat from those that prompt participation in intramural games, these differences are more or less incidental to general underlying causes.

A. The Inherited Characteristics of Athletes

In a special study of the inheritance of athletes made for the present enquiry, Mr. Richard H. Post and Dr. Charles B. Davenport, Director of the Laboratory of Experimental Evolution of the Carnegie Institution of Washington, at Cold Spring Harbor, Long Island, considered the inherited characteristics of some 587 athletes, belonging to fifty-four American families. Studies in this or related fields had already been made by, among others, Dr. Davenport, Sir Francis Galton in 1869, Dr. F. Bach in connection with 3,457 participants in the Munich Turnfest of 1923, and Dr. O. Schlaginhaufen in 1927. From these previous enquiries and from the newer data of Mr. Post and Dr. Davenport, a few fundamental inferences may be drawn respecting the inherited characteristics of athletes as contributory to their participation in athletics.

Sixty years ago, Sir Francis Galton [1] showed that unusual ability in rowing and wrestling may "run in the family." By anthropometric measurements, Dr. Davenport [2] fifty years later demonstrated that both stature and body-build are family traits. Dr. Bach [3] concluded substantially that "it seems impossible that the sport-types have been formed exclusively by environmental influences. We must rather assume a genotype which directs its possessor to certain bodily exercises." In other words, the athlete's inheritance of physique not only predisposes him to athletics in general, but may even tend to direct him in his choice of branches for participation without his being fully aware of its influence. Thus a long-legged youth becomes a sprinter primarily because of his long legs. A short, stocky, powerful-shouldered man becomes a wrestler partly because of his build. The influences of initial success at some branch or the urgings of a trainer or a fellow-athlete are, from the point of view of genetics, secondary to the initial promptings of inherited physical characteristics. On the other hand, other environmental forces may inhibit or modify this native predisposition, and so not all long-legged boys become sprinters nor do all heavily built men become wrestlers.

The inheritance of traits of character is far less easily demonstrable. The studies of Dr. Davenport and Mr. Post have indicated a probability that a father's interest in athletics may result in a son's becoming an athlete, perhaps through the influence of home or other environmental conditions or the removal of prohibitions. Certainly, such qualities as self-assertion, physical energy, control of temper, coolness, fondness for publicity, persistence, and many more besides, are common in varying degree to all men. Some may be inherited in a higher degree than others. Apparently, participation in athletics develops, rather than implants, certain traits of character. After

[1] *Hereditary Genius*, 1869.

[2] C. B. Davenport, "Inheritance of Stature," *Genetics*, Vol. II, 1917, pages 313–89; *Body-build and its Inheritance*, Carnegie Institution of Washington Publication No. 329, 1923.

[3] F. Bach, "Körperproportionen und Leibesübungen, u.s.w." *Zeitschrift fur Konstitutionslehr*, Vol. XII, 1926, page 522. His conclusions are developed by O. Schlaginhaufen, "Anthropologie und Sport," Die Körpererziehung, Vol. V, 1927, pages 3–14.

inherited physical conformation has predisposed some persons to athletic exercise, habituation emphasizes and heightens certain characteristics already present.

We turn now to the results of environment, which, Professor Elmer D. Mitchell says,[4] "is a more potent factor than heredity in the playing of athletic games." Given an inherited tendency to athletics, what conditions encourage the fulfilling of that tendency?

B. Requirements in Physical Education

Among such conditions, the requirements for physical education in secondary schools and in colleges stand out as preëminent. Each of the seventeen states which have departments of physical education requires that boys and girls of school age shall take part in games and contests of some sort. In the other states, high school athletics play a prominent rôle, although in some instances they may not be dignified by the term "physical education." No private preparatory school is known in which athletics or physical education does not now find its place in school life. Finally, all American colleges or universities appear to countenance athletics, intramural or intercollegiate, or both, — indeed, the great majority insist upon the satisfactory completion of a course in physical education for graduation, require that it be taken early in the college course, and count the time spent upon athletics, formal or informal, toward its completion. Thus, curricular requirements serve college athletics. A requirement to the effect that each college or school student shall take physical or athletic exercise according to his capabilities and inclinations is commendable, once his condition and needs are determined through adequate physical or medical examination by a competent examiner.

C. Enjoyment of Athletics

During the past few years, a number of "confessions," written by former college athletes and published in periodicals, have contributed to a widespread notion that participants in college athletics get little pleasure from them. Consequently, in the course of our enquiry, numbers of athletes at many institutions have been asked, "Do you enjoy playing?" The replies may be summarized as follows:

By and large, undergraduates enjoy participating in athletics. But one whose principal interest is his academic work tends to be irked by the intensity of modern training, especially at football. When in such circumstances a choice must be made between academic work and intercollegiate athletics, the decision is doubly irksome and may lead to protests against the stringency of training. A majority of the intercollegiate football players questioned appear to enjoy playing football, but not to regard it as fun or recreation; their enjoyment seems to arise from more intangible rewards, — the atmosphere surrounding competition, the notoriety that success

[4] "Racial Traits in Athletics," *American Physical Education Review*, May, 1922, page 206.

brings, and the like. A great many football players volunteered the information that for actual fun, they prefer the less formal intramural games to intercollegiate. The indulgence of the "play instinct" is rarely possible in modern intercollegiate athletics, especially football.[5]

D. College Opinion

The American undergraduate is less individualistic than the undergraduate of Oxford or Cambridge in deciding whether he shall take part in athletics. College opinion in the United States is apt to be stronger than the individual's personal inclinations. A skilled runner or football player or skater who decides to abandon intercollegiate competition and to devote more time to his studies is confronted by pleading fellow students and friends, coaches, alumni, and even, in some instances, officers of the university, who endeavor to rouse his conscience and sense of "duty" to Alma Mater. Few young men can resist this pressure, especially in view of the social stigma attached to the "quitter" and the fact that they are "getting by" in their academic work. This tendency to bow to convention and unreasoning college opinion is one of the least admirable qualities of American university life. Our athletics increase it by insistence upon the values of team play at the expense of independence in judgment. The man's final decision is of secondary import compared with the mental processes and the reactions to outside stimuli that lead to it. When the academic aspects of American college life command the best interest and endeavors of a student body, this particular phase of what is commonly termed the "over-emphasis" of athletics considerably subsides.

E. The Future Career as a Motive

In numbers of instances, voluntary participation in college athletics is prompted by considerations respecting the life career that the participant intends to enter. To the successful athlete who decides to capitalize his reputation, three roads are open: playing as a professional, coaching or work as director of physical education, and certain kinds of business.

1. Professional Athletics

Sharp competition for expert players has enhanced the value of the college athlete as a recruit to professional teams in football, baseball, hockey, basketball, and, in a very few instances, soccer. The influence of such overtures, even when the athlete is supposedly safeguarded from professional inducements and left to complete his college course, is overwhelmingly in the direction of commercializing college athletics. For example, during college games which "scouts" or promoters of professional teams

[5] For some of the more technically psychological aspects of athletics and participation, see Professor Clark W. Hetherington's discussion in the *Cyclopedia of Education*, 1911, s.v. *Athletics*.

attend in order to discover promising material, the players tend to become self-conscious, and if they make errors of play, they are commonly chided with such jibes as "That will cost you a job for next year," or "That will cost you money." In the South and Mid-West, the professionalizing motive apparently becomes strong in many athletes as early as their high school days, with the result that not a few players of baseball at school enter college merely to play on college teams in hopes of establishing reputations that will attract substantial offers from "scouts" and professional leagues. In such instances, the academic aspects of college or university life are naturally of comparatively minor importance. The awarding of scholarships or other aids to college athletes whose intentions to enter professional athletics as a career are known, is difficult to justify. On the other hand, not a few undergraduates who have received offers from professional teams after graduation have refused them from a variety of motives: previous selection of a different career, the fear of losing social position, parental objection, contrary advice from college officers and coaches, and other reasons. A further motive for professionalizing one's athletic career is discernible in cases of athletes who have entered professional athletics after graduation in order to earn, readily and pleasantly, money to start themselves in business or in training for a profession. Certainly, to all forms of professional athletics, successful participation in college athletics affords a comparatively easy and enjoyable approach.

2. Coaching and Director's Work

The schoolboy whose athletic success or related interests have led him to look forward to work as coach or as director of physical education will generally enter a school or department of physical education. So far as can be ascertained, no university or college segregates for athletics students of physical education from students whose principal academic interests lie in other fields. At a few universities (Illinois, Michigan, Wisconsin), the presence of such men appears to have greatly strengthened football or other teams. These expert athletes, spurred on by the possibilities of employment as coach or director after graduation, give an unfair advantage to any team of which they are members. However this may be, at a number of Western and Mid-Western universities, the intention to enter coaching or teaching of physical education has undoubtedly provided a powerful incentive to take part in athletics, first, because of the knowledge and skill to be gained therefrom, and secondly, because of the value of the reputation that success as an athlete brings to the man who intends to coach, teach, or direct athletics.

3. Business and the Athlete

In the past, business men have set much store by some of the qualities that athletic participation is commonly supposed to engender, — the ability to approach other men, quickness of decision, social ease in meeting people, and so on. While it is undeniable

that these qualities are seldom to be found in the "grind," who has paid attention only to his books and to none of the socializing aspects of college life, the influence of these motives upon the athletic participation of individuals has probably been negligible. Nevertheless, the undergraduate's vague notion that athletics are a good preparation for business is explicable through one or both of two more general convictions: (1) College athletics are a socializing force. (2) Men of social leanings tend to take part in college athletics. It is to these truisms that the alumnus refers when he says, "Of all my school course I got the most out of athletics." [6]

F. Payment for Participation in Intercollegiate Athletics

Because the matter of compensation to college athletes receives detailed discussion elsewhere in this study, it is sufficient to note here that the threat, expressed or implied, that a scholarship or subsidy may be withdrawn if the recipient athlete fails in athletic performance is a powerful compulsion to participation. The importance of athletics in the mind of the subsidized athlete necessarily dwarfs the importance of maintaining satisfactory academic standing.

A curious instance of the prevalence of this feeling occurred at a college where no athletic subsidies are in use. An athlete who had been awarded a scholarship on the grounds of his financial need and adequate academic standing, called upon the president and offered to resign his scholarship because, not having been selected as a member of the football team, he was not earning his stipend. Upon the president's asking what that had to do with the matter, the young man replied that it was his understanding that he had been receiving a football scholarship and that he could not continue to accept money that he did not deserve. It took the president longer than a few minutes to set matters straight in the athlete's mind.

G. Summary

Of all the foregoing incentives to take part in athletics, the most powerful of all is enjoyment. In cases in which subsidies are paid, the pleasure of notoriety persists as a secondary motive. Requirements for graduation doubtless direct toward athletics many students who might not otherwise participate in team games. But it is only when an athlete begins to capitalize his athletic ability, whether through covert subsidies or through overt acts, that cupidity or financial need tends to become the most powerful single motive in his participation.

II. The Branches of College Athletics

For some years it has been customary in the United States to regard the branches of college athletics as divided into two categories: "major sports" and "minor

[6] For the point of view compare Thomas W. Slocum, "Fools Trespass When Angels Keep off the Grass," *Harvard Advocate*, Vol. CXIV, Number 8, May, 1928, page 49 f.

sports." Strictly speaking, this classification, which is in the nature of a rating, applies only to extramural athletics. To the American college man or woman, the terms "major sports" and "minor sports" carry very definite connotations, but they are difficult to define in universal terms, and the distinction is probably breaking down.

A. Major and Minor Sports

The implication of rating contained in the terms "major sports" and "minor sports" is to the effect that some branches of athletics are more important to a college or university public than others. Formerly, the right to wear, usually upon athletic clothing, the initial letter of the institution was enjoyed by those who represented the institution in a major sport. The award was made on recommendation of due authority such as a coach, director, or captain, and was formally conferred by vote of the athletic board or association. Nowadays, practice in this matter appears to be changing rather rapidly. It is becoming more usual for conferences to prescribe the details of award of insignia. At some institutions distinction between major and minor sports has been abolished altogether, while at others continued success of teams in a minor sport has led to the elevation of that sport to major status. Members of second or junior 'varsity teams in major sports are rewarded by lesser but similar distinctions and privileges, usually carefully distinguished from those awarded for minor sports.

Nearly all American colleges regard football, baseball, basketball, and track and field athletics as major sports, and award "major" insignia or "letters" for distinguished participation therein. Colleges and universities that support intercollegiate competition in certain of the other branches of athletics regard them also as major sports: rowing, cross-country running, and ice hockey. Exceptionally, Columbia includes fencing as a major sport, while Yale so rates swimming, and Pennsylvania, soccer.

A "minor" sport is a branch of athletics, generally intercollegiate or extramural, in which distinguished participation and representation of the university is rewarded by the right to wear some insignia other than the major-sports letter. Minor sports include association football, boxing, fencing, golf, lacrosse, polo, swimming, tennis, wrestling, and occasionally gymnastics on intercollegiate teams, rifle shooting, trap shooting, water polo, and, on the Pacific Coast, English "rugger."

Dartmouth College and, even more emphatically, the University of Iowa, have abolished the distinction between major and minor sports, so far as awards are concerned. One of the notions behind this action appears to be the feeling that men who worthily represent the university in intercollegiate competition should have the same, or essentially the same, honor.

The distinction in awards for major and minor sports is comparable to the distinction between the blue and the half-blue at Oxford, Cambridge, and most of the newer

English universities. The American "letter man" corresponds roughly to the Oxford or Cambridge "blue," and the American member of the second string or second team to the Oxford or Cambridge "half-blue."

B. Intramural Sports

Intramural sports are those branches of athletics in which competition takes place between teams representing different groups within the student body of the institution, organized usually upon the basis of daily associations and loyalties. All of the major and minor sports find places upon schedules of intramural contests, although basketball is more nearly universal than American football, which in a few institutions has been stricken from the intramural program. In addition to the usual major and minor branches already enumerated, speedball, volley ball, handball, playground ball, soft ball, touch football, any of the six varieties of indoor baseball, foul throwing or shooting, as adapted from basketball, horseshoe pitching, and occasionally squash, bowling, and hiking, are included in intramural athletics. At universities and colleges where physical education and credit requirements have not led to the extension of intramural programs, class teams and contests in both major and minor sports are usual. Membership in an American class team and the award of "numerals" may be regarded as analogous to playing on an Oxford or Cambridge college team, which is rewarded by the college colors. The English college blazer, which all members of a college amalgamated club are entitled to wear, has no close American counterpart, except possibly in the baseball, track, or football uniform; the use of American college colors is not entirely similar.

C. Women's Sports

Sports for women, played under women's rules, are usually organized on an intramural basis. Most of the women's colleges, however, permit contests with other institutions of their kind, and some (Bryn Mawr, Wellesley) allow teams of undergraduates to meet teams representing approved women's amateur clubs. Branches of women's athletics include field hockey and basketball, which are the most popular, swimming, running, jumping, gymnastics, volley ball, and more rarely, rowing, golf, and tennis.

D. Summary

The most notable characteristic of the lists of major, minor, and intramural branches of athletics is the greater catholicity of the intramural schedules. Intercollegiate branches are traditional as regards the divisions into major and minor sports. The intramural program, on the other hand, has had to form its own athletic traditions. Its problems have been to schedule contests in as many branches as may interest and suit the needs of undergraduate participants, and to develop skill upon a

less specialized basis of expertness. Hence the wider range of intramural as compared with intercollegiate athletics.

III. The Participants in College Athletics

Data concerning participation in college athletics are likely to be unsatisfactory for several reasons. College athletics cannot be subjected to the same statistical treatment as a military unit. Not a few institutions keep only approximate records of participation. Many keep none at all. These conditions are seldom due to lack of good intentions. The principal causes are deficient training of the staff in statistical method, meagre office space and equipment, and emphasis upon activity rather than upon research. It must not be supposed, however, that the athletic records of all institutions are faulty. Generally, state universities appear to keep excellent account of all student athletic activities (California, Illinois, Indiana, Iowa, Michigan, Minnesota, North Carolina, Ohio State). The same is true of a number of privately endowed universities (Brown, Cornell, Lehigh, Notre Dame, Oberlin, Ohio Wesleyan, Princeton, Toronto). Certain colleges, also, are so fortunate as to possess serviceable data (Amherst, Bowdoin, Reed, Wesleyan, Williams). As might be expected, the records of the United States Military Academy respecting participation are exceptionally complete.

The chief obstacle to arriving at a trustworthy estimate concerning the numbers and proportions of men engaged in the various branches of athletics, intercollegiate or intramural, is the duplication of names. In required courses in physical education, in which participation in athletics is counted for credit, a man may "sign up" for several branches, and may actually play a number of games; thus his name will appear in lists of players at touch football, basketball, tennis, and baseball. A card register of students with a clear indication of the branches in which they have engaged and their proficiency or improvement in health is comparatively rare. Still rarer is the attempt to study such records scientifically. After all, it is far more important, — and it will be for at least the next decade, — that undergraduates should be led to participate more and more generally in wholesome and well-managed athletics and should receive the attendant benefits, immediate and ultimate, that inhere therein, than that statistical counts should be meticulous.

A. Previous Estimates of Athletic Participation

Before the present study, three outstanding estimates of the proportion of undergraduates participating in athletics had been made: by Professor Henry M. Sheldon, of the University of Oregon, in 1901; by Professor George L. Meylan, of Columbia, in 1911; and by Professor Thomas A. Storey, of Stanford, in 1927.

1. Professor Sheldon's Estimates

About 1900 Professor Sheldon sent to directors of physical education in twenty large and twenty small colleges a circular letter, to which thirty institutions responded. "Seven reported less than 20 per cent of students taking part in athletics, twelve reported that from 20 per cent to 25 per cent participated, six placed the estimate between 25 per cent and 50 per cent, with three above the 50 per cent line." Professor Sheldon concludes: "When allowance is made for the tendency on the part of the physical directors to have their institution stand well, and consequently to give themselves the benefit of all doubts, it will be seen that 20 per cent is probably a fair average." [7] This figure applies principally to intercollegiate competition.

2. Professor Meylan's Estimates

In 1911 Professor Meylan stated that "out of about 80,000 male students . . . 32 per cent are engaged in some form of athletics. Out of 26,000 female students, 18 per cent are engaged in some form of athletics." [8] By this time intramural contests had attained a certain popularity, and these figures reflect the increased participation that they called forth.

3. Professor Storey's Estimates

Professor Storey's figures concerning participation, gathered in 1923 and verified in 1925, deal with a total of 442 institutions.[9] Among these, one hundred and six colleges and universities had voluntary programs for men, and of these, sixty-seven gave percentages of participation. "Forty-two (more than half) of the sixty-seven report percentages that range from 10 per cent to less in three institutions to from 50 per cent to 60 per cent in fourteen. Twenty of the forty-two report less than 40 per cent; only sixteen of the sixty-seven report more than 60 per cent." Twenty-nine colleges and universities reported the proportion of their upper classmen taking part in voluntary and intramural athletics. All told, sixteen indicated fewer than 60 per cent, and of these sixteen, ten reported less than 50 per cent. "Only six of the twenty-nine colleges and universities reporting on the participation of their upper classmen students . . . record them as participating in percentages above 80."

In analyzing these figures, Professor Storey concludes that participation in intramural athletics as part of courses in physical education required regularly of underclassmen does not lead to voluntary athletic activity, and that "at least half of the

[7] Henry D. Sheldon, *Student Life and Customs*, 1901, pages 533–34. Some of the proportions of athletic participants at individual institutions have interest: "Amherst, about one-fourth, Bowdoin fully fifty per cent, Cornell . . . from ten to fifteen per cent, Wesleyan at least twenty-five per cent, California twenty-five per cent, Columbia twenty-five per cent, Pennsylvania from one-third to one-fourth, Vanderbilt thirty per cent." The Report of the president of Harvard College for 1897 showed that 21 per cent of the undergraduates passed in that year the examinations prerequisite for participation in athletics.

[8] "Athletics" in *A Cyclopedia of Education*, Ed. Monroe, 1911, Vol. I, page 276.

[9] Thomas A. Storey, M.D., *The Status of Hygiene Programs in Institutions of Higher Education in the United States*, 1927, pages 87, 92.

students in colleges and universities . . . are failing to practice or establish regular habits of recreation. This indifference is indicative of a failure of the programs of required physical training in the institutions concerned." And yet, with due regard to all the doubtful factors involved in such estimates, it would appear that between about 1900 and 1925 the proportion of American men undergraduates participating in voluntary athletics, both intercollegiate and intramural, more than doubled, and that the actual numbers increased at least five-fold. It is true that in comparison with the extravagant claims to success made for programs of physical education in speeches, printed discussions, and college catalogues, these figures are disillusioning. On the other hand, as a measure of progress they are distinctly heartening.

B. Estimates from the Present Study

The figures collected in the course of the present enquiry do not lend themselves to very extended statistical treatment. In the first place, the numbers of men engaged in athletics, whether taken as a whole, divided into intercollegiate or intramural activities, or considered by branches, were not available at a considerable number of institutions. Other colleges had records for intramural teams or squads, but not for intercollegiate, and vice versa. Very few institutions place the same branches of athletics on both intercollegiate and intramural schedules, and probably at no two colleges are the same groupings used. Finally, there is always the problem of duplication of names.

If, however, from the institutions possessing comparable figures for various branches of athletics, we consider the numbers of undergraduates presumably eligible and the total numbers of known participants, we may proceed to a few rough estimates concerning numbers and proportions engaged.

We estimate that about 63 per cent of all undergraduates in the one hundred and twelve colleges and universities of the study, taken together, take part in athletics regularly or intermittently. Of these undergraduates, from 18 per cent to 25 per cent, as compared to Professor Sheldon's earlier estimate of 20 per cent, engage in intercollegiate athletics, while from 50 per cent to 63 per cent on the average take part in intramural athletics, voluntary or compulsory. The requirement of physical education for a degree, and the counting of satisfactory participation in intramural and other forms of athletics to satisfy this prescription, introduce an element of compulsion that obscures all questions of voluntary participation.

Our estimate in general is that basketball engages the greatest proportion of undergraduates at the institutions where it is played, namely, about 21 per cent; that football comes next with about 12 per cent, and tennis and baseball next with some 10 per cent each.

Respecting intercollegiate competition only, we estimate that football includes

between five and six per cent of registrants, track and field athletics about five per cent, lacrosse, where it is played, about four per cent, and rowing and baseball on the average about 3.5 per cent each.

As regards intramural athletics, we estimate that baseball is played by about ten per cent of the undergraduates whose institutions schedule it, basketball by between eight and nine per cent, and soccer by about four per cent, or about double the proportion of those who participate in it as an intercollegiate branch. At two institutions where indoor baseball is much emphasized, it appears to engage well over 20 per cent of the undergraduates. It should be repeated that the foregoing figures are rough, general estimates only.

C. Summary

In a comparative view of the foregoing four sets of statistics respecting athletic participation a few inferences stand out plainly.

First, from Professor Sheldon's estimate of 20 per cent participation nearly thirty years ago and the figures collected for the present study, it is apparent that no great increase has taken place over the past thirty years in the proportion of undergraduates participating in intercollegiate athletics. Over the period, however, participation in some form of athletic activity among undergraduates has more than doubled, and probably trebled.

Secondly, in view of the effort that has been made during the past six or seven years to bring athletics and their benefits to the attention of the individual undergraduate and to enlist his interest in them, the increases in proportions of participants to registrants, as indicated by Professor Storey's figures on a basis of voluntary participation, and by the figures of the present study on a basis both voluntary and compulsory, are not abnormal. Professor Storey's inference that almost half of the eligible undergraduates in American universities and colleges are not availing themselves of the advantages that voluntary participation in athletics might bring, is justified.

Thirdly, with an average of only 50 per cent or 60 per cent of undergraduates participating in college athletics, much remains to be done in tactfully enlisting the interest of students in intramural contests. Certain of the larger universities (California, Michigan, Toronto) have shown the way to approach students on the basis of their individual needs as determined by physical examinations and their own private interests. Doubtless, administrative officers of such institutions have been stimulated in this task by the larger numbers of undergraduates with whom they must deal and by the difficulty of solving the problem of approaching the tastes of the individual student. Only a few outstanding smaller colleges (Amherst, Bowdoin, Middlebury, Reed) have succeeded so well.

IV. A Few of the Conditions of Participation

Of the conditions that must be met before a college man may participate in athletics, some are discussed in other parts of this study. For example, the provision of playing fields and personal equipment and their care were dealt with in Chapter V. The uses of the medical examination find place in Chapter VII on the Hygiene of Athletic Training. The general tendencies of the eligibility rules of conferences are a part of the extramural relationships of colleges. The present discussion is concerned with a few of the other aspects of participation, some of which are related directly to college discipline and standards.

A. Conditions of Participation in Intramural Athletics

Aside from the provision of facilities, the conditions which must be satisfied before a student may take part in intramural athletics, whether the basis of such participation be "credit" requirements in physical education or the individual's own volition, are comparatively few. Those which refer to medical examination and physical fitness are, at most colleges, less strict than they should, and doubtless in time will, be.

A second weak point is supervision. Here difficulties arise from the fact that owing to the intensity of intercollegiate rivalry, especially in football, coaching staffs have been strengthened out of all just proportion to their importance in the welfare of undergraduates. In the past half dozen years, however, some college administrators have come to see the matter in a different light, with a consequent perceptible improvement in the amount and character of the attention devoted by certain coaching specialists to intramural athletics (Michigan, Notre Dame, Oberlin, Stanford), whether in their particular fields or in others. Even so, far less attention is given to college intramural programs than is bestowed upon similar enterprises at the best schools, both public and private. Until the welfare of all undergraduates, both general and individual, comes to be regarded as more important, in practice as well as in theory, than institutional success at intercollegiate athletics, especially at football, the supervision of intramural athletics will continue to lag.

Thirdly, to assure the success of intramural athletics and a widespread participation in them, it is not enough to provide playing fields and a program of practice hours and contests. Intramural athletics must be brought home to the individual student. Here arise some of the most difficult problems. So long as the requirements for degrees can be made to feed participants into the intramural machine, all that is needed is to care for the raw material. After this requirement has been satisfied, the test comes, and that test is, roughly, this: Do the habits and the interest that compulsory intramural athletics have aroused lead to voluntary participation in games, during subsequent years of the college course, and in after life? Thus far in the history of organized intramural athletics, whether required or voluntary, there are no clear signs that they

do. But there are slight indications of improvement in this respect, and it should be noted that one college generation does not afford sufficient time to test the interest engendered by an intramural program; a decade is probably too short.

B. Conditions of Participation in Intercollegiate Athletics

Some of the special regulations made by individual institutions for participation in intercollegiate athletics are the result of the standards set by conferences or associations of colleges; others have been individually evolved.

1. Daily Programs and Time-Tables

The amount of time devoted to practice for intercollegiate matches is generally the result of compromise between their proponents and those whose interests lie primarily in other fields. As soon as required courses in physical education include intramural contests, this problem with respect to intramural athletics is solved. Not so with intercollegiate athletics. It would be possible, if it were worth the effort, to construct a scale in which universities and colleges should find their places on the basis of the hours that are daily allotted to preparation for intercollegiate athletics. In such a scale, if constructed with special reference to football, at one end might stand such institutions as Colgate [10] and New York University, where at the time of the field visits candidates for the team appeared to spend most of their afternoons and evenings at practice; and at the other end, the Cornell of 1927, where, because of laboratory and shop requirements, candidates had few daylight hours to devote to practice. Many college football fields are equipped with electric lights for night practice. Either of these extremes is unwholesome. If intercollegiate athletics are to be permitted at all, they should be accorded a just proportion of the daylight hours; but that they should absorb an undue amount of time points to a condition which is to be remedied only by the sincere coöperation of college administrators on the one hand and coaches, captains, and managers on the other. Much of the same might be said of early autumn football practice.

2. Scholastic Requirements and their Administration

In the course of the study much attention has been paid to scholastic requirements for participation in intercollegiate athletics and the strictness or laxity with which they are administered. Some hundreds of academic records of athletes and non-athletes have been examined, transcripts have been freely furnished by university officers upon request, the attendant circumstances surrounding many records have been canvassed, and even preparatory and high school records have been studied. The importance of the matter lies in its bearing upon the standing of the institution and its attitude toward the problems of eligibility and status.

[10] Mr. W. A. Reid, Graduate Manager, April 23, 1929: "Daily football practice not in excess of four hours on any given day."

It is possible to say, first, that over the past twenty years American scholastic standards for participation have risen, and, secondly, that there is still room for their improvement. Probably at no other point in the administration of athletics is imitation of good practice so salutary. Yet the mere announcing of standards is not enough. It is their application that matters.

Not a few universities possess scholastic requirements higher than those of the intercollegiate conferences or agreements to which they subscribe (Chicago, Cornell, Harvard, Princeton, Yale), and their enforcement of these standards respecting both admission and collegiate standing is honest, willing, and sportsmanlike. Other institutions (Columbia, Georgia School of Technology, Tulane) possess equally high requirements, which are rather frequently met through tutoring. Although certain Canadian universities have been accused by sister institutions of relaxing requirements for participation (Dalhousie, Queen's, Toronto), we have not found the charge to be justified. Not so, however, in the case of many other institutions.

All such matters are in the hands of faculties. They are not the concern of alumni or of friends of a college. When, therefore, standards are relaxed to permit skilled athletes either to enter a college without due qualifications or to compete in intercollegiate athletics without satisfying academic requirements, these matters also are the affair of faculties. But when the faculty officers concerned with eligibility happen to be athletic enthusiasts as well, the resulting division of responsibility has worked, in an appreciable number of cases, to the impairment of the standards and standing of the institutions.

A collection of examples (Alabama, Boston College, Fordham, Grinnell, Iowa, New York University, Northwestern, Notre Dame, Southern California, Stanford, Wisconsin) drawn from many parts of the United States will illustrate some of the results of conflicts between athletic ambitions and academic standards. The decision of one university faculty in a matter of participation and eligibility was overruled by the president. A trustee of another institution endeavored to persuade a college president to admit a young athlete whose credentials were not sufficient to justify this course. Prominent alumni of a third were embarrassingly insistent in their demand that a scholastically unqualified athlete should be admitted. The double standard that results from different university and conference requirements, non-athletes meeting the higher university requirements and athletes being held to meeting the lower conference requirements, not to mention a tradition of *laissez-faire* respecting a dean's office, results in immediate injustice to non-athletes and lasting injustice to athletes. At certain Southern institutions the practice of checking of players' scholastic records in midseason has not been followed by the strictest adherence to requirements. At another university an athlete attained scholastic eligibility through the passing of an examination under circumstances that were, to say the least, unusual. The registrar of this same university has in at least three instances received instructions to admit candidates whose records were defective because of "the unusual conditions surrounding the case." The rulings concerning scholastic eligibility at certain Catholic institutions have been

widely questioned. It is a pleasure to note that at another Catholic university (Georgetown) a strengthening of eligibility requirements is said to be in process. In two carefully studied cases, one of which is typical of a very large majority of institutions that are members of highly respected conferences, the functions of the university registrar are debased to those of a clerk, with the result that questionable rulings are reflected in questionable practices.

In short, high though the academic standards of participation maintained at certain institutions may be, they represent no universal condition. Faculties, trustees, and even college or university presidents are not as yet united as respects the maintenance of strict requirements in the face of the supposed benefits that can be wrung from winning teams. The fact that all of these supposed advantages are tinged at one point or another with the color of money casts over every relaxation of standards a mercenary shadow. The good repute which a university attains through high academic standards and their honest enforcement is priceless, and it is not to be compared with the cheap and ephemeral notoriety that winning teams may bring.

3. Limitations upon the Period of Participation

The past five years have brought forth a number of proposals to limit the participation of individual students in intercollegiate athletics.[11] In only one instance have undergraduates had a hand in shaping the suggestions.

Some of these proposals contain much that is of interest. One of the earliest was the so-called Fauver Plan, set forth by Professor Edgar Fauver, of Wesleyan University, to the effect that no man should be allowed to engage in intercollegiate competition in any branch of athletics for more than one season. In connection with this suggestion, a well-known authority on rowing, who has long interested himself in the crews of an Eastern university, has indicated that he should not object to seeing the principal 'varsity race of the season rowed by novices, although he realizes that to bring this about it would probably be better first to place a limitation of, say, two years for men on a 'varsity crew than to make the complete change at once. This matter came before the Wesleyan Parley of December, 1926, which in the previous year had discussed a "four-game plan" for football. Extensions of the one-year plan have been proposed in two forms, both implying two years of intercollegiate competition. One, set forth by Dr. John W. Wilce, then of Ohio State University, would limit such competition to the junior and senior years. The other, submitted by Mr. Arthur Howe to the Ohio College Association, would restrict intercollegiate competition to the sophomore and junior years. To this proposal President Ernest M. Hopkins, of Dartmouth College, would add two further limitations respecting football: "The development of two 'varsity elevens, the one to play at home and the other away on the same days," and the abolition of paid coaching, "the coaching to be done by undergraduates, preferably seniors." Early in 1928, the Advisory Committee on Athletics at Oberlin College, consisting of three members of the faculty, three alumni, and three undergraduates, expressed itself as "unanimously in favor of limiting participation in intercollegiate

[11] For a discussion of some of these plans, see the remarks of Professor Ernest H. Wilkins, now president of Oberlin College, Proceedings of the Twenty-first Annual Convention of the National Collegiate Athletic Association (1926), pages 81 ff.

athletics to two years in any one sport"; with choice by the individual as to which two of the sophomore, junior, and senior years should be selected, and permission to participate in intercollegiate athletics during those years, but not in any one branch for more than two of the three. These proposals were approved in principle by the faculty at Oberlin, and the next stages in their development were entrusted to President Wilkins.

In addition to these formal proposals, two other suggestions have gained many adherents. First, it is asserted that all or most of the difficulties that beset intercollegiate athletics would disappear if standards of scholarship were strictly enforced without exception. Secondly, it is claimed that all that is needed to improve intercollegiate athletics is an age limit upon participants, similar to that adopted in 1928 for Oxford-Cambridge matches.

Against most such proposals, the following arguments have been advanced: They are the work of theorists. They would deprive the skilled athlete of privileges which are really his by right. They must decrease the precision of performance. Novice teams and crews would lessen the interest of alumni and friends of universities in college athletics. Coaching by undergraduates will increase the dangers not alone of football but of all games. In short, all such suggestions are termed impracticable, — they are the work of men who, to quote one newspaper writer, "would take the joy out of college life."

In considering these suggestions and the arguments that have been advanced both pro and con, it is pertinent to observe that at this writing not one of these proposed "reforms" has even entered the experimental stage. The opponents have won by default, and this comparatively easy victory has much strengthened their position. Only one objection is really worth taking seriously, namely, the possible dangers to players that might arise from the abandonment of paid coaches. If it be urged that American football is not a game that can be safely coached by undergraduates, one answer is that it might be made such; certainly there has been nothing sacrosanct about the football rules.

As a matter of fact, one of the most interesting tendencies in American college athletics of recent years is the increasing number of limitations that have been placed upon them. The practically universal rule which prohibits freshmen's playing on 'varsity teams has proved beneficial, in protecting the newcomer from the distractions incident to intercollegiate competition and enabling him to orientate himself before entering upon it. Certain benefits of the rule, however, are forfeited when freshman teams are permitted to undertake long schedules, and when expert coaching is lavished upon such teams in order to develop 'varsity material. It is common experience the country over that freshman members of major-sports teams are distracted to a much greater extent than 'varsity athletes for several reasons. In the first place, athletic success during a first year means more to a freshman than success in any subsequent

year. Again, freshman competition is keener and apparently somewhat more spontaneous; men throw themselves into it with the abandon of inexperience, especially because success or failure as a first-year athlete may have important bearing upon the status of a candidate for a 'varsity team in later competition. All of these considerations impart to freshman participation a tenseness and a strain that may be present among contestants for 'varsity positions, but rarely to the same degree.

The restriction upon the playing of students who have transferred from one institution to another has operated greatly to diminish the number of tramp athletes. In at least one notorious instance of recent years the operation of the rule has provided a valid test of the honesty and good faith of a player, who wavered in his declarations concerning his participation before transferring. Incidentally, in this case supporters of athletics at the university in question, who clamored for a modification of the transfer rule, completely ignored its beneficial aspects. The athletic authorities who debarred the transferred player took therein the only course consistent with honor. Committees at other institutions have not always been so mindful of this consideration. The period during which a transferred student must wait before he may enter intercollegiate athletics is variously set as a season, a term, a semester, or a full academic year. Those institutions which permit a man to transfer to the college in, say, February, and to participate in intercollegiate football during the following autumn after a summer-school course are at fault if they advertise this provision as a one-year rule. The two- or three-sport rule, which prevents an athlete's competing in more than two or three branches of intercollegiate athletics has done much, when related to local conditions, to diminish certain phases of athletic over-indulgence.

All such limitations have proceeded, sometimes indirectly, from the work of conferences and associations, and are to be regarded as among their best fruits. Their chief benefit is the protection they afford the too ambitious undergraduate from the pressure of partisans and disciples of victory. The limitations that have been imposed upon intercollegiate competition are the products of courage and a spirit of experiment. There is no reason to suppose that either quality will be lacking in American college athletics of the future.

4. Participation and the Coaching School

Apparently, to become a successful teacher of physical education, in high school or college, demands an intensive, year-round study of football. Whatever other instruction candidates for degrees in physical education from schools, colleges, and universities receive, in the autumn they practice football, in the early winter they study the theory of football, in the later winter they deal with the coaching of football, and in the spring they again practice football. Some sort of practice or instruction may continue during the summer. It is doubtful if in any other department of the American

college curriculum a single subject receives more thoroughgoing attention. Students in such courses are welcomed to 'varsity squads and teams; and coaching courses and schools, baited with elegant descriptive pamphlets and other expedients, are the tackle that has landed many a prominent schoolboy athlete for the creel of college athletics. The ethical aspects of using on supposedly amateur college teams men who are essentially professional in their attitude towards the game, not to mention men who, however "legitimately," receive university scholarships for studying football as a part of the college curriculum, do not appear to have been seriously scrutinized.

C. Summary

The conditions of participation in college athletics are, from the undergraduate point of view, neither onerous nor uninviting. Although in certain schools, where interscholastic contests have been abandoned and increased attention paid to intramural athletics, a greatly enlivened interest has been stimulated, it is not necessary for colleges and universities to go, as some have done (Emory, Reed), to a similar extreme in order to benefit an increased proportion of their student body through intramural athletics. What is most needed for the development of an intramural program is fertility of resource and a persuasive attitude on the part of those in charge, material facilities not necessarily luxurious but adequate as compared with those allotted to intercollegiate athletics, and a staff for intramural contests that equals the intercollegiate coaching staff in character, ability, and skill.

V. The Immediate Results of Participation in College Athletics

We turn now to a few of the results, such as improved physical health and fitness, honors and awards, social advantages, and moral qualities, which participation in college athletics may or do bring to the undergraduate.

A. Physical Results

The effect of participation in college athletics upon the physical condition of undergraduates as individuals, which is discussed at some length in connection with the hygiene of athletic training, is measurable in terms of weight, height, and strength, and at some institutions has indeed been measured by means of successive periodic medical examinations. These measurable characteristics may be regarded provisionally as indications of physical health as determined by the vigor and regularity of the functions of the vital organs. No one will dispute the values of such results as these. But athletic injuries are far more frequent and more serious than they should be. Apparently the high incidence of such injuries and accidents is part of the price paid by certain individuals for the benefits received by themselves and their more fortunate

colleagues, although this is no reason for neglecting any means whereby the incidence of such injuries may be lowered.

B. Athletics and Scholarship

It has become a commonplace of the adverse criticism passed upon American college athletics that they weaken the intellectual spirit and lower the academic standing of undergraduates. Likewise there has developed a series of defensive sallies, designed to establish the claim that athletics do not weaken the scholarly tendencies. For the present enquiry two approaches to this question have been devised. The results are set forth at this point.

1. The Academic Records of Athletes

In accordance with a plan outlined in the Twenty-Second [12] Annual Report of the Carnegie Foundation for the Advancement of Teaching, 1927, detailed studies of the academic records of 2,787 athletes and 11,480 non-athletes in fifty-two representative colleges and universities of the United States were made at the institutions by registrars, deans, professors, and others. These results, assembled in the offices of the Foundation, are of sufficient accuracy to be interpreted as follows, due allowances being made for deviations in methods of grading and differences in type and procedure regarding intelligence tests and scores:

a. *Program Hours Carried*

Although athletes tend to carry a slightly greater number of program hours than non-athletes, this difference between the two groups is so slight as to be insignificant. During the first college year, and during a fifth year, if required for graduation, athletes carry slightly heavier programs than non-athletes; the reverse is true in the second, third, and fourth college years. The third-year program of athletes is the heaviest, as contrasted with the second-year program of the non-athletes.

[12] Pages 49–65. The method there set forth is too detailed for the present discussion, which deals only with its results, when applied to athletes and non-athletes in the fifty-two institutions listed below. Although not complicated, its use is somewhat arduous, and the thanks of the Foundation are extended to those men and women who contributed generously of time and effort to make the study.

The reasons given for twelve refusals to undertake the work are of interest: lack of time prevented in six cases, lack of information in three, while lack of funds, disapproval of the method proposed, and the sending of a brief previous report led to non-coöperation in the remaining three cases of refusal. Yale University is not included in the material. On February 25, 1928, President Angell wrote "that the expense involved will be more than, at the moment, we can properly undertake. Moreover, I think there would be some rather grave objections to that part of your request which relates to a classification of courses from the point of view of their severity." The offer, on March 7, 1928, of a subsidy suggested by Yale as sufficient to cover the work, did not meet the "rather grave objections" set forth by the president.

The fifty-two institutions that coöperated fully, even to an analysis of "hard" and "easy" courses are Allegheny, Bradley Polytechnic Institute, Butler, California Institute of Technology, Carleton College, Carnegie Institute of Technology, Case School of Applied Science, Colgate, University of Colorado, Colorado College, Columbia University, Cornell University, Dartmouth, Denison, Earlham, Emory, Furman, Georgetown, Harvard, Illinois, Knox, Lafayette, Lehigh, Michigan, Middlebury, Mississippi A. & M., University of Missouri, Muhlenberg, University of New Hampshire, Notre Dame, Oberlin, Occidental, Ohio State University, Oregon Agricultural College, Pennsylvania State College, University of Pittsburgh, Princeton, Rensselaer Polytechnic Institute, Rice Institute, Ripon, University of Rochester, Rutgers, St. Olaf, Southern Methodist, Stanford, Syracuse, Vanderbilt, Virginia Military Institute, Wesleyan, Whitman, College of Wooster, Worcester Polytechnic Institute.

b. *Scholarship Grades*

The scholarship grades of athletes seem to average slightly lower than those of non-athletes, but the ascertainable difference in favor of the non-athletes is probably so slight as not to possess statistical significance. Athletes average higher during the first college year, non-athletes during the remainder of the course. The condition works out much as the number of program hours carried. For both of the groups, grades improve consistently in successive years; the grades of non-athletes are appreciably better in the fourth year than in any previous year for either athletes or non-athletes. For both types and all years grades are better during the second semester than the first.

c. *Time Spent in College for Degrees*

The academic "mortality" of the athletes was lower than that of their fellows; that is, a higher proportion of athletes graduate than non-athletes. But it takes the athlete about half a college year longer, on the whole, to obtain his degree. The figure is probably less serious than at first appears, because in cases where longer than the normal time is required to obtain the credits for a degree, it is the almost universal rule that a semester of attendance is the minimum that can be required. On the average, about 95 per cent of the athletes registered as members of each successive college class returning to college in the following semester, as compared with 90 per cent of the non-athletes.

d. *Probation*

A slightly higher proportion of athletes than non-athletes incurred probation at some time during the college course. The difference is very slight, but it may reflect the general use of probation by faculties and administrative officers as a means of protecting the athlete against a tendency to overdo his sports.

e. *Scholarship Grades by Sports*

Respecting the average comparative scholarship of individual participants in sports by branches, only general tendencies have importance. Wrestlers, cross-country runners, and track men do well, — indeed, far better than the general run of both athletes and non-athletes, especially the wrestlers. Swimmers and oarsmen do better than the average of athletes, but not quite so well as the average of non-athletes. Soccer, lacrosse, and baseball players are below the averages of both athletes and non-athletes. Football and polo players stand at the bottom of the list. Athletes rank below non-athletes in scholarship, but the difference in average grades [13] between the two general groups is statistically negligible. Participants in two or more branches of athletics stand on the average considerably below all athletes, as a group, and nearly as badly as football players.

[13] Non-athletes, 8.25; athletes, 8.18; with an average for all individuals of 8.01.

f. *"Hard" and "Easy" Courses*

It cannot be justly said that in general athletes are greater idlers than non-athletes. Curiously enough, although a larger proportion of athletes than non-athletes elected "easy" courses, the same is true, in exactly the same proportions, respecting "hard" courses. In every case among the two groups, grades in "hard" courses were higher than those in "easy" courses, and both of these sets of grades were better than the averages for other courses not designated as "hard" or "easy."

g. *The Passing Line*

A few more athletes than non-athletes received grades near the passing line, but a larger proportion of both groups than might be expected received such grades.

h. *Intelligence Scores*

An examination of intelligence test scores led to inconclusive results. Of the fifty-two coöperating institutions, only twenty-two examined their class of 1925 in this particular, and of these only three used the same tests. It was possible, however, to consider the results of these tests and of the study of the scholastic records on the basis of institutions rather than by individual scores and grades in the aggregate. The results of these comparisons, although fragmentary, tend to corroborate the conclusions already set forth. Non-athletes, in both cases, did slightly but not materially better than athletes, and the other results are similar.

2. The Pennsylvania Achievement Tests

In May, 1928, under the auspices of the Association of College Presidents of Pennsylvania, the Carnegie Foundation administered a specially devised test of 3,500 questions, which consumed eight working hours of 4,412 seniors at forty-nine colleges, universities, and normal schools. Of these institutions thirteen [14] assisted the Foundation to study the scores of athletes and non-athletes, with the following results:

a. *Average Scores by Groups*

The highest individual score among the 4,412 students taking the test at forty-nine institutions was 1,583, made by a male non-athlete, the lowest 110, the statewide average 568.9, and the average for all men 577.4. At the thirteen institutions under present consideration, 290 athletes made an average of 636.37, while 1,340 non-athletes scored on the average 615.55 points and both athletes and non-athletes in the thirteen coöperating colleges, 619.25 points. The difference between the average scores of the 290 athletes and the 1,340 non-athletes is 20.82. This difference is not significant from a statistical point of view. The athletes, it is true, did better, but not sufficiently better to make their excellence noteworthy. But when compared with the statewide averages

[14] Albright, Allegheny, Bucknell, Carnegie Institute of Technology, Geneva, Grove City, Haverford, Juniata, Lafayette, Lehigh, University of Pennsylvania, Thiel, Ursinus.

for men, 577.4, and for all students, 568.9, the higher average score of the athletes, 636.37, is important.

b. *Average Scores by Sports*

Altogether, some sixteen branches of athletics are represented in the thirteen Pennsylvania colleges. Those branches include, however, cricket, golf, rowing, and gymnastics, in which the numbers of participants are too small for statistical purposes. With these four branches eliminated, the remaining twelve, with their average scores, may be classified as follows:

The first group comprises wrestling (805.05); soccer (788.14); and boxing (759). The second group includes lacrosse (751.91); rifle-shooting (748.86); and swimming (719.86). The third group is composed of track and field (675.25); cross-country running (654.56); and tennis (621). The fourth is made up of football (609.42); baseball (559.8); and basketball (553.83). The second highest score made by a man among the total of 4,412 students taking the test in the state, and the highest of all athletes' scores, was 1,560, achieved by a track athlete. These scores compare well with the statewide average for all men, 577.4.

Men participating in two or more sports did slightly better in the tests (638.29) than the athletes as a whole (636.37), but for statistical purposes these two groups are practically one, because of the smallness of the mean difference between them (1.92).

c. *Significance of these Results*

If, then, the Pennsylvania tests actually measure intellectual capacity or intelligence in conjunction with a certain amount of accomplishment, as they are intended to do, the list of sports and scores just given represents a rating of the intellectual capacities of athletes who took the tests. On the same basis, we may infer from the comparative scores that these athletes have a better intellectual capacity than the non-athletes among the men, and the general run of undergraduates, both men and women.

3. The Effect of Athletics Upon the Scholarship of Athletes

These two independent sets of information considered together, afford interesting conclusions, if they are premised by the assumption that the data are typical of all American colleges taken together.

First, from the Pennsylvania scores it appears that athletes engaged in intercollegiate competition possess about the same or slightly better intellectual capacity than non-athletes. This is even more to be expected in view of their inheritance of vigor in body and hence in mind. We should therefore expect the scholarship grades of athletes as a whole to be appreciably higher than those of non-athletes. But this is not the case, and we seek a cause. Putting to one side the possibility that the educational aims and processes of the American college are at fault, we are led to the alternative hypothesis

that some factor related to intercollegiate competition, — such, for example, as time spent upon practice or games, the fatigue of contests or preparation, injuries, attitude, point of view, or something, — in general holds back the athletes from intellectual performance up to the limits of their capacities.

Second, if this reasoning is justified, from the relative positions of the participants in various sports in the two sets of data, it appears likely that participation has no deleterious effect upon the academic work of men taking part in intercollegiate wrestling, rifle-shooting, swimming, track and field, cross-country running, tennis, baseball, and basketball. It appears, however, to lower the academic achievement of 'varsity participants in soccer, boxing, lacrosse, and football.

Finally, from the lower average grades of participants in two or more branches who seem, from the Pennsylvania data, to be of about the same intellectual promise as other athletes, it would appear that one of the most important functions of the college administrative officer is to continue to protect the skilful athlete from the results of excessive zeal on his own part or too many demands upon his time and energy resulting from over-participation in intercollegiate athletics. The question whether this should be accomplished through restrictions or through setting up a fresh educational goal that will challenge anew the interests and capacities of all undergraduates, need not detain us here.

C. The Rewards of Athletics

Of the awarding of college letters, class numerals, and other symbols for distinguished participation in college athletics little need be said in addition to what has gone before. In such awards the essential factor is the honor which the right to wear the insignia confers. Although at Louisiana College in 1926 football letters were awarded by vote of the 'varsity squad, the fact that at no institution of the study has serious dissatisfaction with the method of award been expressed is valid testimony to its fairness. The ephemeral protests to which college undergraduates seem prone have in no instance reflected deep-seated dissatisfaction.

For women's athletics the system of points awarded for participation, suggested by the Athletic Conference of American College Women, has many advantages. Its administration involves no very onerous undertaking by the department of physical education, and the points won by individual athletes afford a means of comparison and even of competition between separated institutions. The system is in use for women at a number of state universities in the Middle West and the West, but in only a few women's colleges and Eastern co-educational institutions.

All such awards possess no monetary value. The money value of certain testimonials offered rather generally to successful athletes, such as cups, gold footballs for watch chains, sweaters, wrist watches, traveling bags, and other items, is, however, con-

siderable. Again, no instance has come to the attention of this study in which a college athlete has attempted to realize the value of trophies by selling or pawning them. Prizes officially awarded to American undergraduates for participation in college athletics are widely esteemed for the honor which they symbolize.

Concerning unofficial awards the same cannot be said. The local merchant who in a kind of ostentatious competitive generosity offers clothing or jewelry to the player who scores a touchdown or a home run is on the one hand merely exploiting college athletics for his own ends or the ends of trade, and on the other injecting into the individual athlete's attitude toward sport an element which may lead, especially with repetition, to a higher regard for the money value at stake than for the honor which it is intended to manifest (Colgate, Dartmouth, University of Georgia, Lehigh). The utility or the non-utility of such awards is a criterion which might prove serviceable to college administrative officers who desire to end a questionable practice.

D. The Moral Qualities

The moral qualities that participation in college athletics is widely supposed to engender — courage, obedience, unselfishness, persistence, and the rest — have formed the theme of countless eulogies of athletes and athletics. No attempt to measure them has yielded unmistakable results.

The studies conducted by Mr. Post and Dr. Davenport for the present enquiry indicate, however, that to some extent they may be transmitted as hereditary traits. This view is shared by other authorities. Once transmitted, they can be and probably are developed by athletic participation. Thus, for example, an athlete possesses his share of courage when he begins his career at football. From experience of practice and games he gains the power of better controlling his own impulses to fear. As a result, he in time becomes habituated to a series of acts that a non-player might fear to perform altogether or might perform only under the most urgent compulsion or in consequence of an even greater fear. Besides, the athlete's skill increases his self-confidence. At the same time, his development in this particular is furthered by an improved neuro-muscular coördination, until, finding that he can habitually perform certain feats without the disagreeable or painful consequences that he formerly anticipated, he in time becomes a courageous football player. Other moral traits may be similarly developed in other branches of athletics; they may vary from game to game and even as regards different positions in the same game.

A bit of testimony from a director of physical education, who is skeptical concerning the wholesale "inculcation of moral values" through athletics, is pertinent. Long experience has convinced him that a body-contact activity like football, basketball, or boxing, does much to remove from participants the aversion to rough physical contact that young men frequently display. Thus the essential nature of all such activities appears to increase the physical courage of participants.

On the other hand, our study of the recruiting and subsidizing of college athletes affords much direct evidence that college athletics can breed, and, in fact, have bred,

among athletes, coaches, directors, and even in some instances among college administrative officers, equivocation and dishonesty, which actual participation has not removed or prevented. The impairment of moral stamina that such practices imply is the darkest blot upon American college athletics.

VI. The Deferred Results of College Athletics

Of the effects of college athletics that persist into life after graduation, the physical benefits or disabilities are the most easily recognizable. These effects are in part reflected in the longevity of athletes as compared with other groups, such as the general male population and college graduates. The influence of athletic participation upon the future career and the persistence of habits of exercise acquired in college days into later life are matters concerning which individual experience has shaped judgment.

A. The Longevity of College Athletes

Before the meeting of the National Collegiate Athletic Association in December, 1928, Dr. Louis I. Dublin, statistician of the Metropolitan Life Insurance Company of New York, presented results of studies [15] in the longevity of college athletes, honor men, and graduates. The conclusions which Dr. Dublin drew from his analysis of the life records of these 38,000 graduates of eight American colleges, in the classes from 1870 to 1905, inclusive, may be set forth with comment as follows:

1. Dr. Dublin's Conclusions

On the whole, college men have an expectation of life appreciably above normal. Compared with recent insurance mortality tables, their mortality is relatively lower at the older ages than in early adult life. Their death rates have been declining regularly from earlier to more recent class groups, and the decline has been greatest at the younger ages. Men who graduate from small colleges show a lower mortality than graduates of large universities.

Athletes, that is, "letter men," have a somewhat higher mortality than other graduates. Although at ages over forty-five the athletes did somewhat better than the

[15] Dr. Dublin's researches may be examined in three phases: (1) A study of the longevity of 4,976 "letter men," members of classes graduated at Amherst, Brown, Cornell, Dartmouth, Harvard, Massachusetts Agricultural College, Tulane, Wesleyan, Wisconsin, and Yale, was undertaken under the auspices of the Presidents' Committee of 50 on College Hygiene and such constituent organizations as the National Collegiate Athletic Association and the Society of Directors of Physical Education. The Carnegie Foundation gave aid and support to the project, and the Statistical Bureau of the Metropolitan Life Insurance Company guided the work and tabulated results, which "were, on the whole, favorable to the prospect of long life for these men. With but few exceptions, they did somewhat better than the carefully selected persons insured by American life insurance companies." The results were published in *Harper's Magazine*, July, 1928. (2) Dr. Dublin, with the coöperation of the Presidents' Committee of 50 and the American Student Health Association, proceeded to a further "study of the mortality and the length of life of the general student body since graduation" from Amherst, Brown, Cornell, Dartmouth, Harvard, Wesleyan, Williams, and Yale, in classes from 1870 to 1905, inclusive, totaling 88,269 men. This research Dr. Dublin discussed before the N.C.A.A. in 1928. (3) It is now proposed to press the matter further by collecting and studying data over a period of future years.

whole group, at ages under forty-five their death rates were distinctly higher than among alumni generally.

But men of high scholarship outlive both athletes and all graduates as a group, and the death rates among them are lower throughout the life span.[16] Dr. Dublin notes the existence of "a large and growing body of data, which tend to show that it is not men or women of the best physique particularly who live longest. . . . It may be that we have expected too much from our athletes. It is, after all, a good deal of an assumption that the athletic type of build and great longevity go hand in hand. . . . Certainly if fine physique was a requisite for long life, we should have found a life expectation of college athletes much in excess of normal and appreciably greater than that of their fellows at college. Our analysis shows, however, that the honor men, the men who spend much of their time in the library and in the laboratory, come out best in the matter of longevity. This result should give us all much to think over."

2. An Extension of Dr. Dublin's Conclusions

As long ago as 1869, Galton noted that a considerable number of eminent men possessed unusual physical vigor. In 1925 Professor Lewis M. Terman's *Genetic Studies of Genius* called attention to the fact that in a majority of cases the intellectual superiority of the gifted was evidenced at an early age and associated with physical vigor. Apparently, then, our college athletics as they have been conducted for a generation and more have not conduced to long life. Nor have they, in their intercollegiate phases, markedly attracted those undergraduates who are the most vigorous mentally or physically.

B. Participation in College Athletics and the Life Career

Most of the attempts to account for success in life as a product of college athletics have neglected at least two possible fallacies. First, the measure of success has often been defined badly or not at all. In the second place, it has been unwarrantably assumed that when former athletes achieved success, however defined, such success is necessarily the effect of athletics. More probably a successful career is the product of qualities that lead not alone to success in life but also to athletic prominence, and the underlying causes of later success are the same as those which lead to success in athletics. Athletics may intensify valuable personal characteristics, but it is to be doubted if they create them.

1. The Scholar in Business

So far as is ascertainable, only one statistical study has been made involving the relationship of the academic standing of college undergraduates to business success in

[16] The results of studies of the completed lives of 358 teachers who had received retiring allowances from the Carnegie Foundation, 1906–27 (Twenty-Third Annual Report, 1928, pages 34–37), tend to corroborate this conclusion. Presumably these teachers were, one and all, men of high scholarship.

later life, namely, the analysis of the academic and business records of 4,125 college graduates in the employ of the American Telephone and Telegraph Company.[17] "In this particular study made by the Bell System salary has been used as a measure of success." Although in presenting the results President Gifford states that he does not believe that success in life can be rated by income, he is convinced that "as between one man and another working in the same business organization, success and salary — while not the same thing — will, generally speaking, parallel each other." He points out, furthermore, that success in life for both the individual and the nation depends upon the use of leisure.

Although the inferences of the enquiry are based upon "the averages of the performances of the men in different groups and the records of individuals in each group varying widely from the averages," it is clear that "in the Bell System, on the average, men who were good students have done better than those who were not. There are, of course, exceptions — men who were poor students who are succeeding well and men who were good students succeeding less well — but on the whole the evidence is very striking that there is a direct relation between high marks at college and salaries afterward in the Bell System." President Gifford notes that the undergraduate, if he connects his college course with a business future at all, is likely to think that his athletic and social activities, his work on college papers or in dramatic clubs, or some other extra-curricular efforts are better training for the future than his academic work, "and in taking this attitude the boys reflect fairly accurately the opinion of many of their elders, under whom they are going to begin their working career." Yet, "if studies by others corroborate the results of this study in the Bell System and it becomes clear that the mind well trained in youth has the best chance to succeed in any business it may choose, then scholarship as a measure of mental equipment is of importance both to business and to business men."

These results are, of course, provisional and it will take years of effort to corroborate them with respect to business as a whole. Their value lies, first, in their pointing the way to other enquiries, and secondly, in their indication of the attitude of one of the largest employers in the world. With respect to the question whether the athlete has a better chance of success in business than the scholar they are silent, except for such inferences as may be drawn from them, and yet the argument *ex silentio* is here more powerful than the unsubstantiated assertions which have pleased so many willing hearers in the past.

2. The Athletic Manager and Business

Whatever opinion may be held concerning the value of athletics in general as a preparation for a business career, there appears to be little doubt that the work of the manager of a class or a 'varsity team or crew, through inculcation of habits of accuracy and purposeful activity, is directly related to a business career. Testimony, the country

[17] Walter S. Gifford, "Does Business Want Scholars?" *Harper's Magazine*, May, 1928, pages 669 ff. The study was made by the Personnel Department of the American Telephone and Telegraph Company, under the direction of Mr. E. K. Hall, and the preliminary stages of it consumed about two years. The number of colleges involved was 104.

over, is to the effect that the undergraduate who is concerned with the management of athletics is forced to devote to his task more time and effort on the average than the active participant on the playing field. Moreover, not a few college officers feel that the duties of a manager are more likely to impair academic standing than the training of a participant. In the present study no direct effort has been expended in measuring the effect of the manager's duties upon his academic career, because the number of men involved is comparatively small. It is obvious, however, that habits of application engendered in managing teams and the acquaintance with aspects of business which managership involves, are useful preparation for business and the professions, especially if coupled with intellectual ability and accomplishment.

3. Summary

On these grounds, then, there exists much doubt whether success in athletics should be regarded as an earnest of success in later life. Such statistical studies as have been made lead to the inference that, as an index of future success, academic standing is more trustworthy than performance as an athlete. These conclusions are, of course, provisional. A final summation of the matter must depend upon far more extensive studies than have thus far been made, and may also be postponed until the wave of changes in college curricula and methods of study which is now sweeping over parts of the United States, has subsided into a comparative calm for a length of time sufficient to make possible trustworthy results.

C. Experiential Knowledge of Games

Although accurate data are lacking concerning the extent to which habits of participation in college athletics persist into graduate life, nevertheless it appears that the American college graduate generally prefers watching many games to playing them. Doubtless this is partly due to the fact that American football is essentially a game of youth. Whether it should or should not be played by men between the ages of twenty-one and thirty-five is beside the point; the fact is that, generally speaking, it is not so played. The rigors of training required for many branches of intercollegiate athletics are impracticable after graduation. Hence it is to the development of intramural or general athletics that, so far as the college man or college woman is concerned, the nation must look for the spread of habits of athletic activity in the individuals who compose it. If it be assumed that the function of collegiate education is to prepare for later life, including the wise use of leisure, then such sports as tennis, golf, handball, and swimming deserve the attention of every teacher of physical education and every undergraduate.[18] Few colleges or universities can give to their students the

[18] One reason why athletic activities are so frequently abandoned after graduation is a neglect on the part of those in charge of our physical education of the sports most suited to maturer men and women.

Professor Harry A. Scott, in answering the question "What Should the Department of Physical Education Require of its

experience of games which the United States Military Academy requires of its fourth-class men. But habits of participation in not too strenuous games and contests during undergraduate days provide at least a guide to exercise and to keeping fit in later years.

Conclusion

It appears that American college athletics, and in particular intercollegiate athletics, are not contributing to successful undergraduate or postgraduation careers in the extent that they should or could be made to contribute. As regards inheritance, intercollegiate athletes should be the best endowed of college men. But, although their natural capacities are high and their physical condition is measurably benefited by games, their college and academic records are not especially distinguished above those of their fellows and in some sports are even impaired by their participation. After graduation their span of life has not been lengthened beyond that of their more studious fellows or that of the generality of men, nor do they generally continue the more exacting forms of exercise in which as undergraduates they indulged. Finally, from the point of view of rewards, contentment, and fruitfulness of service in at least one very large industry their success in life depends less upon their standing as athletes than upon their academic achievement. Briefly, then, the situation is this: On the one hand, we have youths well endowed physically and mentally who should outdistance their fellows in the race of life; on the other, we find no evidence that the best places in this race have been won by these men, whose tastes and training have led them into intercollegiate athletics. The indicated conclusion is that the American system of intercollegiate athletics is to blame for this situation rather than the body of youth that is subjected to its workings.

In athletics, as in the academic branches of education, Americans have long since accustomed themselves to regard the individual less than the group, whereas the unit of measure in both fields should be the effect of the respective processes upon the individual. The statistical data assembled in this chapter from many sources point in a single direction, and materials presented in other chapters of our study support

Students for Graduation?" (*American Physical Education Review*, March, 1928, pages 142–51), sets forth the recreational activities reported by three age groups:

25–35 years	*36–50 years*	*Over 50 years*
Swimming	Fishing	Gardening
Fishing	Swimming	Hiking
Tennis	Golf	Fishing
Golf	Hiking	Golf
Hiking	Gardening	Calisthenics
Handball	Hunting	Hunting
Calisthenics	Tennis	Swimming
Volley Ball	Calisthenics	Tennis
Gardening	Handball	Rowing
	Rowing	Volley Ball

Aside from the question whether training in athletic sports transfers from undergraduate to postgraduate days, the direct relationship of athletic skills and habits in the two general periods of the life of the college man is worthy of far more attention than has hitherto been vouchsafed to it.

them. To the development of the individual capacities of young men and women, — their appreciation of true values, their powers of decision and choice, their sense of responsibility, and their ability to sustain it when once it comes to them, — to the development of these and of all other best habits of mind and traits of character, college athletics must contribute far more than they have in the past if they are to justify the time and effort that are lavished upon them.