## Conscious control through physical education . (Public lecture given at the Unic. of Southern Calif., Los angeles, July 3, 1924.)

Definition of Physical Education in terms of general education: Education through motor activities aiming at development & coordination of all the latent powers of the individual and the objective social efficiency and a fuller, richer life.

The word "physical" suggests the dualistic point of view and is probably a survival of that conception. And at first emphasis was placed chiefly on health, development and strength of <u>body</u>. The potential values of physical education in these directions are now generally recognized. They make the reflect appeal to the general public and can be realized and thus proven in practice. Will not further discuss them at this time.

Among the leaders in physical education increasing emphasis is placed on <u>educational</u> values of the work and claims made on this ground for recognition and place in the education program.

Such claims are supported chiefly by arguments tending to show the moral, ethical, socializing values partly inherent in the activities, partly and largely accruing from their intelligent direction. The potential values are increasingly recognized by educational leaders.

Finally some claims to educational recognition are also made on the ground of intellectual values, viz. that motor activities, properly directed, contribute to development of mind, make for greater mental power and efficiency. These claims are not easily proven and are not readily accepted. So far only meagre success has resulted from efforts to measure results in this direction, to show the correlation of mental and motor efficiency - other than such as is clearly associated with or explainable in terms of native endowment, or of general growth and development.

Pending more specific information of exact character on this sub-

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recourse must be had to philosophic discussion, ject, reasoning by analogy and by deduction from the facts, principles and laws of growth and development of the mind which modern biology, neurology and genetic psychology have made discernible. Argument.

Evolution, in the animal world, has advanced in direct ratio to the extent and complexity of movement with correspondingly increased power of adaptation to and control of an increasingly varied environment.

All organic structures, all physiological and psychological functions have been largely influenced and shaped by the ever increasing range and efficiency of action. Throughout the development of the animal world, the main trend has been the perfecting of the neuromuscular system as an organ of increasingly varied movements. Along with the development of this motor mechanism has gone increasing refinement of sense perception and all the other functions of the mind which have to do with consciousness. Plant life is unconscious because it is immobile. Animal life is conscious because it is mobile; and this consciousness has increased in more or less direct ratio to the quantity and quality of action.

This relation of motor development and efficiency to development of powers of perception and (in man, at least) thinking capacity, is strongly indicated throughout the animal world. Wherever animals have developed unusual motor ability, either in the organism as a whole, or in specialized organs, there are found, in general, greater, sensitiveness to stimuli and a higher order of intelligence. Examples: elephant's trunk; parrot's beak and claws; hands of apes and man.

Man has an organism at onece the most mobile, the most sensitive, and the most completely under conscious control. The same is true

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of different organs or parts of man and animals. For ex.; the tongue and lips, eyes, index and other fingers (and toes) have the greatest mobility and are most sensitive, Sensitivity decreases progressively from the periphery to more central, less mobile parts of arms, legs and trunk.

From the foregoing it would seem justifiable to generalize as follows:

Life is fundamentally action. The chief intent of life is action. The nervous system has been evolved primarily in connection with or for the purpose of movement.

In the evolution of species and in individual types sensitiveness increases in direct ratio to activity. In other words, activity sensitizes life and thus brings the individual into more intimate and conscious relation with the environment. Activity must therefore have a constant and determining influence on the organs of sensation (and especially on those of the muscular or kinesthetic sense), on the perceptual centers of the brain and on all the mental processes concerned in perception which are the basis of ideas, of intellect, of consciousness of self in relation to environment. (Quote here results of Dr. Dawsons investigations in this connection).

In keeping with this generalization is the view that all our basic ideas of space and time relations, of cause and effect, are in the last analysis kinesthetic in character. Distance and size are judged or estimated in terms of muscular efforts needed to traverse, span or move; time by the amount of movement or action accomplished; cause and effect we primilarly understood, at first, only in terms of effort expended. All these basic ideas and concepts permeate our thinking and guide out judgements in relation to environment. Conscious control of action, of conduct, is then an index of the level of life. As we ascend the scale-in

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the animal world as a whole, perhaps, but at any rate in the world of humans, racially and individualy - consciousness becomes ever wider, finer, more detailed, more discrimminating, and action becomes correspondingly more and more consciously directed. Consciously directed action is the mode of action, the principle, if we may so call it, by which progress is marked and on which it depends.

If the goal of education may be stated in terms of an ever increasing content of ideas, an ever widening and more vivid, intense consciousness, together with a more rational and efficient control of human conduct, then physical education must promote these ends, conorder to tribute to the attainment of this goal, if it is to make good its Indeed, This claim to an integral part of and place in education. A widening of (or ought to be) consciousness this increasingly conscious direction of life is, one of the objectives of physical education. The means are directed motor activities; and not only by giving opportunity for abundant and (and those who engage in the varied motor experience but also by organizing the activities, and by furnishing the right kind of direction, guidance and leadership in the activities.

While many of these activities involve largely (so called) spontaneous, unconscious, reflex or automatic movements, especially in the case of young children or very inadequately trained older pupils, there is at least opportunity for progressive refinement of motor control. Through appeal to instincts of rivalry and emulation pupils are spurred to strive for greater proficiency better coordinations. This may, and at first does, result chiefly from hit-or-miss, trialand-error methods, without much conscious detailed control. But even such methods of learning result in increasing the power of kinesthetic senge perception and in the acquisition of new coopdinations or perfecting of old. In the more highly organized activities, in which skill plays a larger role, many of the movements or coordinations may be, and are, practmating and information of the movements of the part at least. Movements at first large and cumbersome, by such conscious practice become more exact, better localized. In this way the reflexes of which most automatic complex movements are composed, are re-conditioned and the efficiency of the whole raised to a higher level and then again relegated to subconscous or automatic control, to be used in that way in actual playing.

In this reconditioning of the reflex movements making up the parts of complex coordinations and the reconstruction of these complettes into new coordinations or perfecting of old, inhibition plays a considerable role.

From the very beginnings of acquisition of motor control, in infancy, inhibition of unnecessary or antagonistic muscular action has constituted and important part of improved coordination. In more advanced motor training inhibition is equally important. Neverthe less it is sound pedagogy, in keeping with modern conceptions, always to emphasize the positive, rather than the negative. This applies to motor training as well as conduct. But as soon as movement is consciously controlled inhibition becomes a more prominent factor. This is at first, and perhaps always, more or less of a hindrance, but is necessary for the greater ultimate efficiency. (Similarity, in this respect, in other lines of action and general conduct).

Consciously controlled movements in the various physical education activities - play activities, including athletics; dancing; gymnastics. Motor control objectively and subjectively applied. Capacity for such objective and subjective application best cultivated by play activities on one hand, and dancing and gymnastics on the other. The former make for objective efficiency, the latter for subjective harmony.

Motor control and self discipline. Self masteryfundamentally motor in characher, both positively (doing the right) and negatively (self restraint).

Unity, harmony and completeness of the disciplined life.

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