THE INTERRELATION OF HIGH SCHOOL AND COLLEGE ATHLETICS, FROM THE STANDPOINT OF THE COLLEGE.*

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Before we can get a correct idea of this interrelation, it is necessary to get a proper perspective of the whole field of athletics in educational institutions. This would include grade school, high school, college and after life. The sphere of both college and high school athletics is intermediate, and they are therefore not an end in themselves, but a means toward an end. College athletics should, in part at least, look forward to the working years of a man's life. They should be directed so as to accomplish the best results during college life and prepare the future citizens for the most efficient living.

Just as college athletics look forward to the life of the individual, so high school athletics should look forward to college life and college athletics. We should therefore fully appreciate the fact that high school athletics are *fundamental* and not an end in themselves. In other words high school athletics should bear the same relation to college athletics that high school studies bear to college subjects. They are not necessarily of the same kind, and certainly not of the same degree, either of complexity or of intensity, but should be suited to the age, and stage of development, of the individual. If, as Groos conceives this matter, athletics are a preparation for the work of the adult, it is necessary that the proper kind of athletics should be used to accomplish the best results, and they should be graded both in kind and degree. With this in view it is necessary to understand the development of the individual, and the particular phase of development which occurs during high school life, before we can outline a scientific course leading up to college activities. The period of life from fourteen to eighteen differs from any other in the life of the individual. It is designated by a characteristic term, and has received a great deal of attention within the last few years, and the importance of proper care and guidance at this time is being emphasized.

First, it is a period of rapid growth of physique, when the bodily structure is rapidly increasing and the functions are endeavoring to keep pace with the strides made by the tissues.

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It is therefore necessary to adapt our athletics to the conditions of this period, rather than to follow the line of work taken up by the colleges; choosing such activities as will aid in the development of the body without working any injury. It is a period of rapid growth in bone tissue, when the bony system is in a plastic condition; when postures of different kinds leave their impress upon the bony structure; when continued activity of one kind causes an excess of development of one set of muscles over their antagonists, thus permitting of a permanent twist, producing absorption on one side of the bone and permitting excessive growth on the other; when excessive work, destroying the tone of certain groups of muscles, permits their antagonists to pull the body into abnormal postures; when the bones are not completely ossified and there is danger of fractures at the epiphyses.

Again, it is the time when the muscular system is developing and when, if at all, the muscle cells are to receive their full development. Our activities at this period should be such as to use all the fibers of a muscle, all the muscles of a group, and all the groups of muscles in their proper proportion, and this without undue strain. This can only be accomplished when all the fibers of a muscle are being used at the same time. Consequently such exercises as demand a constant repetition by a few fibers do not give us the development that we should have at this time of life; such exercises, for instance, as the distance run, where the constant endeavor is to minimize the number of muscles used to accomplish the results. The athletic activities of this period should be of such a kind as to produce a muscular development of the whole body. Such exercises should take in the upper part of the body as well as the lower extremities. And it is a regrettable fact that there are very few games and forms of athletics to-day that give us development of the chest and upper extremities. Consequently we have to depend upon more or less formal exercises to give us this development. A few years ago an experiment was tried when the freshmen class of the University of Kansas were given, as a part of their regular class work, soccer for one half-term and basket ball for the next half-term. At the end of this period, upon reëxamination, it was found that the lower extremities had increased to a considerable extent, while there was little or no advance in the chest and upper extremities. The same class was then given work on the ladders, parallel bars and tumbling for one term, and a marked change was shown in the proportion of development of the upper and lower extremities. From this experiment it was thought advisable to use other means of development than simply that of the ordinary games, yet the tendency of our high school athletics is to specialize in games at an early age, and this necessarily in events that give little muscular development. The tendency is to follow this line

out in the college, thus neglecting to get the best development for college athletics, much less for the future life of the individual. It is a fairly well-authenticated fact that the high school athlete who has made a specialty of the long-distance runs seldom makes good in his university course in the same line of athletics. Whereas the individual who has developed himself by those exercises that demand more strength of limb and permit of more gradual development of the heart, such as hare and hounds or cross-country running, are prepared to go ahead in distance running.

Out of forty point winners of record holders in high schools in the interscholastic meets of the last ten years, thirteen did not attend college, seventeen failed to make point winners in college and ten made good. Of the seventeen who attended college but failed to make good, ten were runners, four shot putters and three hurdlers. Of the ten who made good, one was a distance runner who failed to better his high school record; one was a sprinter who was out of athletics on account of a torn muscle; one was a broad jumper who kept on adding to his distance; one was a high jumper who did four inches better in college than in high school; six were hurdlers and all-round athletes. This is merely suggestive of the results of all-round athletics for high school, at least those which demand strength and skill rather than endurance without strength.

The second factor peculiar to the development of this period is the growth of the nervous system with its reflexes and automatisms.

This is the period of life when reflexes are most easily acquired and most permanently established. It is the period that is peculiarly suitable for the development of individual skill. The activities, therefore, of this period should aim at the development of skill and the establishing of proper reflexes. For this reason, therefore, the athletic events of the high school age should be individualistic, rather than sacrificial. They should be such that the competitor should be thrown upon his own responsibility, and such that the honors which he acquires should depend upon the extent to which he has perfected his own physical ability. The athletic events which most nearly meet these requirements are the field sports, such as the high and broad jump, the pole vault, the shot put and discus, the hurdles and sprints. The event par excellence for this period is tumbling, which uses all the body, giving due emphasis to the extensor groups of muscles, demands individual skill, and gives a chance for development of the other attributes required at this time.

The third factor is one which we are apt to deprecate in the life of the youth, but which has an essential bearing on the

development of the individual. That is the attribute, if we may so call it, of recklessness. In acquiring skill it is necessary to take a certain amount of risk, and in mature life we are unwilling to subject ourselves to danger, consequently, the period of life when the element of danger appeals to us is the proper time for the development of that skill which can come only through taking risks. It is necessary, therefore, that we utilize this phase of the youths' character to develop those very attributes for which this special condition was given. For instance, there is a time when it is comparatively easy for a young man to learn to swim, because he lacks that fear of the water which will later greatly hamper him in the acquisition of this ability. It is, therefore, unnecessary, and even inadvisable to eliminate all risk from the athletics of this period. Instead of eliminating them they should be utilized at the same time that all possible safeguards are thrown about these events. It is unnecessary to subject an unskilled individual to a risk that might better be postponed to a time when the risk is minimized and a certain amount of skill has been acquired. Take for example a common statement that the best way to teach a boy to swim is to throw him into deep water and allow him to get out with his own resources. In this case the risk is altogether out of proportion to the probability of acquiring the skill demanded. But there comes a time, when the movements of swimming have become reflex, that it is necessary for the individual to forget his inhibitory processes and to launch out. If, therefore, there is any end to be gained in acquiring certain phases of skill, this is the period of life in which to acquire them. At the same time the element of risk should not be an intrinsic part of the game, but should be a punishment for not doing the act in a proper manner.

A fourth phase of the athletics of this period is the development of self-confidence. This is the period of life when the individual is apt to go to one of the two extremes; either he becomes an egotist, with an exalted opinion of himself and his abilities, or he hides himself and his abilities in the activities of the gang. Neither of these extremes produces the best results. But the best development is dependent upon the consciousness of the individual that he is able to accomplish certain results, but at the same time is willing, when called upon, to sacrifice his own glory for the good of the common cause. A game in which team work predominates gives an opportunity for the backward individual to hide behind the team; on the other hand, the purely individualistic tends to develop in the party an exaggerated idea of his own prowess. Consequently, the ideal game for this period is the open coöperative game where the success of the team is dependent upon the individual skill of the player, upon his willingness to assume responsibility, and his ready coöperation with

the other members of the team. Such games are: baseball, lacrosse, soccer, basket ball and English rugby. These games demand and develop these attributes, and would bring the individual to the university with a capacity for progress and further development.

If a game or an event is one where skill is demanded, it is necessary that those who instruct the high school student should be acquainted with and understand the best form in which this event should be conducted. It is no uncommon thing to find a freshman entering college with a reflex well established, in an impossible form which prevents the individual from making the most of his ability in college sports. He has been permitted to adopt the easiest method by which he could make a temporary showing and win possible points instead of by a slower process, acquiring that form which he could use to advantage when he wished to make further progress. It is no uncommon thing for a college coach to be compelled to entirely change the form of the high jumper, pole vaulter or shot thrower. In other words, he must break down the reflexes which the individual has spent years in acquiring, and must build up new, beginning away below that which the individual is capable of doing at the time. This is a waste of time and of energy for the student, a disappointment for his coach and a complexity of reflexes which renders him unable to do his best work. Too often in our high school athletics we imagine that anyone can coach an athletic team if he has had some experience in the particular sport, whereas, it is necessary to understand the mechanism of the human body and the laws of physics to properly apply the experience which he has had. It is more important that the coach of high school athletics should understand the principles of motor activity than that he be able to develop a team which can make more points than the one from some other school.

The thing that is most needed in high school athletics to-day is some standard by which we can measure the athletic standing of the individual other than his ability to do some one thing better than some other student. So far as college athletics are concerned it would be better to make every matriculant come up to a certain standard of all-round athletic ability, with good form, than that a few should show exceptional ability in some one event. This might be accomplished to a certain extent by a wise choice of the sports in which the student engages. Second, by a combination of sports which will demand the attributes which are desirable and by insisting that each individual shall be judged by his total ability rather than by his specialization. No university would admit the student, however expert he may be in mathematics, who is deficient in all of his other subjects, yet this is the common tendency in athletic activities. It is com-