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ABSTRACT

In addition to the presidential address and the general session address ("Aesthesis and Kinesthesis: Meditations on Metaphysical Education: or, Graffiti in the Gameroom"), the proceedings contain speeches on the following topics: (1) intercollegiate athletics, (2) the history of sport, (3) teacher education, (4) basic instruction, (5) intramural athletics, (6) research, and (7) international relations. Some of the material presented in the research area includes papers on the use of television in physical education, phenomenological research in physical education, and viewing violent sports and agression. A record of NCPEAM presidents and a list of NCPEAM members are also included. (PB)

Proceedings
Annual Meeting
January 6-9, 1973

National College Physical Education Association for Men

76th

Edited by
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PRESIDENTIAL ADDRESS

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After Deane's excellent job last year reviewing the 75 year history of NCPEAM, I thought it might be appropriate to try to indicate some concerns I have about Physical Education in general, and NCPEAM specifically, that may have to be addressed to ensure that there will be, some 24 years hence, an opportunity for an NCPEAM President to review the organization's 100 year history. Although such a task obviously involves a great deal of speculation and, of course, can make the person who involves himself in such an undertaking look pretty foolish even a few years later, I believe such risks are worth taking. So, with the old saying that "fools rush in where angels fear to tread" well in mind, here goes. . . .

The safest suggestion I can make is that we must begin by making a sincere and concerted effort to determine as clearly as possible what we **are** as an organization and what we **should be** in terms of the role we are to play in the profession and **how** we are going to play it. This sounds like a comparatively simple task, but any such undertaking is certain to bring to the surface basic disagreements among members that within the usual comradarie of our annual meetings are never really addressed. One short-run consequence of deliberately surfacing and clarifying what are genuine and possibly irreconcilable disagreements among ourselves, will be a possible reduction in total membership. Certainly, the more specific we get in a confrontation with our differing values and professional commitments, the higher the probability that we will alienate some members. In spite of this I suggest that NCPEAM should "bite the bullet" by setting a well-planned course that makes sense to a majority of our members. I would suggest that the Resolutions Committee report this year was a step in this direction. This kind of sharpening of our focus, with the probability of an accompanying reduction in membership, will mean that NCPEAM membership could cost significantly more in the near future. I am confident however that most of our members are both willing and able to adjust to this eventuality if the organization is perceived as a vital force in the profession. If one can accept this self examination idea at least for the next twenty-five minutes or so, I would like to suggest problems that should be addressed by almost all of us who operate under the banner of Physical Education. It is, of course, a naive suggestion that the "profession" address the problems, but it is not at all naive to suggest that NCPEAM (and NAPECW) can both address them and also provide some significant direction to their solution.

The first concern that demands a clear position by the profession is the "requirement" in college physical education programs. Too many of us have simplistically assumed that what goes on in College gymnasiums was intrinsically good—the old fitness-carry over skill-Christian values syndrome succumbed to by Y.M.C.A.'s, Police Athletic Leagues and even churches. This assumption has been sustained by the historic (if simplistic) notion that the requirement is a major bulwark against the elimination of physical education as a viable curricular area—and

that a requirement is always more desirable than any elective program, no matter how arranged. I would like to suggest that we objectively re-examine what such data-free logic has been doing for (or to) students. My guess is that we would be hard-pressed to justify many of the objectives of the requirement in most institutions. I would also suggest that we would be even harder pressed to indicate any significant attainment of our loosely stated objectives through a requirement.

The loss of the crutch of the requirement would undoubtedly hasten the onset of a critical examination of what the students want and how best we can meet these needs. This might also mean a move away from the idea that vigorous participation leads in some arcane way to significant understandings concerning the complex values of leading an active, fit life. We might even go so far as to provide courses that address themselves solely to scientific aspects of sport and activity. Although the idea of a physical education course for a non-major that does not include activity might offend a number of our colleagues, we might help them through the 'withdrawal' trauma by assuming a position that at least students should take a shower after each class no matter what they do, just to assure these people that at least some of the vestiges of physical education remain. I believe that the requirement may be a very real **obstacle** to the development of quality college physical education programs. The sooner our programs are based on an input of ex-pressed student desires, guided by an orientation of realistically achievable objectives, and subject to continuing revision through the feedback of hard data concerning the actual achievement of such objectives with students, the sooner physical education will achieve a stable and useful place in higher education. Phrased in the most direct terms possible; in most institutions the requirement makes it logistically and pedagogically impossible to achieve the **results** for which increasingly we are going to be held accountable, and for which traditionally we have been permitted to substitute only high sounding rhetoric. Certainly if nothing else, the profession will gain an enormous energy pool from the discontinuance of the requirement that can be re-directed to providing programs that the students have been indicating **they** want through their enthusiastic participation in sports clubs and extra curricular activities for years. I am convinced that students are not less enthusiastic about physical education activity courses than previous generations —it's just that they are much more vocal about the unimaginative, rigid offerings of the typical Physical Education Department. One of the most damning testimonies to the ossified state of the profession is that most Physical Education programs must go outside those prepared as professional Physical Educators to employ teachers with many activity teaching skills demanded by students (judo, yoga, karate, outward bound, etc.). And worse, many of us still question the "legitimacy" of such activities. As though Physical Education professionals were the final arbiter as to what is legitimate physical activity, as opposed to illegitimate physical activity!

The next concern I have is the trend toward fragmentation within the profession. For many years Physical Education has occupied an almost unique position in American higher education. It was a place where activity teachers and coaches worked and rubbed professional shoulders with Exercise Physiologists, Anatomists, Kinesiologists, Philosophers, Sport Psychologists, Sport Sociologists, and Sport Historians. In fact, many coaches were also capable academicians in what might be described as the Jim Counsilman, Charlie Silvia, John Lawther tradition. This proximity of multi-faceted professionals under one roof enabled physical education to provide unique interactions and understandings between the so-called academic areas of the profession and the applied areas—functions historically divided in Universities between Colleges of Arts and Science on one hand and professional schools on the other. The 'pure' area, for example, of economics and the 'applied' area of Agricultural Economics are usually found at best at opposite ends of a typical campus, and, at worse, the former not even aware of the existence of the latter!

But now finally with enormous effort and almost unbelievable cost, Universities are beginning to force cooperation between departments and schools to attack problems as they really exist in society—University Departments have been tragically unable to even understand many problems because of the filters through

which these nationalistically-inclined units tend to view them. Robert Frost once described a College as being made up of Departments—each none too sure of the others importance. But, as I say, this attitude is changing—cooperation between departments is at a new high among Universities. Joint appointments abound. Scholars are charting new and exciting directions as a direct result of cooperation between hard scientists and social scientists; between the Humanists and Educationalists, and a variety of other previously isolated scholarly and professional domains.

And where, while all these new and exciting developments in extending cooperative ventures are taking place in higher education, is Physical Education? In the one unit that has had a real head start in terms of cooperation both among scholars with diverse interests and between scholars and professional personnel; in what way have they responded to such new demands and opportunities? You already know the answer—the wrong way. Exercise Physiologists, for example, who within my memory were willing to break bread (or at least drink beer) with their departmental colleagues now in many schools are hard-pressed to acknowledge the legitimacy or existence of many areas in Physical Education. The needs of professional preparation programs are regarded, at best, as annoying intrusions on proper scholarly concerns. The enterprises of the profession in the real world of work are regarded simply as irrelevant. A number of specialists in the biological sciences have long since eschewed their professional association with NCPEAM for the more comfortable professional proximities provided by the American College of Sports Medicine. They are, of course, not alone. Many of our psychologists find the North American Society for the Psychology of Sport and Physical Activity much more attractive. Last year in New Orleans a group of distinguished sport historians voted to form the North American Society for Sport History. I also understand that discussions about forming an organization in the philosophy area are underway. The fact that we are moving to a new meeting format in Kansas City that reverses our past trend toward structural fragmentation is a clear indication that the majority of our members are in agreement with my concern. But if we cannot persuade those groups, who were attracted to NCPEAM because of its history of tolerating (if not supporting) emerging special interest areas, that the new direction is the proper one, we have gained nothing. It is my contention that without the active involvement of professionals with the wide range of interests and competence that comprise Physical Education, NCPEAM (and Physical Education) will not last. In our Universities many of our sport historians would prefer the "legitimacy" of close association or even absorbtion into History Departments in preference to their inclusion within Physical Education. This is also true in many cases with our Sport Sociologists, our Philosophers. Many of our Exercise Scientists are now beginning to seek out appointments or at least joint appointments in Medical Schools or Departments of Biology or Biochemistry. Such trends are harbingers, in my opinion, of severe problems for Physical Education, for without the continuing involvement and interest of these critically important people, we have very little chance of survival. The scholarly specialist, of course, HAD TO COME, and none of us can regret their belated arrival. The problem was that too many of us welcomed them for the wrong reason and that nearly all of us overlooked the social and psychological problems they brought with them to our professional community. We proceeded, for the most part, on the simple-minded model that if we just mixed scholars and professionals together in a pot, good things were bound to happen. As with the same strategy with blacks and whites, that—is a recipe for disaster.

Fragmentation is a consequence of neither the stupidity nor the perversity of scholars (though surely some are as unperceptive and simple-minded about some things as their professional counterparts). It is a consequence of inadequate attention to the creation of a healthy environment. Our problem is summed up for me in this simple paradigm:

> It is foolish and sad when scholars say "don't bother me with kids and schools and teachers—that professional junk is not my business, I'm a scholar".
>
> It is **not one whit less foolish and sad** when the curricular and logistic

structure of a program forces the scholar to teach classes in which he must daily confront the question: "How will all that stuff make me a better P.E. teacher—what will it do for my football team?"

To the degree that devising and sustaining environments that facilitate fruitful interaction (rather than dissonance and fragmentation) between diverse specialists is a task of the administrator—our present condition is evidence of a massive failure of vision and insight by a generation of administrators, who wanted the glory of scholarship without bothering either to understand its nature or to provide for its integration into a system of professional commitments.

This increasing isolation among the profession's sub-groups is being transferred, I believe, to our graduate students each generation of which is being trained with more specificity. The old 'generalist' courses are rapidly fading from our catalogues. Many students are now being admitted to our graduate programs without undergraduate preparation in Physical Education. In many cases for perfectly legitimate reasons. Nonetheless, the end result of these changes is that we are producing more people who are reaching higher level capabilities in increasingly narrow areas who at the same time seem to have less of a sense about what Physical Education is—or at least what I think it is. I am convinced that over the lifetime of my generation, at least, the profession's major thrust will continue to be through physical activity, and for that reason I am equally convinced that the people we are training must understand the importance of working together across their respective disciplinary areas to focus on the real problems and needs of both professional preparation programs and the professionals in the field. What I am afraid of is that if we continue to go in our present directions we will not even be able to agree on what the problems are, let alone how to solve them. I also feel that as long as college physical education programs are going to constitute the primary market area for our own graduate students, **we** have charted a course to our inevitable extinction by the way **we** are preparing the people **we** are going to hire. A partial solution to this problem may involve some painful reassessment leading to the probable conclusion that we must support curricula that will not permit complete avoidance of knowing what Physical Education is. If this means broadening existing curricula—let's do it. If this means required graduate seminars outside of one's "in-depth" area, let's do it. Let's do **something**—my perception is that we don't have a lot of time.

A reasonable question at this juncture would be whether the trend toward subject matter separatism within the profession is irreversable. I would suggest that it is not. NCPEAM must however commit itself to make every effort to provide an organization that will retain and attract the spectrum of professional interest that can ensure the interactions the organization must have. How we accomplish this is, in my opinion, related to another most important consideration—NCPEAM's relationship to NAPECW.

As is usual on most issues, the NCPEAM membership appears to have a wide range of opinion in regard to the organization's proximity to women professional Physical Educators. The range of opinion on this matter seems to manifest itself in the discussions I have heard—both in our formal meetings and in informal debates—into advocating one of two rather distinct and dichotomous positions: more or less total integration, or more or less total separation. The advocates of the integration talk with great concern about the unnatural historical separation of men and women professionals in Physical Education. They talk quite convincingly about the need to bring together our collective resources and intellectual capabilities—not only in the solution of common problems, but in the pursuit of our mutual scholarly concerns. They point to our highly successful cooperation with NAPECW in the publication of **Quest**. They also point with much justification to the long history of positive interaction between men and women in the AAHPER, Big Ten Colloquia, and of course many Departments and Schools of Physical Education in Colleges and Universities. On the other hand a number of members who have not been supportive of bringing women together with NCPEAM talk about their perception of basic philosophical differences in a wide range of areas—from athletics to

the expressed need of women for separate courses on the study of women as being justifications for retaining separate identities. Others talk at much more basic levels about their concern that not only is the format for the NAPECW meetings essentially different from that of ours, but also that the membership of NAPECW is almost double that of NCPEAM and are pessimistic about the resolution of matters of legitimate disagreement that might end up being decided by a vote of the combined membership. These are, of course, only a few randomly selected examples from many I have heard—ranging, in my opinion, from carefully thought out concerns to absurd prejudices on both sides.

Curiously, in all of the debate about this important issue, I don't believe I have heard anyone discuss intelligently (or even ask about, for that matter) what the **women** want to do. I have asked a number of them over this past year, including some of our guests, and, predictably, their responses are varied. Many NAPECW members share the same concerns as our members about the potential problems associated with a closer proximity—including the very legitimate concern that at this juncture NAPECW represents one of the few organizations that is capable of generating a purely and distinctively woman's perspective on issues in higher education. As we look at our own institutions it is becoming increasingly clear that this voice has hardly even been heard in the past, and that an organization such as NAPECW represents an enormous resource for viewpoints on issues in Physical Education specifically, and higher education generally. In addition, many NAPECW members feel that their organizational and meeting structure is the correct one for their needs. NAPECW is divided into Districts, each of which conducts a meeting during the fall every year, and, on alternate years, there is a national meeting held usually in a summer at a resort area and lasting for about 5-6 days. This of course is quite different from the meeting pattern that most NCPEAM members prefer. There are, in other words, many legitimate concerns among the membership of both organizations that make a dramatic single move to merge the two organizations into one, unadvisable in my opinion. We would lose more than we would gain. That is not to say, however, that we should not move our two organizations into a much closer proximity in a number of critical areas, something that might be called 'selective cooperation'. We already have our mutually satisfactory **Quest** experience to indicate that cooperative effort is not only possible, but desirable to achieve a specific end. One of the first areas I think we should explore is the problem that led the fledgling Sport History group to state that one of their reasons for not staying as a special interest group within NCPEAM was that women were automatically excluded, and that this was an unnatural state for a group with a major scholarly thrust. Some members of NAPECW will undoubtedly find this argument persuasive. This specific argument for further fragmentation can **only** be solved by a joint effort. Perhaps NCPEAM and NAPECW should move toward co-sponsoring meetings which address themselves to specific disciplinary interests—not unlike those undertaken for years by the Big Ten—but open to much wider participation and control. Perhaps the solution lies in the joint planning of some aspects of our annual meetings to enable the needs of the profession's sub-groups to be more adequately met. It may mean pooling some of our resources to provide some of the support functions they require—we might consider, for example, a substantial modification of our Newsletters into something more than a vehicle for random announcements. If we can work together to attack problems such as this one, that affect us both, while continuing to preserve our individual identities—at least for a while—I believe it is possible to have the best of both worlds.

Yesterday morning's joint meeting of the NAPECW officers with our Executive Council is a clear indication of the desire of both of our memberships to work more closely together or at least understand each other better. We have had a NCPEAM-NAPECW Conferences and Projects Committee—perhaps we should ask this committee, as it presently exists, or with expanded membership, to examine some of these issues that I perceive to be problems to determine if they really are, and if they are, to propose definitive action that could be considered by both organizations.

The last concern I would like to address is one that I feel least equipped to deal with, yet it unquestionably is one of major importance to NCPEAM. It is the matter of minority membership and participation. A quick look at our attendance at our annual meetings is sufficient to convince anyone that for a number of reasons we have failed to meet the needs of minority college physical educators. We have had two President's Committees in the past two years focusing on this problem. I cannot speak with authority on what the 1971-72 President's Committee on Minority Group Membership did or did not do, but I do know that this past year, with the dedicated involvement of Professor Jim Stevens at North Carolina College and a few others, we did try to do something. The only problem is that what we tried to do was probably wrong. It was primarily at my urging that the Executive Council voted fifty free one-year memberships to encourage potential new minority participation—or at least familiarity with NCPEAM. The first harbinger that this move was not wise was Stanley Wright's article in the Newsletter which very thoughtfully pointed out some potential problems in terms of how this offer might be perceived by potential minority members. He was undoubtedly right.

Professor Stevens has pointed out a number of the problems we are going to have to face in terms of our quest for a representative membership. Among these are the fact that many of our minority professionals are also very active in NCAA and AFCA affairs; meetings of which occur at almost the same time as our NCPEAM meetings. Many of our potential members are Athletic Directors; others are Department Chairmen and Coaches who justifiably claim scheduling problems as a drawback to attendance. Many Blacks seem to be leaning more toward Associations offering more involvement to minority members—these people are familiar with NCPEAM but see no particular positive programs to attract their participation; others are still not even familiar with the organization.

If we are going to really succeed in our objective of achieving a representative membership, we must determine the needs and interests of potential minority members and then develop programs that are relevant. I would suggest we begin on this project with all deliberate speed.

There are many other concerns that I have about our future as an organization, but I believe the issues of the requirement, professional fragmentation, our relationship with NAPECW, and minority membership are the most critical issues facing NCPEAM today. They can be solved. They **must** be solved, because I've already made plans to be sitting out there in 1997.

GENERAL SESSION ADDRESS

Aesthesis and Kinesthesis: Meditations on Metaphysical Education: or, Graffiti in the Gameroom

LAWRENCE MEREDITH
University of the Pacific

John Simon is a film critic: sophisticated, acerbic, devastating, relentless, widely hated and even respected, and insufferably egomanaical—the Howard Cosell of the cinematic world. In his recent book of film criticism (**Movies into Film**, Dell, 1971) Simon defends his own work as art and evangelizes for a proper distinction between art and non-art:

> For the civilized person, then, art is the supreme type of entertainment, different from others chiefly by its greater human relevance or, more simply, truth. This does not, however, exclude the possibility or even the desirability (and, certainly, the acceptability) of a highly cultivated person's finding various forms of non-art entertaining. Only there need be a sense of distinctions, proportions, values. We must not confuse pleasures with higher pleasures, fleeting with lasting goods, laughter with laughter that taught us something, carefree moments with moments which, by making us face them, might actually free us from our cares.
>
> I think we must accept man as a dual creature: whether we want to call him part angel, part beast; part Jekyll, part Hyde; part superego, part id; or any other kind of biparite being, is immaterial. What matters is that he can enjoy both Bach and the Beatles, both Kafka and comic strips, both looking at a great dancer perform a perfect arabesque and watching a champion tennis player return an impossible smash. But it is wrong to call the tennis player an artist, wrong to prefer Superman to Joseph K., wrong to equate a popular song with a concerto. Not morally wrong (though, in some cases, that too), but esthetically wrong. (page 3).

I wonder how this strikes you? Irrelevant? How's that again? Interesting? Who the hell cares what John Simon thinks about anything?

My contention is that you ought to be at least slightly irritated. I certainly am. I'm just a plain Texas boy, a fugitive from **The Last Picture Show**, over-privileged, over-paid, with my values deeply rooted and drawled in Middle-home-spun, boy scout, Methodist Church—America—the Don Meredith of the academic world.

I like concertos on occasion and Joseph K. has a certain complexity which makes him by and large more interesting than Superman. But Simon is some kind of simple when he tells me that it is wrong to call a tennis player an artist. And as if that weren't egregious enough, he twists the knife in my tender Texas sensibilities by explaining the valence of "wrong." Not **morally**, he insists, but **aesthetically** wrong.

Now what does it mean to say that something is aesthetically wrong? What is an aesthetic moment or object? **Aesthesis** comes from the Greek verb **aisthanomai** which is the past-tense form of the verb **aisthesthai**, which means "to know" or

"to sense." That is: to know is to know with your senses. Many ancient Greeks in fact used **aisthesis** to mean not only "knowing," but "seeing" and "hearing" as well. David Miller in the midst of his own definition of aesthetics quotes from that marvelous little play, **The Fantastiks**, where a character says:

> . . . try to see it:
> Not with your eyes, for they are wise;
> But see it with your ears:
> The cool green breathing of the leaves.
> And hear it with the inside of your hand:
> The soundless sound of shadows flicking light.
> Celebrate sensation. (**Gods and Games**, World, 1969, p. 140.)

Aisthesis, then, is seeing and knowing with the whole body, with, as Miller puts it, the wholeness of the body. **Aisthesis** is body-seeing: not cerebration as much as celebration.

Now aesthetics as we all know is the study of art, or the theory of art. And art is defined as "the controlled objectification of feeling" (Ducasse, in Philip Beam's **The Language of Art**). Art is quite simply expressive imagination, or if you like, feeling in form. To put it physically, aesthetics is fundamentally a playful attitude toward the universe. It takes the world apart and puts it back in another form. It invents a new universe out of the old multiverse—forms one startling possibility out of many so that we might participate for a moment in that possibility and the energy flow it releases.

It has always been the case that art has **released** rather than imprisoned the imagination. That is to say that art is necessarily in **motion**. It never paralyzes, even if it seems to freeze a moment—as in a painting or a photograph. Serious art ("good art"?) has this quality of the dynamic. It **moved** me, we like to say.

Along with this pychic motion organic to all art, there is also that group of feeling forms which are necessarily physical. Some art both moves itself and moves us. This is kinetic art.

So we abstract our feelings and objectify them in mobile perceptions: in body movements such as dance, pantomine, drama, and even double movements, as in the moving pictures—the films so beloved by Mr. Simon. With television we get a third movement: multiple signals in the atmosphere restored to a single field of perception by the medium of what was first called a kinescope—literally a "seeing" of "movement."

Sometimes the human presence is subtracted in the mobile feeling form, leaving us machines that move as art objects: electronic sculptures, multiple gears, wheels, wires, etc., that evoke new value arrangements of the universe. You remember one of the most famous of these kinetic forms, shown at the New York Museum of Modern Art. It was a machine that committed suicide—literally flew apart at some unsuspected moment in front of traumatized spectators. The artist explained that he was having his revenge on modern technology: machines that were dehumanizing, murdering man, imprisoning him and choking off his humanity.

But is this art? Isn't this rather a revolt against aesthetics? Rene Wellek savagely describes this attack:

> The revolt against aesthetics was also a revolt against classical art with its demands for beauty, order, form, harmony and clarity of meaning. But such a desire to make things new was not a denial of the ideal of art or literature; rather it was an attempt at a redefinition of art or an extension of its meaning to allow for the innovations of the twentieth century. A German Volume of conference papers and debates called **Die nicht mehr schönen Künste**, "the no longer fine arts" wittily formulates what has happened in recent decades: the inclusion in art of the ugly, the formless, the disorderly, the outrageous and obscene that culminated in Dada's thumbing its nose at art and echoes today in such movements as pop art. Attempts have been made not only to widen the realm of art but to abolish the boundary between art and nonart. In music, noises of machines or the streets are used; in painting, collages of stuck-on newspapers, or "found objects"—soup cans, bicycle wheels, electric bulbs, any

piece of junk—are exhibited. The newest fad is "earthworks," holes or trenches in the ground, tracks through a cornfield, square sheets of lead in the snow. A "Sculptor," Christo, wrapped a million square feet of Australian coastline in plastic. In poetry, poems have been concocted by the Dadaists by drawing newspaper clippings from a bag at random; more recently poems have been produced by computer, and a shuffle novel (by Marc Saporta) has appeared, in which every page can be replaced by another in any order. (page 34, "The Attack on Literature," **The American Scholar**, Winter, 1972-73.)

Surely Wellek would applaud John Simon: do not call a tennis player an artist, for Joseph K. is to be preferred to Superman.

Now I assume that Wellek and Simon would have no problems with calling ballet art. For in ballet, they would tell us, the intention is clear. It is a serious, disciplined, evocation of value through the beauty of moving form, a heightening of sensibility—new levels of possibility made aware to us.

So we might even be willing to label ballet a form of **kinesthesis**. The Greek here combines **kinein**, "to move," and **aisthesis**, "to perceive." **Kinesthesis** in physical education becomes kinesthesia and is defined as the sense whose end organs lie in the muscles, tendons, and the joints, and are stimulated by bodily tension. Kinesthesia is indeed the muscle sense, the body sense. The science of the muscle sense we know as kinesthetics. I would assume that the core of your work—the quintessence of your work—is kinesthetical: the development and discipline of the muscle sense, of the perception of the universe through the receptors of the sense organs—training, if you will, in body language.

If ballet qualifies as art, why not gymnastics? At what point, in other words, does kinesthetics pass over into aesthetics?

One watches the Olympic gymnast with something approaching wonder. The grace and timing is so exquisite, the movement so mesmerizing. But Simon would tell us that these are complex exercises, precise movements without meaning.

Perhaps free skating qualifies? Here is grace and poise, gliding and whirling to various musical rhythms, pirouetting and shimmering in kinesthetic sweat. Is it **sliding** ballet at least? What possible arrogance and parochialism could allow anyone to retain the word art only for the classical sweat and audible leaps of the stage?

Yet the level of expectation is somehow different for ballet, rather like the difference between a concerto and a popular song. A concerto requires more intellect, more perception, more concentration, as does ballet. Popular songs and skating and gymnastics are so much more simple. So—how shall we say it?—so **easy**. I don't mean easy to do. God knows who could do what that tiny Russian girl does! It is easy however to watch. It demands nothing of us that would alter our perception of the world—or heighten it. At least, this is what the aesthetics purists would tell us.

That is, non-art only **entertains** us, it does not **confront** us.

And so Simon tells us that tennis is not art—can under no circumstances be art, because there is no possible way that a tennis stroke, however beautiful, however graceful, would confront us: challenge us to be other than we are, raise the quality of our humanness.

But some motion pictures are art and some are trash. The same form both succeeds and fails, and this is not quite the same thing as winning and losing a game. Tennis depends for its beauty on its invented limits within which the players agree to stay. Motion pictures have no such limits, at least not in this sense. They are not a game, and certainly not an exercise, and it is quite improper to introduce them in competition with one another (as George C. Scott correctly symbolized by refusing to accept an Oscar for his role in **Patton**). Art is by definition noncompetitive.

Ballet is not a game. Tennis is. Gymnastics is a form of exercise. Ballet is not. Some motion pictures are sheer entertainment. Others become art.

Do you see any patterns emerging from this meditations? Any useful principles? Any metaphysics for physical educators? I didn't think so! Perhaps "princi-

ples" sound too arid and textbook anyway. But at the very least we could draw together some quick insights. Charles Beard, the famed historian, was once asked if he could summarize what he had learned from history in one sentence. He replied that he certainly could not. But he **could** do it in four sentences: those whom the gods would destroy they first make mad with power; the mills of the gods grind slowly but they grind exceedingly fine; the bee sucks honey from the blossom, but it also pollenizes it; when things get the darkest, the stars come out. My own choice of summary sentences for the meaning of this precious, capricious energy we call life would not be fit for the history books. Rather they should be written on stadiums, gymnasiums, lockerrooms, and all the arenas for play provided by nature and man: graffiti, if you will, for the gameroom. For I think we must hold these clearly in front of us in order to serve not merely well, but at all, in the new age emerging in education—in our whole culture.

Graffito One: I would only believe in a God who dances.

Nietzche said this to a late nineteenth century audience that listened but could not hear, for they also heard him say that God was dead and how could God, the maker of all life, ever die. Surely Nietzche must be mad.

But what Nietzche announced we have watched come to pass. The God of elite authority has died; the God of the transcendent, other-worldly realm has died; the God of scarcity economy and survival aggression has died.

To put it bluntly, the God of culture as we have known it for over two thousand years has died. Our Western culture is not sick, not in trouble. It is dead. Killed by the very forces that gave it such phenomenal growth: hard work, possessiveness, competition. This capitalistic premise gave it victory over mere survival—produced a surplus economy and a technological society in which for the first time in history men were not victims of their environment but co-creators of it.

This means that we have been released as a culture to define ourselves not by our success in competitive endeavor (I'm good, but you're better, and he's best) but in communal, creative activities. To put it another way: the God of the old culture worked out of fear; the God of the new culture dances out of joy.

Now you must see the absolute distinction between these two ways of living in the world. Call them moods, or attitudes, or philosophies, or theologies.

The old mood resided in external authority. Its attitude was formed by obedience to divine rules. Its philosophy carefully persuaded us that there was not enough to go around (food, shelter, land, prestige) and its theology persuaded us that life was a civil war of the soul, a battle between good and evil for the one great prize of eternity.

From the sixteenth century, from the twin forces of the Reformation and the Renaissance, this cultural model has been under attack. The scientific revolution of Darwin and Freud, the philosophical revolution of Kant and Marx, the existential revolution of Kierkegaard and Heidegger, all co-inhere in Nietzche's pronouncement. The twentieth century is an **axial period** in human history, when some new level of being is emerging, something unknown in any previous time—almost a mutant—as far removed from the previous two thousand years as Jupiter is from earth. So Kubrick in his film **2001** sends out the space station tumbling into the future to the ironic strains of a Strauss waltz: old culture music celebrating the new, the rebirth of man. As the old God of authoritarian work dies, so the new God of free environment dances.

Graffito Two: I am my body.

Gabriel Marcel said this to seize in a sentence the proper focus of the new culture. Marcel is a phenomenologist, which is to say that his focus of interest is in the nature and structure of consciousness, the arena itself of human experience. Now this axial period is exactly a mutation in human consciousness and whereas formally we could speak of consciousness arising in us through a kind of non-physical implantation (the soul—or even some definitions of the mind), at this point we understand ourselves as totally related to our bodies as part of the body of the world.

There is not here time to document this focus, but I think you can see it at

least superficially in th explosion of interest in behavioural and depth psychology, and specifically in man's sensuous life. I say "sensuous" rather than "sexual" because human history is full of examples of probing into erotic patterns of behaviour, from the **Kama Sutra** to **The Sensuous Woman**. But sensuousness properly used means sensuality with imagination, an aesthetic of sex, sex as a form of creativity of new levels of consciousness, not merely super thrills with an ice cream cone.

For a more profound and detailed exposition of Marcel's epigram, read Thomas Hanna's **Bodies in Revolt**, where the new culture is understood as somatic culture, and the mutant citizen developing for this culture **thinks** somatically. I want to say that we think with our bodies, but Hanna prefers the word **soma**, which of course is simply Greek for "body," but which some Greeks intended to mean something quite splendid.

> . . "Soma" does not mean "body"; "Me, the bodily being." "Body" has, for me, the connotation of a piece of meat—a slab of flesh laid out on the butcher's block or the physiologist's work table, drained of life and ready to be worked upon and used. Soma is living; it is expanding and contracting, accommodating and assimilating, drawing in energy and expelling energy. Soma is pulsing, flowing, squeezing and relaxing—flowing and alternating with fear and anger, hunger and sensuality. Human somas are unique things which are belching, farting, hiccuping, fucking, blinking, pulsing, throbbing, digesting. Somas are unique things which are yearning, hoping, suffering, tensing, paling, cringing, doubting, despairing. Human somas are convulsive things: they convulse with laughter, with weeping, with orgasms. Somas are the kind of living, organic being which are at **this** moment, in **this** place where you are. Soma is everything that is you, pulsing within your fragile, changing, growing and dying membrane that has been chopped off from the umbilical cord which linked you—until the moment of that severance—with millions of years of organic genetic history within this cosmos. The umbilical cord has been severed, and now you stand separated from the umbilical chain, a unique membranous bag of living bone and muscle and nervous tissue and blood—a collection of structured, breathing offal that is somehow you. Somas are you and I, separated without asking from the warm, protective, ever beloved bodies of our mothers, feeling a little alone and a little confused, wondering what it is all about, this sixty or seventy years of pulsing physiological autonomy that was given without asking and will be taken away without asking. Somas are the consistently stupid and incomparably intelligent automatons which bear either your name or my name. Some somas are males who sense that the fullness of humanity includes also being female but who cannot be female and so are driven to immerse themselves, merge and flow into the most beautiful of all things in this world: a loving, explosive male soma. Somas are males and females who know they belong together, because fitted together they make a whole and experience wholeness . . . Somas are you and I, always wanting life and wanting it more abundantly. Somas are you and I, brothers of a common membranous enclosure, a common mortality, a common environment, a common confusion and of a common opportunity, right now, to discover far more than we have ever known about ourselves. The only somas are those who are here and now; . . . Somas are you and I, at this moment and at this place we are in, beings whose evolutionary history has brought us to the revolutionary stage of realizing that the brave new world to be discovered is no longer "out there" but is the here and now of our immediate organic being. The brave new world to be explored by the twenty-first century is the immense labyrinth of the soma, of the living, bodily experience of human individuals. And we of the latter third of the twentieth century have been appointed discoverers and early cartographers of this somatic continent. (pages 35, 36 and 37).

If Hanna and his host of philosophers, biologists, and assorted radicals are correct, then physical educators are presented with an incredible opportunity to be revolutionary in what has often been considered as the most reactionary department in the academy. I mean that you deal with the **body** vocationally and that

somatic thinking is the key to the axial age in which we find ourselves. I mean that the **aesthetics** of 2001 are **kinesthetic**; art is body in motion, energy incarnate.

Graffito Three: Let us leave the surface and, without leaving the world plunge into God.

Teilhard de Chardin said this and earned the wrath of the Pope and total obscurity within his own communion—so powerful is the nostalgia that lures—no—seduces us into the past. But leaving the surface (the selfimposed limits, the old world expectations, the old age moralities, the old securities, the old spiritualized consciousness) is what the new age is all about—if you remember that its focus is the body. Or to put it differently, Dostoevskey said that if God were dead, then all things would be permissible. Forget the so-called "moral" implications of this. Morality as we have known it is also dead and another form of being human is becoming manifest—forged really—invented on the basis of ecstatic experience. All things in the new culture are permissible within bodily limits.

Notice, for example, the phenomenal popularity of that wierd little non-authoritarian bird, Jonathan Livingston Seagull. Why on earth (**sic!**) have we fallen in love with this simple parable of flight? Precisely because of this radical mood I have described, the mood that made **The Greening of America** also a national best seller, the mood of possibility, of shoving out the limits, of pushing out so far and so high that we virtually discover a unique realm where our speed is so dazzling and seemingly miraculous that even collisions with granite cliffs are not fatal and our bodies become almost translucent with the joy of heightened awareness.

But remember that Jonathan's discovery, which amazed and angered the flock still content to fly at such trivial speeds and distances, was made precisely with his body and precisely by measuring what his wings could do in perfect union with the sky, the wind, and the sea.

> A single wingtip feather, he found, moved a fraction of an inch, gives a smooth sweeping curve at tremendous speed. Before he learned this, however, he found that moving more than one feather at that speed will spin you like a rifle ball . . . and Jonathan had flown the first aerobatics of any seagull on earth. (page 27).

This is actual areo-dynamics, not fantasy (and was first published in a flying magazine). Seagulls without wings, without wind, do not fly. Yet this limitation, this body, is no cause for not leaving the surface, for complaining, as Henry Miller once did, that the earth is immortal and he was not. Listen to Jonathan:

> We can lift ourselves out of ignorance, we can find ourselves as creatures of excellence and intelligence and skill. We can be free! We can learn to fly! (page 27.)

This new age flies higher and faster and we don't have any conception of what those limits are. One remembers Paul Weiss' philosophical inquiry into **Sport**, where he tells us that the primary role of sport is to push out our limits, that physical education probes those supposed limits, constantly seeks to transcend what formerly we thought was the best we could do: becoming daily "creatures of excellence" in the "guise of men."

That is, your job is not just to keep men and women healthy (jogging and perspiring and the like) but to engage them in their search for wholeness—for salvation, which is not a state, but a flight on or beyond what anyone had suspected was possible.

One also remembers Kierkegaard's famous parable of the geese. Once upon a time there was a flock of geese that loved to celebrate flying. They would gather together regularly and even worship flight. They would listen enraptured to a priestly gander in divinely white feathers tell them of the ecstasy of the air and how good of God to give them the gift of wings. And after honking a hymn, all the geese would walk home.

It may be that the surface is safer, but we are made for higher things.

Graffito Four: Damn everything but the circus.

E. E. Cummings said this to the receptive ears of mid-twentieth century America in high hope that we have at last learned that all art is literally clowning around,

tickling the ribs of the world—that growing up, as Norman O. Brown reminds us, is finding new toys, that the new culture has redeemed us into play. And mark this well: play in the emerging age is serious, for the ultimate seriousness in non-seriousness.

Let me make this point as unmistakable and non-mysterious as possible. With all authority invented, life centered on the body, all things permissible within those bodily limits, it follows that no hierarchy of values can ever be established as definitive.

This most particularly means the end of any distinction between art and non-art. What we have is art as feeling and experience, as energy forming itself into imaginative bodies. So **aesthetics** and **kinesthetics** coalesce: one can no longer say art for ballet, or non-art for gymnastics. Both **confront** us, for both involve the totality of bodily expression extending the limits of our possibilities, delighting the eye, and teaching us to fly within the range of somatic movement.

Of course ballet remains more complex—we say now that it is more "intellectual." But the new culture is also calling an end to the distinction between body and mind. Let us have this settled once and for all: we think with our whole bodies. So convolutions on a horizontal bar are physically more simple than **Swan Lake**, but they are no less artistic. For the aesthetic (the knowing, perceiving, art sensibility) fundamentally plays with the universe: pokes at it, cuts it up and pastes it together in collages, intersects its time flow, arranges its wave lengths, squeezes its textures, frustrates its natural rhythms, smears it, multiplies it, laughs at it, laughs with it, represents it, makes it present.

Only one thing it does not do. It does not conquer it. Art does not have dominion—authority—over the world. It caresses it and loves it. "It is the curse of theology," writes Gerardus van der Leeuw (**Sacred and Profane Beauty: The Holy in Art**, Abingdon, 1963, p. 74), "always to forget that God is love, that is, movement. The dance reminds us of it . . . Whoever does not dance runs, races, waddles, limps —that is, he dances badly. We all must learn once to dance so that once again a general consciousness of life can be created . . ."

Non-seriousness then is that quickness, that readiness to move, that facility, adroitness, poise, mercurial magic that puns with the Word made flesh, accepts no situation as unredeemable, no solution as final, no formulation as divine, no death as despair, no life as paralyzed. Non-seriousness pricks our pretensions about ourselves, pipes a tune and says, come dance with me.

That is the fundamental meaning of the Greek **aesthesis**: non-seriousness. And the Greeks always knew that the aesthetic man was dangerous, for he simply would not take our pretentious nonsense seriously! Artists you will recall were denied a place in Plato's utopia. Of course. They will disrupt utopia, frustrate any organized effort to freeze spontaneity, turn every portentous and heavy academy into a circus.

And when **aesthesis** is combined with **kinesthesis**, what power is generated to redeem our exhausted, moribund, bureaucratic, serious world. Think of it—the art of motion, honing the raw processes of energy and exploding daily into shocks of delight.

Think of Jonas Salk's wife, Francoise Gilot, an artist of international reputation who paints as she says "what comes from within . . . inside feelings and thoughts, rather than the surroundings [the surface!]." Her current theme is movement and the interaction of moving forms and she works now in painting athletic figures in action.

Think of Dan Jenkins, a writer (and senior editor) on the staff of **Sport's Illustrated**, whose current work is a novel on athletic figures in action, called, **Semi-Tough**. (Atheneum, 1972). What Gilot sees is that athletes are not just subjects for art, but that they **are** artists, and she plays the universe of color and line into revealing this dimension of depth incarnate in sport. What Jenkins sees is that athletes are not just subjects for sport, but that they are human, and he plays the universe of words and syntax into revealing this dimension of breadth incarnate in humanity.

Gilot's pictures are difficult to find, but all America now knows Billy Clyde Puckett, "the humminest sumbitch that ever carried a football" in "what you call your violent world of professional football," and Marvin (Shake) Tiller, dimpled, green-eyed, trim, split end who runs pass patterns like a poet composing sonnets, and mainly Billy Clyde's "good buddy for a lifetime." On the field Tiller would "shake 'em up and shake 'em loose," and off the field had a way of "making things sound like you never know if he's truly serious," even when he was "serious." One day between the wool market of available women and the super battle with the dog-ass Jets, Billy Clyde got reflective:

> Shake and me had always had conversations every so often what the world amounted to. We didn't generally get too serious.
>
> Shake always questioned things more than I did, maybe because he read so many books. I always just believed a man ought to do the best he could, whether it involved playing ball or something else. I thought a man ought to laugh a lot. And then I thought a man turned up one day and just wasn't breathing any more. And that was that.
>
> I was stretched out on a sofa with the coffee cup balanced on my chest, looking up at our trophy shelf with the game balls on it and at some pictures.
>
> I laid there a minute and said, "Yeah, but I wonder where we're all going?"
>
> "Clarke's, I hope," Shake said, who was in a chair behind an issue of **Sports Illustrated**.
>
> I smiled and said, "In what you call your life, I mean."
>
> "Oh, that." Shake laughed.
>
> And he didn't add anything to it.
>
> (pages 141 and 142).

How very right for athletes to raise the question of meaning in "what you call your life." Think of Samuel Beckett, a French-Irish writer of the strangest kind of fiction, of which the most famous is called **Waiting for Godot**. It is a play that I never really understood until I started meditating on metaphysical education.

Two tramps wait by a leafless, lifeless tree on a bare stage—wait for some mysterious stranger named Godot, whom they hope will give their lives significance. They pass the time with small talk, little games, but Godot never comes. Two other strangers arrive named Pozzo and Lucky: Pozzo a brutish, bullying, bureaucratic type; Lucky a luckless servant, carrying Pozzo's bags, entertaining him, and occasionally even thinking for him, all on command. In the exact center of the play, Lucky delivers his only speech, a seemingly meaningless paroxym of words, pouring out and tumbling over one another with no obvious coherence, almost as if his blocked circuits suddenly were turned loose all at once and his verbal switchboard jammed with noise sounding like thought.

But you must **hear** this noise—you particularly who are interested in physical education, who still are wondering why anyone would question Simon's simplicity: no tennis players can be called artists.

> Given the existence as uttered forth in the public works of Puncher and Wattmann of a personal God quaquaquaqua with white beard quaquaquaqua outside time without extension who from the heights of divine apathis divine athambia divine aphasia loves us dearly with some exceptions for reasons unknown but time will tell and suffers like the divine Miranda with those who for reasons unknown but time will tell are plunged in torment plunged in fire whose fire flames if that continues and who can doubt it will fire the firmament that is to say blast hell to heaven so blue still and calm so calm with a calm which even though intermittent is better than nothing but not so fast and considering what is more that as a result of the labors left unfinished . . . that man in short that man in brief in spite of the strides of alimentation and defecation wastes and pines wastes and pines and concurrently simultaneously what is more for reasons unknown in spite of the strides of physical culture the practice of sports such as tennis football running cycling swimming flying floating riding gliding conating comogie skating tennis of all kinds dying flying sports

of all sorts autumn summer winter winter tennis of all kinds hockey of all sorts penicilline and succedanea in a word I resume flying gliding golf over nine and eighteen holes tennis of all sorts in a word for reasons unknown . . . that in the plains in the mountains by the seas by the rivers running water running fire the air is the same and then the earth namely the air and then the earth in the great cold the great dark the air and the earth abode of stones in the great cold alas alas in the year of their Lord six hundred and something the air the earth the sea the earth abode of stones in the great deeps the great cold on sea on land and in the air I resume for reasons unknown in spite of the tennis the facts are there but time will tell . . . in spite of the tennis the labors abandoned left unfinished graver still above of stones in a word I resume alas alas abandoned unfinished the skull the skull in Connemara in spite of the tennis the skull alas the stones Cunard (Mêlée, final vociferations) tennis . . . the stones
so calm . . Cunard . . . unfinished . . . (pages 28 and 29).

Three more times the phrase appears: "in spite of the tennis"—like a litany, almost a requiem mass.

Is it gibberish? Beckett playing with words and us? Is this his way of shaking us up and shaking us loose and never sounding serious, even when he is?

But I see it now. Beckett is only semi-tough; he is painting from within, etching feelings, leaving the surface in this ontological burlesque show. The two tramps are body and mind, know that they are somehow not separate, but waiting for some outside force to unify them, give them meaning and purpose. But Godot never comes, for it is the ultimate fiction that body and mind are separable, and the games we invent to pass the time are ludicrous obscenities if they do not confront us with this wholeness for which we do not have to wait because it is here and always has been. And Pozzo and Lucky are really the tramps institutionalized in Western culture: separating off kings and subjects, Lords and vassals, masters and servants, professors and students, male and female, mind and body, concertos and popular music, art and non-art.

The center part of the play—our play—what you call your life—is this explosion of the body, the body that speaks and thinks. And what does the body say? That God—that abstract notion of disembodied ideal authority—is dead, that theology of oppression, of superiority of one class over another is quaquaquaquaqua, that all our advances in civilization have come to an end, that all the physical culture we developed to support the commerce of that civilization has been transformed from preparation for civilization and relaxation from the business world which energized it—transformed to be only the thing itself.

Tennis, in other words, I resume, is no longer the gentleman's respite from the game of economic life. Pozzo the tyrant, the industrialist, the economist, the technician, has produced a world where man as earth—man, as physical man—as in the plains, the mountains, the seas—by rivers running water running fire—**man**—where man finally is **Lucky** to be purely and freely and bodily and only Man . . .

tennis . . the stars . . so calm . . .
you and I . . .
unfinished . . .

Now you must see that we cannot wait for Godot and that we must not sit still for any snide comment that we should prefer aesthetically Superman to Joseph K, or that a tennis player is not to be called an artist. What you call your whole being is at stake here.

Mark this well. Beauty is no longer defined by the elite. It is in fact defined by everyone for himself. Every person in this audience is an artist: an unfinished bodily being with imagination and energy (**aesthetic** and **kinesthetic**) and the future is open as it has never been in man's whole history.

Education is in crisis they tell us, jobs are scarce and conservatism is abroad in the land. Of course education is anxious! The new culture **cannot** be educated in the old way. To revert to an ancient practice of inculcating inert knowledge, attempting to graft what we now are becoming to what once was, it to prostitute our real present.

This is the age of somatic thinking, of technological magic so incredible that it will free us from the struggle for survival and force us to face the world of leisure, of imagination, of play. Or to say it directly again, the culture of the future will be a physical culture: of games to produce human ecstasy, of dance to express erotic relationship, of sports to induce gentle communality, of metaphysical muscle tone, of voices and instruments blending with the earth and reaching to the stars—haunting hymns of let it be, of everything which is natural, which is infinite, which is yes. "We are the material of the universe coming alive. We are God re-creating himself." So wrote science-fiction author Ray Bradbury. And William Thompson had these thoughts at the liftoff of Apollo 17:

> You threw away anxiety and leapt up with the sheer joy of knowing that men were turning the tables on the heavens and riding that comet out of the earth . . . One could write on the rocket as the anonymous stonemasons did on medieval cathedrals: Adam made me. (**Time**, January 1, 1973, p. 51).

So there you have it, or it has you. You can forget it of course and try to pretend that things are just like they were. But I hope you will go back to wherever you are and at least add some graffiti to the old culture signs hanging around in acrid gyms signs like "When the going gets tough, the tough get going," "We play them one at a time." "Show me a good loser and I'll show you a loser." Find a gameroom somewhere and on each wall write in succession:

I would only believe in a God who dances
I am my body
Let us leave the surface and without leaving the world plunge into God
Damn everything but the circus

And if anyone in authority asks for an explanation just tell them that tennis players can be artists. And so can physical educators.

Athletics are not Physical Education

DOUGLAS C. WISEMAN
Plymouth State College

I suspect that the title, **Athletics are not Physical Education**, has tones of heresy to some of you attending this session. Nevertheless, at the risk of accelerating some heart rates, supervening your synapses or, perhaps, being thought of as amusing, I would like to reflect upon a few selected observations I have made which point out the rather dichotomous relationship that I see between athletics—a program for the atypical, and physical education—a program for all.

One aim of physical education is to develop within individuals all of which they are capable of becoming—capable of becoming through physical, mental, social, and emotional elements. The medium for this transition is through appropriate and diversified activities selected according to needs, interests, and process capabilities. On the other hand, the program of athletics aims to nurture those unique and special talents which already exist so that victory in competition can become eminent. The students are different, the process is different, the program is different and, in short, the reasons for the program even existing are different. Evolving from these differences are many issues. At the risk of appearing presumptuous, however, I would like to focus on **five** (5) of these—the **five** (5) that appear dominant in my mind (at least at this point in time).

Publicity. Virtually every newspaper includes a sports' section. This sports' section reports upon contests coming up, contests gone by, or perhaps just advertises athletic departments. Here we have recorded for history all the great accomplishments of the super "starters" and the super "subs". It is apparent to me that this proposes a vivid distinction between programs of athletics and programs of physical education. Seldom, if ever, are there public accounts of and recognition given to individuals who are only in physical education classes except, perhaps, within the walls of a class. Further, the readers of newspaper accounts often equate, in ignorance, the physical education program content with that of the extramural program—a relationship which, at best, is ludicrous.

Awards and Recognition. Here we have a second issue inherent to the distinction between athletics and physical education. Specifically, athletes (1) receive medals, trophies, and other accolades of varying dimensions; (2) have the best chance for popularity among peers; i.e., receive status, become "heroes", get the most attractive girls to vie for their attention, etc.; and (3) have the best chance, with other things being equal, to meet college or job "entrance requirements". On the other hand, students in physical education classes most often receive none of these options for themselves even though they may have surpassed by far any teacher- or self-imposed objectives.

Compensation. It is atypical if coaches in the public schools do not receive extra financial compensation for coaching. It is not far from atypical, however, for them to "throw the ball out" so that they can go into their offices during "should be" class time in order to prepare inordinate practice and/or game programs. The true educator, however, in order to do his preparations, must wait until school is no longer in session unless he is blessed with appropriate planning periods.

Further, it is not unlikely for the coach to receive additional gratuity if his team wins a championship. The physical education teacher, however, receives nothing even though his class may have far exceeded all expectations set for it. Is this justice? Assuming that receiving money or other compensation is in some way gratifying, it is no wonder that the classroom teacher often "gives in" and "ends up" prostituting his principles in order to hyperprepare for some athletic team.

Yes, athletics and physical education are different; they are **unalike.** Athletics are not physical education.

Speaking to the issue of **planning,** coaches have two-to three-hour practice sessions at least **five** (5) days per week during the season. They have three-dimensional play books, scouting charts, 8 mm film, "Super" 8 mm film, and/or 16 mm film, as well as audio and video tape decks. Further, to have these resources is common. Contrary to this is the physical education teacher who is fortunate if he is able to meet with his students for **two** (2) fifty-minute periods per week during a unit of instruction, let alone the use of motion picture film and video tape except in rare circumstances where he "insures" results and, further, has managed to sign up for its use **two** (2) weeks in advance.

Finally, the fifth of my concerns is **motivation.** Motivation comes easy to athletes. In physical education classes, motivation is largely extrinsic. For athletes, it is intrinsic. Indeed, they are "captive". Why? Probably because of the first four issues that I discussed; they will get publicity, receive jackets and trophies, get individualized instruction, and have the benefit of updated technical equipment. The coach will bar no holds in order to achieve excellence, and the athlete knows it. Is it not understandable that athletes make for a prime audience.

It seems to me that if it can be assumed the both programs are equally important, we must, all of us—coaches and physical educationists, come together in dialogue and focus, not on program differences as reflected in this paper, but on where the programs are alike—perhaps where each can complement the other. It is my opinion that, unless we do so, the physical education program will eventually dissolve; there will be nothing but inter- and intramural teams; diversified activities will be learned by chance; and to be able to set the stage for individuals to become all they are capable of becoming will be more a fantasy than it is now.

There are more issues to discuss regarding this subject than have been presented here. At best, I have been superficial. However, my motive is obvious—there must be a framework established for a formal review of our policies and practices. If athletics are to be a part or an outgrowth of physical education, we must re-evaluate the programs that are being promoted at this time, and re-educate the practioners therein. If, on the other hand, athletics should **not** be a part of physical education insofar as product and process philosophy are concerned, then let's say so. Without this approach, it may well be said that we didn't **solve** the problem, all we did was bid it **goodbye**.

Intercollegiate Athletics Is There No Way to Live With It?

EDWARD OLSON
Texas Wesleyan College

It was a bit difficult to anticipate exactly what Dr. Wiseman was going to say. The title of his talk in part indicated that some comment on my part about his was necessary.

One could take two attitudes here: A. Agree with the premise that athletics are not physical education, and then argue that the two need to live together anyway, or B. Disagree with the premise, and proceed to a philosophical treatise on the common traits of both.

Attitude A requires the construction of an administrative fortress not now in existence to be a very realistic attitude. All around us the separation of the two areas, athletics and physical education, is occurring. Large universities have completely severed any administrative ties between the two departments; many small colleges either follow suit, or worse, have combined departments on paper but in actual practice keep the two functions from ever working together.

Large city school systems who can afford it have the coaches do no teaching of physical education and the physical educators do no coaching of athletic teams. Our physical education leaders have apparently accepted Dr. Wiseman's premise and rejected the idea that any administrative structure can house the two harmoniously.

But one group has not, and that group is the women physical educators. They have devised an organization that is attempting to make the old triangle principle live. It is called the AIAW, the Association of Intercollegiate Athletics For Women.

At the risk of being too presumptious this morning, I would like to propose that the men look very seriously at what the women are doing and begin considering a similar approach for ouselves. A couple of years ago Jim Ewers gave a talk here entitled "Move Over Men, The Women Are Coming." Perhaps we shouldn't move over, but climb onto their laps. What would you think of an AIAP, the Association of Intercollegiate Athletics for Persons. The title is facetious, but the idea is one about which I'm very serious.

The Association of Intercollegiate Athletics for Women is quite new, having come into existence only two years ago, as the administrative arm of the DGWS, essentially to promote national championships within the framework of certain philosophical positions regarding women's competition. AIAW has a long way to go before it will be organizationally sound, but I submit that it is quite sound philosophically and will therefore do a real service for the field of physical education and athletics over the long run—if in no other way but to keep the two together.

I alluded to an Attitude B earlier, to the effect that one needs to agree that athletics are physical education. The dilemmas that Dr. Wiseman cited are very real, but one transcending idea, it seems to me, overrides these problems. The idea is that we are educators dealing with people. We are dealing with their lives as they experience themselves in movement. The type of movement, the form of movement, the intensity of involvement, all are part of our role in helping the person come to a better understanding of himself. It matters not whether we are helping a novice or a genius, as long as our goal is that individual's welfare, explicitly, intrinsically and humanistically, we are "physically educating." The idea of helping them in these ways lies at the core of the difference between educational athletics and entertainment athletics. It is here that the "big-time" programs have an awfully difficult time remaining as part of the physical education program. Their concern simply is with goals other than the intrinsic worth of the individual student.

Some of the policies of the women's group, the AIAW, I believe, have dealt directly with the complex task of making athletics a part of physical education.

Among their most important policy statements is the one regarding athletic grants or scholarships.

> "The Division for Girls and Women's Sports does not approve of awarding scholarships, financial awards, or of giving financial assistance designated for women participants in intercollegiate sports competition. This position is intended not to diminish, but to protect, the continued development of athletics for women. The purpose of this statement of belief is to discourage the buying or retaining of athletic talent by any college or university. Financial assistance includes any gift or gain presented prior to, or during, enrollment and/or attendance at the institution. This does not prohibit academic or economic-need scholarships but includes "talent" scholarships awarded to

those whose talent is athletic in nature. DGWS believes that women in sports should choose their college or university on the basis of its academic worth and not be influenced by monetary gain because of an athletic program. Once an individual arrives on the campus of her choice, it is the earnest desire of the DGWS that a broadly diversified program of sound, educationally based athletic and recreational experiences be available to her. We believe these quality programs and experiences flourish in an environment free from pressure recruiting and performer exploitation that so often accompany the general availability of athletic scholarships.

This does not prohibit academic or economic-need scholarships awarded in open market competition with the general student population."[1]

This statement is a landmark one in that it attempts to restrict subsidization and recruitment on a national level, and to restrict it severely. Perhaps the amateur ideal is dead, but if it is, then many of us have been yelling at ghosts. Educational athletics versus entertainment athletics is the question, and the AIAW is dealing with it very explicitly.

Admittedly, they've got some problems. They run into the same problems that men's conferences have run into that have similar guidelines, primarily need-scholarships and/or work-grants. Coaches will manuever it, college presidents will misunderstand policies, and athletic directors will conveniently overlook indiscretions.

But the time is ripe to try it—to get off the dime—in which we sit in our theory classes and graduate seminars and preach against the system now known as intercollegiate athletics. It is time to bring it back under the umbrella of Physical Education, and administer it as part of our total task.

The time is ripe due to at least three factors:

1) College presidents are putting the financial pressure on the athletic directors to hold down costs.
2) Students have become more enlightened about what their college ought to be doing for them, and are demanding broader, more participatory, athletic programs.
3) We now have a national organization with the machinery already in use to erect the kind of structure necessary to have democratic and educational intercollegiate athletics.

I really do not have the time to detail the approaches or policies that could be developed if such a move were taken. It seems to me that the role of the NCPEAM is to discuss the philosophical foundations for such an organization and in this way get the ball rolling toward its eventual development.

There are certain issues that need real thought; they need the microscope of the philosopher put on them. Allow me to suggest a few:

1) Why "nationalize."

   My old Ohio State friends who knew me as a political libertarian (they would call it conservative) may be surprised to hear me advocate a strong national control as opposed to local control. But having tried to administer an athletic program for six years, I have come to a belief that national control is the only realistic way. The most important *reason* is philosophical direction. Only when guidelines come from highly respected sources do most college presidents make crucial changes; be it NCATE, or NCAA, or, hopefully, AAHPER.

College athletics are national in scope and this has some real merit educationally. But this fosters unequal competition as well as all the forces of pseudo-pride involved in national polls and championships. It seems to me that only a national administrative body can control the problems here.

2) Why an arm of the AAHPER?

   Personally, I think the NCAA or the NAIA are better organized to do it, the

[1] The Division for Girls and Women's Sports. **Philosophy and Standards for Girls and Women's Sports.** rev. ed. 1972. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1972.

problem is more one of tradition and philosophical clarity. Both of these groups have for many years dealt only with intercollegiate athletics and from a standpoint of local autonomy. Both are now making real noises away from this approach, but it is hard for them. The AAHPER could focus the emphasis on making intercollegiate athletics a part of the total school physical education program. It could include all school programs, not just higher education. This, it seems to me, is vital to the ultimate success of the idea. These two factors, the integration of physical education and athletics, and the construction of a total administrative program from junior high thru college, are the proteins on which we must build.

3) What are the crucial policy statements that need to be made?

a. Should athletic scholarships or grants be ruled out totally?

The most telling argument against this has been that the underprivileged youngster is given the opportunity to go to college. Even the women are entertaining compromise ideas on this. Jo Ann Thorpe recently noted that a non-scholarship policy penalizes physical education majors, while other areas like art and music continue to benefit from their "special talent" awards.

Perhaps the only answer lies in weighing the effects of recruiting, which is at the heart of the problem.

b. Should off-campus recruiting by coaches be ruled out?

Johnny Wooden recently stated that he favored very strict limits on recruiting—no paid visits, work through the normal college admissions office, to cite two. The problem is that the Johnny Woodens of the world have arrived. They attract without recruiting. This in itself is not serious, if only the basketball coach were involved, but in many small colleges, the life of the college itself is at stake. Recruiting is an all-college, all-faculty task. Every professor has the responsibility of selling the college to prospects. State schools, especially large prestigious ones, don't have this fact of existence threatening them.

In spite of these arguments, I firmly believe that recruiting could be more effectively done by a single campus office, non-athletic in structure, reporting to the college president, which would seek out students of all types, not only athletes. This office would cost a small college no more than they now spend on an extra coach or two, who does mostly recruiting. College presidents have not examined this question closely enough and have been sold a bill of goods by the athletic departments. In this light, a firm policy by the AAHPER with suggested approaches would be informational as well as workable.

c. Should the length of the season be circumscribed at both high school and college levels?

The DGWS suggested certain season lengths, like 12 weeks for basketball including practices. My personal view is that specialization before the college level is a travesty of educational athletics. Some state high school athletic associations seem afraid to set firm policies to guarantee that football won't run all year long, or tennis, or whatever. It will take a national thrust to get rid of "Spring Football Practice." Who better than the AAHPER to make it happen?

I'm ambivalent on prescribing the college season. There seems to be some justification for specialization at this age-level—for the intense concentration on excellence implied by a college program. I would be interested in hearing the opinions of this audience on this question.

d. Should state championships, all-state teams, etc. be counter-recommended at the high school level?

Williams and Oberteuffer and others of that sacred lot often cautioned against this practice, but it is hard to overcome. The press force it on us, the parents love it and demand it, and the students may

even rebel for it. But the distortion of values and self-concept has no greater catalyst than this one. This is one of those monumental problems that only a national campaign can solve. People must be given counter-information and educated to understand the need for moderation and context in school athletics. The AAHPER is using the PEPI organization to educate the nation and publicize educational ideas. Why not put the same thrust into the effort to make intercollegiate and interscholastic athletics more intelligible?

e What should be the policy regarding women on men's teams?

The policy of the AIAW now is against this practice unless no women's program can be established. This is often hard for people like Gladys Heldman of **World Tennis** to understand, who deal only with the super girl athlete. But it is sound for the long haul and I hope that the AIAW will courageously fight for it, as well as the more important answer, which is sound, diversified women's athletic programs.

f Should not all transfer ineligibility rules be discarded?

The AIAW has no "sit-out" rule, which is unfathomable to many men coaches. Their immediate reaction is that great thefts of student athletes will occur from one school to another. The NCAA clings to their one-year sit-out rule and the NAIA has an 18-week transfer ineligibility rule. This policy question really pinpoints the complexity of the ask. If recruiting, scholarships, and all other problems are brought into perspective, and if physical educators take control of interscholastic athletics, and if the nation is educated to the real goals of competitive sports, THEN the question of transfers being eligible is obvious.

In this talk I wanted to stimulate your thoughts to considering the possibilities of constructing a new national organization to control men's athletics from elementary school to college. My suggestion is to build it on the foundation laid by the women; i.e., to use the AAHPER as the prestigious and educationally grounded home base, and build policies strictly in keeping with sound educational principles.

Many of you will say it cannot possibly work. The AIAW is alright for the women because they have no NCAA, no traditions, no community power structures, to compete with. I have no doubt that this argument is valid, but it is not unconquerable.

The first step is here at the philosophical level, the NCPEAM. Please kick the idea around. There must be a solution somewhere. Let's not continue to let athletics drift away from physical education. We can live together. We must.

An Analysis of Achievement of Selected Groups of Duke University Graduates

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INTRODUCTION

This study is concerned with undergraduate and post-graduate achievement of three groups of Duke graduates. The undergraduate achievements to be observed is the

American College of Education Aptitude test; quality point ratio and the Duke activity achievement. The post-Duke achievement to be observed is occupation, salary, post-Duke activity, and advanced degrees earned. The sample of Duke graduates will include a sample of athletes, a sample of Phi Beta Kappans, and a random sample of students that are neither Phi Beta Kappans or athletes. This study examines the achievement of the three groups and makes selected comparisons between the groups.

There are some vague attitudes about the relationship of students' achievements at college and their relationship to achievements after college that need to be explored. One of the important achievement factors that needs to be looked at is the importance of grades. The consequences of high or low grades are important to students for admission to further education (i.e. law, medical or graduate school.) Grades are important to school officials who make numerous and important decisions affecting the students' educational experiences (i.e. academic probation, dismissal and special curriculum availability, like independent study.) Grades are important to employers who must determine the contribution the graduates will make.

There are some who would believe that the activities participated in during the undergraduate years will be as important as grades, if not more important. Will the "super" athlete achieve higher because of his exposure to the high level of competition on the playing field?

This study will help to give some solid facts about the level of achievement in college and ten years after graduation. It is hoped that these facts will help to understand the achievement level of the three groups studied and the interrelationship of the achievement variables.

METHOD

A questionnaire was sent to all Phi Beta Kappas, athletes and a random sample of students in neither catagory who had graduated in 1959, 1960 and 1961. Returns were received from sixty five percent (183) of the total population.

The data was analyzed at the Duke Computer Center suing three statistical procedures. A one way analysis of variance was used to measure the variance of the mean score for the three groups on all variables. A correlation coefficient was performed to determine the relationship of undergraduate achievement to post-graduate achievement. A multiple regression analysis was used to see if the three undergraduate achievement scores, used as one score, could predict post-graduate achievement.

All hypothesis were stated as null hypothesis for statistical rejection or acceptance.

DEFINITION OF TERMS

The definition of the terms are to help the reader to understand the main body of the text. Some of the terms will be abbreviated in the body of the reports as shown in the definitions.

Quality Point Ratio—The quality points earned divided by the number of course credit hours received. To be designated as Q.P.R. in the main body of the text.

American Council on Education—A test given to entering college freshmen to help predict academic achievements. The two tests used in this study were linguistic and quantitative. The test will be referred to as A.C.E. in the main body of the text.

Duke Activity Scale—The score for activities participated in while an undergraduate at Duke.

Salary—The total annual earned income of the individual. The following are the numerical classifications. 1 = $6,000-$9,999; 2 = $10,000-$14,999; 3 = $15,000-$19,999; 4 = $20,000-$24,999; 5 = $25,000-$29,999; 6 = $30,000-$50,000; 7 = over $50,000.

Occupational Level—The occupational level was determined by a socio-

economic ranking from the United States Bureau of Census (United States Bureau of Census, 1963). The catagories were professions, managers, sales, craftsmen, operatives, service workers, and laborers.

Post-Duke Activity Scale—The number of civic, church or political activities engaged in ten years after graduation.

Athletes—Those on full athletic grant-in-aid that graduated in 1959, 1960 or 1961.

General Students—A random selection of Duke graduates from the classes of 1959, 1960 or 1961 who were neither Phi Beta Kappas or grant-in-aid athletes.

Phi Beta Kappa—A student who is admitted to the Phi Beta Kappan fraternal organization, which recognizes a superior level of academic performance. This will be referred to as P.B.K. in the main text.

SUMMARY AND DISCUSSION

Within the limits of this study it is concluded:

1) that there is no significant difference in the mean level of academic aptitude is rejected.
2) that there is no significant difference in the mean level of the quality point ratio for the three groups is rejected.
3) that there is no significant difference in the mean level of the Duke activity scale for the three groups is rejected.
4) that there is no significant difference in the mean level of salary for the three groups is accepted.
5) that there is no significant difference in the mean level of occupation for the three groups is rejected.
6) that there is no significant difference in the mean level of post-Duke activity for the three groups is accepted.
7) that there is no significant difference in the mean level of advanced degrees achieved is rejected.
8) that there is no significant relationship between the achievements at Duke, measured by quality point ratio, to achievement ten years after graduation as measured by:
    1) occupation is accepted
    2) salary is accepted
    3) post-Duke activity is accepted
    4) advanced degrees earned is rejected
9) that there is no significant relationship between the achievement at Duke, measured by the Duke activity scale, and achievement ten years after graduation, measured by:
    1) occupation is accepted
    2) salary is accepted
    3) post-Duke activity is rejected
    4) advanced degrees earned is rejected
10) that there is no significant relationship to the entering aptitude score (A.C.E.) to the achievement at Duke, measured by quality point ratio and the Duke activity scale is rejected.
11) that there is no significant relationship to the aptitude score (A.C.E.) and to achievement ten years after graduation, measured by:
    1) occupation is rejected
    2) salary is accepted
    3) post-Duke activity is accepted
    4) advanced degrees earned is rejected
12) that there is no significant relationship to aptitude score (A.C.E.) and achievement at Duke to achievement ten years after graduation, measured by:
    1) occupation is accepted
    2) salary is accepted
    3) post-Duke activity is rejected

4) advanced degrees earned is rejected

The three groups of Phi Beta Kappas, athletes and general students are similar in some ways yet vary in other ways. The following will describe their association or disassociation.

Undergraduate Achievement

The achievement of the groups while undergraduate students does appear to indicate a difference in the three groups. P.B.K.'s entered Duke with higher aptitude scores, achieved higher Q.P.R.'s, about 3.4, and were involved in more undergraduate activities. The general students entered Duke with a lower aptitude score than the P.B.K.'s, yet their score was higher than the athletic group. They earned about a 2.5 Q.P.R. and participated in the least number of student activities. Athletes entered Duke with the lowest aptitude scores of all three groups, yet earned about a 2.3 Q.P.R. and participated in more student activities than the general group.

Post-Graduate Achievement

The post-graduate achievements indicate some similarities between the three groups. The P.B.K.'s do achieve higher occupation levels and earn more advanced degrees. Occupational differences could be attributed to the various types of high ranked socio-economic professions which P.B.K.'s tend to enter. Professions tend to score very high on the socio-economic scale. The lower level of the athletes in the occupational rating could be attributed to their tendency to go into sales or related fields which score lower on the socio-economic scale. None of the athletes in this sample were active participants in professional sports at the time of this study. It should be noted that none of the three groups had a mean level score below seventy and that eighty-nine percent of the total sample was above 81 and sixty percent of the total sample was above 91. The findings are similar to Whitley (1971).

The variance of advanced degrees between the three groups appears to indicate that those with high academic undergraduate achievement tend to achieve significantly more advanced degrees. This is not an unexpected observation, because graduate schools tend to make grades an important factor in the acceptance of those applying for graduate school. Therefore, if an individual earns a graduate degree he would very likely have high undergraduate grades. The difference between the number of advanced degrees earned by general students and athletes is very small. The type of degrees achieved are of interest. (Table 7A). Athletes earned primarily master degrees with forty-two percent receiving master degrees and only ten percent earning a Doctorate of Philosophy (Ph.D.), Medical Doctorate (M.D.) or Jurist Doctorate (J.D.) degree. The general students had thirty-four percent earning master degrees while thirty-eight percent earned a Ph.D., M.D. or J.D. degree. The outstanding achievement of the P.B.K.'s shows that seventeen percent earned master degrees while sixty-five percent earned a Ph.D., M.D. or J.D. degree.

Perhaps the most interesting comparison is between advanced degrees earned in the total sample of Duke graduates with the graduates of all other institutions. Seventy-four percent of the sample of Duke graduates earned graduate degrees, while thirty-one percent of all other graduates earned graduate degrees.[1] Each Duke group was higher than the United States percentage. Eighty-five percent of P.B.K.'s earned graduate degrees, while seventy-three percent of the general students and fifty-three percent of athletes earned graduate degrees.

Although P.B.K.'s did earn more advanced degrees and score higher on the occupation scale, there was no significant difference between the groups in the mean level of salary earned or post-Duke achievement. The athletes as a group had a slightly higher mean salary than the P.B.K.'s or general students, but not enough to be significant. All three groups had the highest percent of individuals in the $15,000 to $19,999 catagory. All salary levels were very similar when the percent of individuals at each level was compared. (Table 4A). Seventy-eight percent of the total sample was above $15,000, fifty-two percent was above $20,000 and thirty-

[1]Computed from United States Office of Education, Digest of Educational Statistics, 1971 using the average number of undergraduate degrees granted between 1960 and 1970 and the average number of master, Ph.D., M.D. and J.D. degrees granted between 1960-70

six percent was above $25,000 per year. The salary level of this sample of Duke students is high when compared with the national mean salary of $12,938 for those with four or more years of college.[2]

The post-Duke achievement indicated that athletes were slightly more active in the community than P.B.K.'s or general students, however, there was not a significant difference. It is possible that athletes, which tend to go into sales, tend to be involved in community activities because of the nature of their occupations. Interestingly enough was the activity of the P.B.K.'s and general students who were not primarily in sales or related positions but still were active in community affairs.

Relationship of Undergraduate Achievement with Post-Graduate Achievement

Comparisons between the three groups have been shown, but what is the relationship of undergraduate achievement to post-graduate achievement? The entering aptitude score (A.C.E.) seems to be the best predictor of post-graduate achievement. The correlation of A.C.E. to advanced degrees earned and occupation level were significant. Those with higher A.C.E. scores tend to earn more advanced degrees and enter higher occupational levels. There was a very small, but not significant, relationship between the A.C.E. score, post-Duke activity and salary.

Quality point ratio continues the theme of academic achievement enhancing further academic achievement. The only significant correlation the Q.P.R. had was to the number of advanced degrees received. There was a small relationship, but not significant, between the Q.P.R. score, post-Duke activity, salary, and occupation level.

Duke activity did show a significant relationship to two post-Duke achievement scales. Not only was it related to the number of advanced degrees earned, as was Q.P.R. and A.C.E., but there was a significant correlation to post-Duke activity. Those that were active at Duke tend to be active in community affairs and earn more advanced degrees. There was a small relationship to salary and occupational level achieved but it was not significant.

It can be said that 95 times out of 100 Q.P.R. or Duke achievement variables will not predict either salary or occupation level. At the same time 95 times out of 100 the three variables of A.C.E., Q.P.R. and Duke activity will predict a higher number of advanced degrees earned.

The variables of A.C.E., Q.P.R. and Duke activity appeared to have a significant correlation to each other. All three scores were then used as a single predictor of each of the post-Duke variables. A multiple regression analysis shows that 95 times out of 100 the variables cannot predict salary and occupation level. The three variables will predict post-Duke activity level and advanced degrees earned 95 times out of 100.

It can be seen that this sample of Duke students do achieve and achieve at a high level. Perhaps one of the reasons for this high level of achievement can be attributed to some data not shown in the statistical chapter, the level of father's education. (Table 13). The data seems to support the findings of Jewell and Shah (1968). Fifty-four percent of the fathers in the total sample graduate from college and thirty-three percent of them did graduate work. Specifically sixty percent of the P.B.K.'s fathers graduated from college and thirty-eight percent went on for graduate work. Fifty-seven percent of the general students' fathers graduated from college and thirty-one percent went on for graduate work. Only twenty-nine percent of the athletes' fathers graduated from college but twenty-six percent did do graduate work. At the other end of the level of education attained by fathers it can be seen that fifteen percent of the P.B.K.'s fathers were high school graduates or less. Thirty-two percent of the general students' fathers were high school graduates or less. The athletes had over half of their fathers or fifty-three percent who were high school graduates or less. Although this study was not concerned with the characteristics of the individual's home life or environment, there does appear to be some relationship between the father's level of academic achievement and their son's academic achievement. Those students whose fathers achieved the

[2]Figures were obtained from United States Social and Economic Statistics Administration, 1972

highest level of education went on to achieve the largest number of advanced degrees and the highest level of advanced degrees. Those whose fathers achieved the lowest level of education achieved the least number of advanced degrees and the lowest level of advanced degrees earned.

The pattern of academic achievement seems to start long before college, perhaps it is genetic or environmental. But one thing for sure, academic achievement begets more academic achievement.

What are the important things about achievement for the three groups? No generalization can be made about any groups except the population in this study. This study group is a unique group because they did pass high standards for admissions and all of the population of the study graduated.

From the evidence of this study it can be seen that the groups do achieve at a high level. Why? Perhaps because of their intelligence. Heckhausen (1967) says, "As a rule findings do not reveal statistically significant correlation between achievement motivation and intelligence test scores."

Perhaps athletes achieved because of their athletic competition. McClelland (1961) says, "By definition people with a high level of **n** achievement show much inner concern with doing something well, with striving to achieve or surpass some standard of excellence. Shouldn't they then be interested in competitive games where they have a chance to achieve (or watch others achieve) standards of excellence?"

Perhaps Duke students as a group achieve because of the nature of Duke as an institution. Chickering (1971) says about selective schools like Duke:

> "... under current patterns of recruitment and admissions, and in the context of current practices in higher education, the most productive educational outcome for individuals and for the country takes place in those nonselective colleges where proportous of misfits are high and where they are recognized and helped. Selective colleges, which by their selectivity can function **in loco uteri** for most of their students and which remain content to do so, contribute least."

Perhaps the reasons for achievement are based upon the ultimate **n** achievement level of the individual, explained by McClelland (1969). He states that those with a high **n** achievement have the following characteristics:

1) They tend to set moderate goals for themselves and to work harder when the chance to succeed is only moderately great. When the task is too easy they don't work hard because there is no sense of achievement.
2) Men with hign **n** achievement prefer to work in situations which they can take personal responsibility for the performance necessary to achieve a goal.
3) High **n** achievement persons like to get feedback as to how well they are doing. they are responsive to concrete feedback. This may be one of the reasons why men with high **n** gravitate to business.
4) Those with high **n** achievement typically show more initiative in researching their environment. They travel around more and they generally try out more new things. They tend to test.

Men with high **n** achievement would prefer to wire a radio rather than write a term paper. The difference being that a paper needs to be graded by a teacher. When the man wires a radio he knows that he alone is responsible, in contrast the grade on the paper written may appear a lot less direct and specific to him (McClelland, 1969).

"Doctors, lawyers, and ministers all receive feedback of some kind on how well they are doing. but usually it just tells them whether they are behaving appropriately, not whether they are actually getting results." (McClelland, 1969).

Eminent scientists do not score high in **n** achievement, perhaps because they have been willing to wait for long periods of time without getting concrete feedback on how well they are doing. Politicians are known to have a need for power, and it is likely that generals have too. At any rate the empirical data clearly shows that only the salesmen—entrepreneur have a higher average score on the **n** achievement. (McClelland, 1969).

McClelland (1969) states that "actual achievement by itself cannot be considered a safe index of the need to achieve. In fact actual achievement is controlled by many forces—desire for social approval, power or knowledge—to say nothing of ability factors."

What causes a person to achieve after college graduation is very difficult to find out, but this study does show what other studies have shown. Studies of Thorndike and Hagen (1959), Richards, Taylor and Price (1962), Holland and Nichols (1964), Hoyt (1965) and Husband (1957), show that the relationship between real life achievement and academic potential or achievement are typically very small.

This study shows that being an athlete, or Phi Beta Kappa or neither will have a very small relationship to financial achievement or how active you are in the community, but could have a very high relationship to the occupational level you achieve and very probably a very high relationship to the number of advanced degrees earned.

Perhaps the thing that stands out most of all in the study is that high grades are basically a preparation for more academic education. High grades or low grades do not necessarily predict what a person will achieve, they merely tell what a person knows. If colleges are looking for students that will achieve after graduation perhaps they need to look at other factors besides academic potential, tests and grades

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William Andrus Alcott, M.D. Pioneer Reformer in Physical Education 1798-1859

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In March, 1859, William A. Alcott died after having dedicated his life to improving the condition of his fellow men through unbelievable productivity in the fields of education, medicine, and journalism. This man wrote 108 volumes (31 of which deal directly or indirectly with physical education, health, physiology, and anatomy), was a reformer of educational facilities, a pioneer in educational concepts, a doctor of medicine, president of the American Physiology Society, a lecturer, and a journalist and editor of several journals; and yet he remains relatively anonymous.

There are no studies known to be in existence on the life of William Andrus Alcott. And yet a period in the history of physical education which to date was considered a dead period now has new life because of Alcott's efforts to inform and teach men about the healthful way to live—proper diet, dress, bathing habits, exercise patterns, and temperance. He was, in fact, the forerunner of the medical era that began with Edward Hitchcock in 1861 at Amhurst College. His broad concept of physical education included an individual approach which necessitated self-knowledge, self-dependence, and self-discipline. This approach was revolutionary to the educational system as well as to the individuals who composed his society. His philosophy of "educating the whole man" included the statement,

> The value of physical culture is now admitted by all who have acquired correct views of education; and the practice of various gymnastic seminaries is now demonstrating anew the natural and intimate relations and dependence of the three grand divisions of education—physical, mental, and moral—teaching us that the preservation of improvement of the animal system must constitute the basis of every plan of education, which is capable of meliorating the condition of our race.[1]

It is written in the **Dictionary of American Biography** that William A. Alcott was a pioneer and reformer in physical education.[2] Physical education and the health habits and code of the time were so negligible, as far as structure and purpose was concerned, that efforts in this regard were novel. The purpose of this paper is to consider William Alcott as a pioneer and reformer in physical education during the decades in which he lived and to suggest his contributions to a period considered by some to be devoid of initiative in physical education.

William Alcott's basic hypothesis was the development of the individual toward a balance of his intellectual, moral, and physical attributes. The ideal was that the moral sphere be developed to the point of automatic reference for the

[1]William Alcott. "Progress of Physical Education," **American Journal of Education**, I (January, 1826), 21

[2]**Dictionary of American Biography**, ed Allen Johnson (New York: Charles Scribner's Sons, 1956), I, 142-43

mental and emotional. As these three spheres became synchronized with nature, strength of character would result and one would be better able to contribute to the world about him and to realize his mission here on earth while earning his reward in the hereafter.[1] Service was the key to Alcott's life; dedication was the vehicle, and the betterment of his fellow man was the goal. Alcott's statement regarding reform was, "The redemption of the intellectual and moral world and the physical conditions of mankind must proceed together."[2]

William Alcott was born to John and Anna Alcott, a farm family in Wolcott, Connecticut, August 6, 1798. His family heritage was carved deeply in New England tradition.

William began school at the age of four and attended for three or four months each winter and for two months during the summer. The remainder of the year he spent attending to farm chores. In his eighteenth year he was approached to take a teaching job in the town of Wolcott, Connecticut. He accepted the position and thus began a career that became his first love.

After four years of teaching, several of his innovations could be plainly seen. Meaningful advancements were made in methods of teaching spelling, reading, writing, arithmetic, grammar and geography. His approach was to encourage use of reason, ingenuity, and perceptual insight. This was a break from the traditional methods of rote-memory and limiting mental inquiry to extrinsic measurement. Alcott believed the object of education should be to prepare man for the duties of life. This required a sensitive heart, an intellectual mind, and a physical constitution to execute the purposes at hand. He thought the teacher should dedicate himself to challenging each of his students to reach his fullest potential. He became determined to "warm the heart as well as fill the head; and to elevate and direct the affections, as well as enlighten the understanding."[3]

He became "wholly devoted to reforming the school."[4] He changed the school building construction with ventilation through the top portion of the building and windows that opened. He had backs put on the school benches and brought flowers and plants to study—as well as for a more cheerful environment. Maps were hung, sports activities for children were encouraged, and organized play was instituted during an expanded recess.

At the age of twenty-six Alcott accepted a teaching position at Central School, Bristol, Connecticut and began to study medicine so that the could gain a knowledge of physiology ahd the laws of health and resort to practicing medicine if his constitution prevented him from teaching. In addition, he had "always anxiously desired a liberal course of education, but had been denied by poverty the opportunity of procuring it."[5] He stated,

> Indeed this school keeping was always nearest my heart. I had only resorted to another profession as a discipline to my mind, and that I might have, as the common saying is, 'two strings to my bow,—that is, that I might have, as a last resort, and in case of necessity the benefits of a profession which though respectable I knew I could never love."[6]

During the next winter he attended a regular course of lectures at Yale Medical School in New Haven, and the following March he received a diploma to practice medicine and surgery.

Alcott was instrumental in raising standards of qualifying exams for teaching positions. The opposition was fierce; but finally a licensing board was established to evaluate each teacher's qualifications. Alcott continued his employment on the county level—working for an elevated set of standards for teachers, curriculum, facilities, and state law. He discontinued teaching and, with his administrative duties to the county, began an additional career in journalism.

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[1] **Annals of Education**, ed William A Alcott II No 4 (April 1, 1832), 155
[2] **Ibid**, II No 3 (March 1832) 53
[3] William A Alcott **Confessions of a Schoolmaster** (Andover, Mass Gould, Newman and Saxton, 1839) p 170
[4] **Ibid**, p 153
[5] **Ibid** p 181
[6] **Ibid** p 198

In 1826 Alcott wrote an article, "The Progress of Physical Education" to encourage the establishment of physical exercise and recreation in all public schools. This article was one of the earlisest devoted to physical education in connection with public education. He stated,

> The subject is sufficiently important to warrant the establishment of schools for bodily exercise which might confer on our youth all the substantial benefits of the ancient gymnasia. The time we hope is near, when there will be no literary institution unprovided with the proper means of healthful exercise and innocent recreation and when literary men shall cease to be distinguished by a pallid countenance and a wasted body. Of all the expedients that have been proposed for winning the young from habits of idleness and dissipation, none seems to us more promising than the gymnasium.[9]

Alcott believed that physical education included good grooming and bodily care as well as physical exercise. He stressed the role that the public schools should take in the form of leadership in health education. He felt that physical exercise was a needed break from the monotony of classroom routine. The recreation periods he had introduced as a teacher had immediate positive results. And his study of medicine re-emphasized the indispensable part physical fitness played in the overall mental and emotional output of man. Alcott lamented over the fact that the imbalance of all work and no play as a child had produced his frail physical condition. His ideal in education was to administer to the needs of the "whole" person.

Alcott's concept of physical education was broad in scope. It included proper diet (mostly vegetarian), proper sleep (six to eight hours per night), the understanding of physiology and anatomy, exercise (of vigorous nature and mild to recovery), proper health concepts, a no-medicine philosophy that led man to the dictates of nature, and a moral obligation to be physically fit. Among the most important of his contributions to physical education were his lectures that stressed exercise, proper diet, rest, and bathing habits. He also emphasized structured exercise for elementary grades such as running, swimming, wrestling, walking, skating, coasting, ball playing, and games of physical enrichment. In addition, he encouraged daily use of gymnasiums.

As editor of the **Annals of Education**, he recommended to his readers **A Course of Calisthenics for Young Ladies in Schools and Families with Some Remarks on Physical Education.** He was concerned over the ignorance of people with regard to their own structure and the laws of their physical being:

> Sports are as indispensable to the health of both the bodies and minds of children as their food, their drink, or their sleep. . . . My pupils studied best when they had the most time for exercise.[10]

He advocated the practice of teachers joining in the sports of their pupils for the following reasons

> The sports of pupils are excellent for studying their disposition and character they then show themselves out in their true naked character.
>
> To join them . . . is an excellent means of controlling the character and regulating all the circumstances of their recreations, in such a way as to render them salutary; not only so physically, but morally. This whole subject—the healthfulness of children's sports especially—is greatly overlooked.
>
> The practice will have a favorable influence on the health of the teacher himself. . . it preserves, in some measure, not only his bodily elasticity, but the elasticity of his mind. . . . In a word, there is no one thing more useful, in every point of view, to the country school master—and the school master in the town or city needs it still more—than frequent free exercise out of doors with his pupil.[11]

William Alcott wrote 108 volumes—not including tracts, articles and essays. He was editor of five journals and one magazine and author of many books dealing

[9]William A. Alcott. Progress of Physical Education. **American Journal of Education**, I, No. 1 (January 1826) 1.
[10]William A. Alcott. **Confessions of a Schoolmaster** (Andover, Mass.: Gould, Newman, and Saxton, 1839) pp. 81-82.
[11]**Ibid.** pp. 293-295.

with education, physiology, health exercise and medicine. His "Essay on the Construction of School Houses" was awarded a prize by the American Institute of Education. He began to publish small volumes on educational subjects, and, by means of his pen and lectures, made his name well known. The books and articles presented here are representative of his influence on physical education.

"The Progress of Physical Education" appeared in **The American Journal of Education** in 1826. In this article Alcott stressed physical activity for females and encouraged the use of physical education for shaping the character of all children. This early statement placing physical education with other school subjects as having redeeming qualities was refreshing yet new in concept. In 1833 Alcott presented himself to these questions again. In the **Annals of Education** he wrote, "On the Study of Physiology as a General Branch of Education," and "An Account of a Female School." In the first article he stressed the fact that physiology was an important aspect of physical education and that physical education was a phase of general education. As such, physical education earned its right to be included in the curriculum of the day. In the second article Alcott reviewed the efforts of incorporating a physical education curriculum for women. This effort was not popular with many educators; but Alcott recognized the need of young people to move and exercise with an educational goal in mind.

In 1834 Alcott wrote what he hoped to be the most practical approach to the study of anatomy and physiology related to movement for laymen that had been written to date. He presented in an allegorical manner the similarities between the bony structure of the human frame and the foundation, beams, and supporting structures of a house. Alcott did this to simplify the anatomy and physiology of the human body and to make it more understandable to the common person. In three volumes Alcott presented, **The House I Live in: The Frame,** Volume I, **The Human Body,** Volume II, and **Popular Illustrations of the Structure and Functions of the Human Body,** Volume III. Alcott attacked the poor health conditions, personal and community, in the journals **The Moral Reformer** and the **Library of Health and Teacher on the Human Constitution.**

In 1838 Alcott was elected the president of the American Physiological Society. He welcomed this opportunity to try to organize a society that could collect and screen health information and recommend public health reform. Subsequently, he edited **The Constitution of the American Physiological Society** for two years (1837-1839). This document was important because it was considered to be the first of its kind in America for the promotion and reform of health with a physiological basis.

The Library of Health and Teacher on the Human Constitution was an effort by Alcott to awaken the populace to poor health standards and to help individuals recognize the need for physical education in their society. The Society proposed to study and read and publish articles dealing with the sciences of anatomy, physiology and hygiene. The prominent objective, as was noted in the **Constitution,** was to generate a spirit of inquiry into all facets of health and physical education.[12]

William Alcott was involved in a scientific endeavor to prove the benefit and pleasure of physical activity. As in all of the other reforms with which Alcott was involved, there were redeeming factors in exercise reform:

> Whether we study the material or the immaterial world; whether we are at home or take to the uttermost parts of the earth; whether we look around us or within, above us or below,—all is and must be ever-enduring activity.[13]

Alcott contended that basic to all activity is movement, and to move efficiently one must have knowledge of the working parts of the body. As one combined knowledge with proper exercise, the internal processes as well as the personality were improved and enriched for further service.

Alcott delineated the functions of the bones as: shape and form, anchors for the flesh and muscle, and a form of protection for some of the internal organs. But muscles were the means of performing work.

[12] American Physiological Society. **Constitution** (Boston: Marsh, Capen, and Lyon, 1837) pp. 89-90.
[13] William A. Alcott. **Lectures on Life and Health; or, The Laws and Means of Culture** (Boston: Phillips, Sampson and Company, 1853) pp. 385-440.

A muscle is a strip of lean flesh, somewhat enlarged, usually, in the middle, but tapering towards each end. . . . There are usually two sets of muscles to a part—called flexors and extensors. Flexors bend the part, and extendors carry it back or extend it.[14]

He explained that the bones and muscles make up sets of levers and pulleys and most of our locomotion simply "consists of being pried about."[15] Whether we walk, creep, climb, or swim, our system of locomotion is by levers and pulleys. It followed that the more exercise the body was exposed to, the more efficient movement was, and the more muscular power one had. Concerning the old Roman notion that a sound mind was possible only in a sound body, Alcott said, "the vigor, if not the activity of the brain. . . will always be in due proportion to the muscular vigor and energy of the body."[16] He maintained that no truth could be better substantiated than that the strongest, soundest minds were, as a general fact, lodged in the strongest, soundest bodies.

As the general vigor of the body and the mind. . . is usually in due proportion to the health and vigor of the muscles and bones—the moving powers —so the health and vigor of every part is always in proportion to the muscular force and activity of that part . . . Therein also lies the importance of recreation and employment that have the same tendency. And herein if founded . . . the necessity of numerous athletic sports and recreation . . . in the open air.[17]

Alcott had in his possession an English book, printed in 1705, entitled **Medicina Gymnastica,** in which the author advanced the idea that almost every disease could be cured by exercise. Alcott commented:

Plato . . . went still further, and affirmed . . . that it [exercise] would cure even a wounded conscience. . . . There is, however, no necessity of making everything of what is only a part. Still . . . we can neither set limits to the local and general strength which exercise may be made to impart, nor to its remedial agency and power, especially when combined with cheerful and appropriate mental employment and exercise.[18]

In presenting exercise as "the first law of the Creator," Alcott reasoned its physical benefits as well as its imperativeness to mental and emotional health.

In the first editorial of Volume II, **The American Journal of Education,** Alcott pointed up some of the defects in the established primary education system. The first was the entire neglect of physical education.

The little pupils are too commonly converted into prisoners; and the confinement of body and soul seems to be the predominating object in the arrangements of the school room, the position of the scholars, and the regulations of the instructor.[19]

Alcott recommended that physical education (culture) and enjoyment be blended with the daily lessons of the school, so as to become inseparable. He maintained that when a child was old enough to go to school, physical education became even more important than before. The increased demands of the growing corporeal powers of the child and the need for relief from sedentary application demanded active recreation for health and cheerfulness. He argued against the supposition that the daily walk to school and a little playing in the streets was sufficient.

Of all the hindrances to health . . . which are connected with schools, none is more serious than the great want of suitable playground, where regular exercises may be taken, and innocent recreation enjoyed, under the superintendence of the teacher. . . . Besides the general benefit to health, an important point of a mental and moral kind would in this way be secured. The pupil would be convinced that education was not meant to interfere with recreation, but rather to encourage it, by rendering it consistent with or conducive to improvement and happiness.[20]

[14] **Ibid.**, pp. 396-397
[15] **Ibid.**, p. 397
[16] **Ibid.**
[17] **Ibid.**, pp. 400-401
[18] **Ibid.**, p. 405
[19] Alcott, **American Journal of Education,** II, No. 2 (February, 1827), 113-114
[20] **Ibid.**, II, No. 5 (May, 1827), 291

He strongly urged those who had access to gymnastic schools to enroll their children for constant and permanent membership and to encourage its daily use.

Alcott fought for female education. For nearly a decade, he crusaded for course changes and additions. Since he regarded active exercise as indispensable to health and happiness—whether it be male or female—he was pleased to report the inclusion of regularly assigned recreation.

> The results as observed: the pupils thus far seem to have habitual health, uniform cheerfulness of temper, and the ability to undergo sustained and vigorous application of the mind, without exhaustion.[21]

This, he felt, was an invaluable aid to intellectual progress.

Alcott lectured that the very first and most essential condition of success in the theory and practice of education was cultivation the body. However,

> . . . practice can never be right while principles are wrong. While men remain ignorant of human nature, unacquainted with the structures, powers, functions of their bodies, of their mental and moral capacities, it is not to be believed that they will be fortunate in cultivating these capacities, or wise in directing them to the accomplishment of the high purpose of existence.[22]

Thus Alcott pleaded for physical education in the schools. He reiterated that man is made up of a physical, moral, and intellectual constitution—all equally and essentially important in themselves and in their mutual relations and reciprocal influence on each other. Consequently, every plan of instruction that did not recognize and attempt to meet the needs of all three areas must prove unsuccessful because it would not be conformable to the arrangements of nature.

> What would an individual be worth to himself or others whose mind, whose disposition, or whose corporeal system—or any two of these only, were educated? His head might be furnished, and his heart well disposed, but he would still need a hand to execute.[23]

He inferred that the only individuals who could exempt themselves from the study of physiology were those who had become so etherial as to no longer require food, drink, rest, air, warmth, and exercise.

In the four decades between 1820-1860, educators, physicians, and reformers had begun to develop a philosophical rationale concerning the relationship of physical exercise, games, and sports to mental and spiritual welfare. From the diffusion of ideas developed by the medical profession, under the influence of the Enlightenment, and by educators and reformers affected by the romantic spirit, Americans were alerted to the intrinsic value and imperative nature of physical activity. Alcott made innovations in providing adequate recreation time and facilities in schools and encouraged the establishment of gymnasiums and the hiring of physical education instructors. Because of his knowledge of physiology and anatomy, he was able to lecture on the interdevelopment between mind and body. And because his goal was a balance of mental, moral, and physical attributes within an individual, he stressed that the neglect of one area affected the total personality. He was truly a pioneer reformer in physical education.

[21] Ibid., II, No. 4 (April, 1832), 210.
[22] Ibid., I, No. 1 (January 1826), 20.
[23] Ibid.

Reaction to "William Andrus Alcott, M.D., Pioneer Reformer in Physical Education, 1798-1859."

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I suppose it is no secret that I have a strong personal liking for biographical studies, and so I always particularly welcome research such as this on William A. Alcott by Dr. Paul Mills. He has chosen another one of the many fascinating people who have served our profession well over the years. William Alcott, thanks to Dr. Mills' diligent efforts, is no longer a shadowy figure only dimly perceived and scarcely recognized.

I was frankly skeptical when I read Dr. Mills' assertion that there are no studies known on the life of his subject. But he is absolutely correct and I could find nothing in the Ohio State University library. Furthermore, I talked with a colleague, Professor Robert Bremner who is a specialist in the social history of the United States. William Alcott was a new name to him, and he expressed surprise that a man who had done so much writing has been overlooked by historians.

The views of William Alcott as ably described by Dr. Mills again confirm the fact that the concepts of "educating the whole man" and "the unity of man" did not originate in the United States with twentieth century leaders such as Luther Gulick, Thomas Wood, or Jesse Feiring Williams. It is apparent that William Alcott understood this concept and used it as a basic premise for his enlightened work in education and health.

Now for a word or two of a more critical nature. I am fully aware of the agony which we all suffer in trying to present a research report within the usual time limits of a convention program. So I would like to make three suggestions which Dr. Mills might wish to consider before publication of his study.

1) Alcott also wrote a book entitled **Letters to a Sister**, published in 1850 which is not referred to by Dr. Mills. It is relevant because two of the letters deal with health and amusements. Alcott's priorities may be shown in the fact that these two letters were placed third and fourth among a total of thirty-one. In this book there is a vivid passage which I love. After approving of gardening and open-air amusements for his sister, Alcott continued:

> But this is not enough—it does not go far enough. You need something more active, as jumping, running, and the like. I will tell you what will be about the right amusement for you, beyond the garden and field. An occasional ramble with a friend, or with a small party, in pursuit of rare flowers, plants, minerals, insects, or birds. And should you, in your zeal, so far compromise your dignity, as to forget the staid snail-like pace to which, ever since you entered your teens, society has endeavored to constrain you, as to walk a little more rapidly, or even run, and clap your hands, and shout **Eureka**, do not think you have committed the sin unpardonable in Heaven's court; or that even the tribunal of your company will condemn you. (Page 55)

2) Although the facts of Alcott's life and his ideas are adequately presented, I do not have much identity with Alcott as a flesh and blood human being. About the only personal reference is to a frail physical condition. What was his relationship to other members of the Alcott family—Louisa May and Bronson Alcott? What did he look like? What family, if any, did he have? What was the nature of his personality and habits?

3) I believe that this life of Alcott stands too much in isolation, and he needs to be related to the mainstream of American life in the first half of the nineteenth century. The late John Betts described the people and the period in his article, "Mind and Body in Early American Thought," which is found in the March, 1968 issue of the **Journal of American History**. He refers to Alcott as one of a company which included Dr. John Warren, Dr. Charles Caldwell, Catherine Beecher, Abel Peirson, and others. An intriguing question for the biographer always is: Where did a person get his ideas? Did William Alcott know of Joseph Cogswell and the Round Hill School which was only fifty miles away? Was he aware of Catherine Beecher's seminary in Hartford, only fifteen miles distant, and her concern for girls' education and physical education? Did Alcott have knowledge of Charles Follen, Francis Lieber, and the gymnastics of Jahn as practiced at Harvard and in Boston? What were the relationships between the Alcott family and the Beecher family, if any? Or, was William Alcott an original thinker who developed his ideas independently?

William Andrus Alcott obviously is a person who has laid buried far too long. He might have been exhumed by a historian of education, or social history, or medicine, or journalism. I am very pleased that he has been resurrected first by a historian of physical education and offer a salute and warm congratulations to Dr. Mills for this professional service.

Preliminary Research Regarding American Influences on J.C.F. Guts Muths

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One of the reasons for the health and strength of the Americans, whom Mr. Constant visited, was the physical exercises, which they practice daily with [their] youth. Our youth, likewise, would become much healthier and stronger if they were brought up with similar exercises. This we notice with our pupils [the pupils at the Schnepfenthal Institute]. Also, among these, whose number reaches far beyond thirty, there is not one single sick one. And how does this happen? Largely [as result] of the physical exercises in which they participate daily. Because many [people] may desire that they could copy this [practice] with their youth, but do not know the advantages and skills which must be observed in doing so: therefore, Mr. Guts Muths, who has directed these exercises at our [school] for [the last] eight years, has decided to describe same extensively and to indicate faithfully all advantages which are to be observed. The book will be about two [inches] thick and printed on beautiful Swiss paper. It will include also ten copper plates engraved by Mr. Lips.

The title will be: **Gymnastics for Youth; Comprising a Practical Method for Physical Education**. . . . Schnepfenthal, Nov. 1792. The Educational Institute at this location (9:711-712:11:394)

It does not take much imagination to picture the surge of excitement caused by this information tucked away in a nearly two hundred year old footnote. What American program of physical exercises? Where in America? Before 1792? Who was that Mr. Constant? And how to find out more about him?

It is true that Guts Muth's books give evidence of a great admiration and liking of the North American continent. Particularly in his first book **Gymnastics for Youth** we find many examples of his veneration for the freedom, individualism, strength and daily contact with nature that was enjoyed by

> . . the inhabitants of Canada, the Germany of North America, strengthened by climate, not denied sufficient nourishment, hardened by ingenious education, perfected by hunting and warlike exercises, not exhausted by emanciating worry, not borne down by oppressive labor . . . (5:50)

Guts Muths was convinced that the loss of contact with nature was a direct cause for the decline of the physical condition of his people.

> There was a time when diseases were little known, when age was almost the only infirmity and death the sole physician. This period . . . was governed by nature; when her sovereignty was not longer acknowledged, the Go den Age fled away and men began to study physics. Still, however, it lingers here and there, where the son of nature, in happy surroundings, reposes after moderate labor in the shade of the bread fruit tree; where, blackened by the intense heat of the rays of the sun, he cultivates his cassava and rice; where he pursues for miles the stag and the wild ox or tends to his peaceful herds; on the banks of the Niger and the Mississippi or on the Alpine heights. (6:149)

Comparing representatives of his society with those of America he blamed the one-sided intellectual education for "modern" man's inability to survive natural, every-day taxing situations.

> Place a man who has been accustomed to exercise his faculties . . . for instance . . . an active wild American, in the same danger as a man of letters or a mechanic, and it is more than probable, that the former would save himself, while the latter would perish. (5:79)

Assailing the unhealthy physical-social-and moral conditions of his day he credits the same 'natives" with more insight in controlling their environment than the Europeans:

> The natives of North America to whom want is a stranger, as the Iroquois and Delawares, have seldom six children from one marriage . . . (5:62).

Convinced that "Our physical education compared with our intellectual, is too impotent . . ." (5:197), he posed a hypothetical situation to prove his point that harmonious education would be possible and effective.

> A second Rousseau goes to America, in order to carry into execution the great problem of education, of which I have been speaking. He takes for his subject a young Huron, or whom you please. He polishes the rude child of nature, exercises his mental faculties, forms his heart, employs every means to extend his knowledge, and initiates him into all the science of Europe; at the same time he leaves the completion of his physical education to his situation among the active sons of nature, and his own stomach, that he may become in this respect a genuine, strong, healthy Huron. His education is thus at length completed, and we have a **cultivated man of nature**. (5:195)

Although some descriptions of life in America are a little more detailed, they generally remain of a superficial nature and do not deal with specifics, particularly not where physical education is concerned.

Guts Muths was well read. Besides the numerous educational journals that Salzmann provided for the staff of his school, Guts Muths had access to the library of nearby Gotha, which boasted more than 70,000 volumes. Due to his original interest in geography which he maintained and in which area he published several volumes, he had become acquainted with a great number of travelogues and journals published in his day. (8:46-54). His knowledge of foreign languages and his close relationship with Samuel Glover, one of the English pupils at Schnepfenthal, naturally was of great help. Furthermore, Guts Muths had access to the publications of Vieth, Villaume and other contemporaries who had an interest in physical education. How well acquainted he was with the publications of Benjamin Franklin is not known. It is certain that he was informed about Franklin's methodology of swimming, for in **Gymnastics for Youth** he quotes Campe when he presents Franklin's approach. (5:513).

For almost 200 years the English speaking physical educators have assumed that Guts Muths and Franklin were in agreement. Nothing is further from the truth, which might explain why Guts Muths did not mention Franklin at all in his **Small Manual of the Art of Swimming for Self Teaching** but refers frequently to Bernardi. (7) The chapter on "Bathing and Swimming" has been altered greatly by the unknown "translator" whose personal preference leaned toward Franklin. In addition to omitting Guts Muths' most poignant point, his disavowal of Franklin's methods:

> If I may be all owed to dispute this method [then] based on my own and [on] experiences [I] heard about from many other individuals, my judgment would not be in favor of it [Franklin's method] (5:514).

the "translator" inserted

> If a person should be seized with the cramp in the leg while swimming, Dr Franklin recommends while thus lying on the back, to lift the leg out of the water, and give it a sudden, vigorous, and violent jerk in the air. (8:358)

In 1726, Franklin, then down on his luck, almost accepted a position as swimming teacher. (3:103) Later, when he returned to Europe a celebrity, his scientific and literary contributions were well known, including his opinion on sunbathing:

> The air bath [sunbath] consists of one exposing one self, for some time, naked, to the influence of the air. Franklin supposedly was accustomed to this daily. (4:392)

Although Benjamin Franklin was in all probability the first American to suggest that physical education become a part of the educational program (10:383), it is as yet not known whether Guts Muths was familiar with Franklin's, "Proposals Relating to the Education of Youth in Pennsylvania" which appeared in 1749.

Other factors, of a non-scientific nature, may, and in all probability have been, the cause of the "look at America" situation. American independence and the French Revolution had made the peoples of Europe very aware of their political, social and economical situation. The Philanthropists, peaceful as they might be, were very interested and active in reforms. The most successful one, Salzmann, had managed to create a small republic (his school) in a predominantly feudal state. Realization of the ideals of self-determination, independence and equality had been demonstrated most clearly in the young American Republic, which consequently had become an epitome, particularly for the creative intelligentsia.

Goethe, the German Shakespeare, created in his, **Wilhelm Meister**, a make-believe state, a future state where social conditions were perfect. As many of his contemporaries during the enlightenment, Goethe thought it feasible that when emigrating to America it would be possible to preserve all advantages (good qualities) of the national culture, while leaving behind all the bad aspects. (1:164)

In a serials publication of, **The Curious Life's History of Constant, Merchant at Richmannshauzen**, Salzmann created in a similar fashion a situation in which he described how, after a complete breakdown of the social order, a merchant, Constant, organizes a humanistic freemasons group with the purpose of founding a new state in America. Salzmann did not have any intention of emigrating but utilized Constant as a vehicle to portray a republic, guided by sensible, prudent men, where intellect prevails, not only by those governing but by all individuals, thus eliminating all sources for political failure. (2). In the "Thuringer Messenger", a periodical which he utilized to keep people informed about the progress of his educational institute, Constant appears regularly to make one or another educational point. In this manner Salzmann developed a situation where a Cherokee attempts to make friends with the white man in order that he may convey the idea that despite his fierce looks, the savage is a good man (9:275). On other occasions, Constant learns of public playgrounds for youth (9:373); observes special hardening methods for new born babies (9:438); participates in an existing ideal school where "labor" is a subject and where natural science is emphasized (9:485); and, experiences supervised public bathing and swimming providing for activity and a good time for children (9:561).

The first enthusiasm caused by a vision of "organized physical education programs in the United States in the late 1700's leading to superior health and

strength" has waned some, as it appears likely that the descriptions of conditions of American physical education at the time are based more on fiction than on actuality. The process of data gathering is painfully slow, laborious and extremely difficult as virtually all sources are located in Eastern Germany. Evaluation of data obtained quite often requires extensive correspondence and back checking. It should, therefore, be understood that this introductory examination of available materials is indeed preliminary research and nothing more. It may take a long time before sufficient material has been collected to allow for more definite conclusions. There are consolations, however, like the "uncovering" of Guts Muths' and Franklin's divergent points of view in teaching swimming.

Though unconventional, I would like to express publicly my appreciation to Mr. Wolfgang Pfauch, the curator of the Salzmann museum in Schnepfenthal for his interest and generous cooperation.

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Edward Hitchcock and the Society of College Gymnasium Directors*

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To William G. Anderson belongs the credit for launching the two professional organizations which grew into the present-day American Association for Health, Physical Education, and Recreation and the National College Physical Education Association for Men. The man was an organizational genius, and the physical education profession will always be his debtor.

The American Association for the Advancement of Physical Education did not solve the Battle of the Systems, as Anderson had hoped. Hence, he conceived the idea for another society to heal the breach. It was his thought that the society should be restricted to college gymnasium directors who adhered mainly to the "so-called American Gymnastics." This restriction would prevent the new society from being torn apart by special interest groups, such as the proponents of the German and Swedish systems.

In forming the new society, Anderson proceeded along a similar line as he had done twelve years earlier while starting the Association. His first step was to secure the support of several of the leading figures in physical education. Anderson's description of his initial organizational work was recorded in the **Proceedings of the College Physical Education Association**.

> It occurred to me that an organization of college directors might be able to bring order out of chaos. Accordingly, I approached Dr. Hartwell with the suggestion that we call together, as a first important step, the directors of men's gymnasia in our eastern colleges. Dr. Hartwell concurred with me and advised me to "go ahead." which I immediately did. Letters were sent to Drs. Hitchcock of Amherst, Sargent of Harvard, Savage of Columbia, Linhart of Ohio State University, Miller of the University of Pennsylvania, Crenshaw of Johns Hopkins, and a few others including Mr. Goldie.[1]

Two organizational meetings were conducted in New York City, one on November 4. 1897, and the other on December 31, 1897. The purpose of the second meeting was to settle the question as to whether or not a permanent society should be formed. Debate on the question was furious, as reported in **Mind and Body**.

> The Committee on Organization then presented its resort [report]. Dr. Sargent, Harvard, opened the discussion by stating that he did not favor an organization of this kind; that he feared it would weaken and antagonize the A.A.A.P.E. He agreed with the sentiments expressed in the last issue of "Mind and Body" on this subject, and he hoped the matter would be fully discussed and carefully considered in all its bearings, before an organization was effected. Dr. Seaver, Yale, agreed with him. He pointed to the fact that it was only after ten years of careful nursing that the A.A.A.P.E. attained the strength it possesses to-day. It was also his opinion that, although the old society was stronger to-day than ever and was steadily growing, the time for off-shoots

*Materials for this paper were drawn from the author's dissertation and book entitled, **Edward Hitchcock, M. D., Founder of Physical Education in the College Curriculum**. The book is out of print, but the dissertation may be obtained on both microfilm and microcard. Microfilm: University Microfilms, Inc., Ann Arbor, Michigan. Microcard: School of Health, Physical Education, and Recreation, University of Oregon, Eugene, Oregon.

[1]William G. Anderson, "Pioneering in Physical Education," **38th Annual Proceedings of the College Physical Education Association** (Washington: College Physical Education Association, 1934), pp. 17-18

had not arrived, and the old society yet needed the undivided support of all friends of physical education. Dr. Hitchcock, Amherst, spoke in the same vein, and pleaded with the younger men present to make "haste slowly."

Dr Linhart, Ohio State, spoke in favor of an independent society to meet the needs of the college directors. Director Koehler, West Point, favored the old society and suggested that the proposed new society be organized as a section of the A A A.P E. This view was finally overruled in favor of an independent society but one that required its members to have membership in the A A A P E.[2]

In the business session, Jay W. Seaver of Yale was elected president; C. P. Linhart of Ohio State, vice-president; and Watson L. Savage, secretary-treasurer. The Council consisted of the officers plus Dudley A. Sargent and F. H. Cann. The fact that Edward Hitchcock was chairman **pro tem** of that organizational meeting caused several writers to list him erroneously as the first president.

Sargent, Seaver, and Hitchcock had opposed the formation of a new society. Had they been successful in thwarting the start of this society, the cause of physical education would have been damaged. Yet by opposing the birth of another professional organization, they prevented this new society from going off on a tangent. The Society did not develop completely independent of the American Association for the Advancement of Physical Education. Instead, the two organizations worked together cooperatively. The forces of conservatism won a major victory which meant much for the future growth of physical education. Savage described this goal of the new society in a letter to George W. Fitz, a secretary of the A.A.A.P.E.

> The object of this society is to harmonize, regulate, and raise the standards of the work in the colleges, and in no way lessen the usefulness of the A A A P E. but rather to give it strength.
>
> To make this fact doubly certain the first requisite to membership in this society is membership in good and regular standing in the A.A.A.P.E.[3]

Hitchcock's actual participation in the Society was limited. He attended the organizational meeting of 1897,, and he attended a meeting at Yale in 1899. This was probably the extent of his attendance, but by that time he had a very capable first assistant at Amherst College. The assistant was Paul C. Phillips, and he was most active in the Society. Amherst College was well represented in the early development of the Society when these important subjects were studied: college credit for physical education, intercollegiate athletics, common terminology in gymnastics, relationship of athletics to physical education, physical culture correspondence schools, and faculty status of physical directors.

Hitchcock's service to the Society was by no means comparable to that which he rendered to the American Association for the Advancement of Physical Education. He was extremely active in the latter organization, for it was started at the height of his career. The Society was formed as Hitchcock entered the twilight of his life Yet he rendered valuable service to the Society by being a charter member, giving it his blessing, and encouraging his first assistant at Amherst to take a very active role in its affairs. In so doing, Hitchcock established an Amherst tradition of close association with the Society which lasted for over sixty years.

Phillips was one of the Society's faithful workers for over thirty years. He served on the Council during 1901-03, as president in 1902, as second vice president in 1904, and as secretary-treasurer during 1908-19. He was followed as departmental chairman at Amherst by Allison W. Marsh, who was an active member for thirty-six years. Marsh was vice president in 1926 and 1945, president in 1927 and 1946, and a Council member during 1928-29 and 1947-48. The fourth chairman of the department, Albert E. Lumley, was active in the Society for seventeen years and was a vice president in 1955. This professional consciousness at Amherst dated back to Hitchcock's cooperation with Anderson as the Society was being launched. Anderson himself recognized the important part all of the charter mem-

[2] Society of College Gymnasium Directors, **Mind and Body**, IV, No 47 (January, 1898), 263-264

[3] Communications **American Physical Education Review**, II, No 4 (December, 1897), 247

bers played when he described the famous photograph taken at the 1899 convention

> On December 29 and 30, 1899, the Society met at Yale, at which time a photograph of those present was taken. I wish to refer to this because each member was a pioneer and did his part in organizing the present Association.[4]

Although Hitchcock did not attend professional conventions after 1901, he continued to maintain a warm interest in professional affairs. Only fourteen months before Hitchcock's death, the Society honored Sargent, and Hitchcock wrote a letter to Sargent congratulating him on the occasion of his thirtieth anniversary in the profession. The Society in turn expressed their good wishes to Hitchcock.

> At the conclusion, the secretary read a letter of appreciation and good wishes from the dean of physical education, Dr. Edward Hitchcock, to Dr. Sargent, and the whole society arose and pledged Dr. Sargent's good health and long life. Dr. Sargent spoke feelingly in reply, emphasizing the value of approbation from one's colleagues, of fellowship and the resultant increased capacity of work. . . .
>
> A committee was appointed, consisting of Dr. Sargent, Leonard and Phillips, to prepare a motion which should express to Dr. Hitchcock the sentiments of the society. This committee later reported as follows: "The Society of Directors of Physical Education in Colleges, at its thirteenth annual meeting, recalling your long and helpful connection with its affairs, extends to you the compliments of the season and wishes you continued health and happiness."[5]

This was Hitchcock's last communication with the Society. After the death of Hitchcock, R. Tait McKenzie introduced a motion in his memory at the fifteenth annual meeting of the Society.

> Doctor McKenzie moved that in memory of the death of Doctor Edward Hitchcock, the former dean of physical education, a silent toast be drunk. This was done by all the members. It was remarked that Doctor Hitchcock's death made the first break in the ranks of the Society.[6]

Anderson expressed his sentiments about Hitchcock in a letter to the editor of **The Amherst Student**.[7]

> Dr. Hitchcock was human, he was farsighted, he was open-hearted, he stooped down and gave a helping hand to the younger men in his profession, he organized the best system of college physical training in America, he stood at the apex as an authority on anthropometry and his influence will live long. He was a consistent friend of the college boy.
>
> I shall always feel that I am deeply indebted to Dr. Hitchcock, and I will strive to do what he asked me to do many years ago: "Follow after me, young man, follow after me."

Seventy-six years have elapsed since William G. Anderson founded the Society of College Gymnasium Directors. Supporting Anderson in his historic work were Edward Hitchcock, Dudley Sargent, and R. Tait McKenzie. Emmett Rice, et. al. classed Hitchcock and Sargent as being "giants" in the profession, and they referred to McKenzie as being a leader among the "pre-eminent few."[8] These men would have proven to be exceptional leaders in any era, for their hallmarks were loyalty and service to the physical education profession. Let those of us here today resolve to move forward with the same sense of unflagging dedication as that possessed by these early leaders.

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[4] Anderson **op. cit.**, p. 19

[5] "Reports from Sections—Society of Directors of Physical Education in Colleges." **American Physical Education Review**, XV, No. 3 (MArch, 1910), 211.

[6] "Minutes of the Fifteenth Annual Meeting of the Society of Physical Directors in Colleges." **American Physical Education Review**, XVII, No. 3 (March, 1912), 214.

[7] Undated letter from William G. Anderson to the editor of **The Amherst Student**, Hitchcock Memorial Room, Amherst College, Amherst, Massachusetts.

[8] Emmett A. Rice, John L. Hutchison, and Mabel Lee. **A Brief History of Physical Education**, Fourth Edition (New York: The Ronald Press Company, 1958), pp. 264, 323.

The Black Gladiator–The Major Force in Modern American Sport©

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The Black athlete has been the most significant force in sports in the twentieth century. Let's look at the record. . . . .

In **baseball** (since 1949) there have been. . . . .

5 AL Black batting leaders
10 NL Black batting leaders
3 AL Black home run leaders
14 NL Black home run leaders
3 AL Black MVP awards
15 NL Black MVP awards

In **pro-basketball** (since 1956) there have been. . . . .

10 NBA Black leading scorers
15 NBA Black rebounding leaders
10 NBA Black assist leaders

In **pro-football** (since 1952) there have been. . . . .

4 NFL Black leading receivers
5 AFL Black leading receivers
16 NFL Black leading rushers
8 AFL Black leading rushers

The entrance of the Black athlete in professional baseball and his later emergence in professional football and professional basketball has set the pace for the meteoric rise of sport as a major force in America in the twentieth century. It is estimated now that approximately **35-40%** of the players in professional baseball are Black, approximately **30-35%** of professional football players are Black and over **50%** of the players in professional basketball are Black.

A look at the Black athlete, his role, his contributions and the factors that have influenced his development should begin with some historical perspective. The history of the Black athlete in America is, of course, linked with the history and culture of Blacks in America, beginning with the **enslavement** of the Black man. It is widely recognized that the contribution of Blacks through their work during slavery was one of the main reasons for the rapid economic growth of the new nation, the United States of America. During the early and middle nineteenth century slavery was rampant and increasingly large numbers of Africans were brought to the shores of America as slaves with the subsequent denial of the rights and privileges of citizenship. Enslavement meant that there were few opportunities for Blacks to participate in the overall life of the American culture, including sports.

During most of the nineteenth century there was little emphasis on sport in America, largely because of the physical exigencies of living and the Protestant ethic, the drive of the new settlers for economic success. Since sport becomes a preoccupation of man when there are opportunities for leisure and the physical energies of most Americans were used in coping with the daily chores of living, sports were relatively unimportant and were conducted on an informal basis throughout most of the nineteenth century. The sports that contributed most to the sport culture of the nineteenth century was horseracing and boxing. Both of these sports are relatively simple in their structure and they appeal to two basis curiosities of man, speed and brutality. Black men contributed significantly to both of these sports. A Black man, the legendary Isaac Murphy, was the greatest jockey in

America during the late nineteenth century, and Peter Molyneaux in the nineteenth century and Jack Johnson in the early twentieth century were the first of a parade of great Black boxers. The drive for economic affluence that permeated American culture from its origin to the present had its impact on the Black in sports, for it was through the early efforts of those white entrepreneurs who wanted to capitalize on the superior proficiency of Blacks in boxing that Blacks were able to get their first opportunities to enter the competitive world of sport.

During the early twentieth century a significant sport culture began to develop in America. The main impetus of this sport culture developed around the "great American pastime," baseball, a sport which was initially popular in the camps of the Civil War. During the early days of baseball, the nation depended on wireless and telegraphic communication to spread the word about sports accomplishments and other news happenings. Since it is easy to describe a baseball game, with its intermittent flow of action, on telegraphic transmissions, baseball became the most popular sport in America. The sports pages thrived on the exploits and statistics of a 154 game baseball season; thus, baseball was the basis of a sport culture which reached its first peak in the 1920's. Sports have now reached a second peak in the 1960's because the Black gladiator's involvement in sports has led to a new wave of national interest.

Although there was Black participation in track and field early in the twentieth century, and Joe Louis broke the racial barriers against Blacks holding heavyweight boxing championship in 1937, Blacks never earned real recognition in the world of sport until **after** World War II. The late Jackie Robinson's entrance into major league baseball was the catalyst. The removal of the color line in baseball at the end of World War II, America's No. 1 pastime at that time, opened the gates for Black athletes who had previously been excluded from open sports participation. The admission of Blacks to baseball signaled to the nation that there was considerable reservoir of athletic talent that could no longer be and would not be overlooked.

While the major focus of this paper will be on the post-World War II period, the emphasis on that period should not detract from the significant contributions of Black athletes whose fame came before World War II. In fact, it was the contributions of these athletes that helped to create the climate which led to the acceptance of Black athletes in most of the world of sport. The feats of men like Jack Johnson, Joe Gans, Harry Wills, Joe Louis and Henry Armstrong in **boxing**; Fritz Pollard, Eddie Tolan, Ralph Metcalf and the legendary Jesse Owens in **track**; the legendary accomplishments of Paul Robeson in **football** and **track**; the exploits of Fritz Pollard, Duke Slater, and Jerome (Brud) Holland in **football** and the many-faceted accomplishments of the late Dolly King in college basketball, football and baseball all are part of the legendary past of the Black athlete. Also the great Black teams, the Pittsburgh Crawfords, the Black Yankees, the Homestead Gray, the Kansas City Monarchs in baseball, the famed Harlem Globetrotters and the New York Renaissance in basketball, and the great Morgan, Virginia State, Florida A & M, Wilberforce, and Tuskegee teams in football helped to create a sport culture in the Black community. The outstanding ability of these men, both on and off the field, has contributed to the public's awareness of Black athletes as outstanding people as well as outstanding athletes. While only a few of them actually became leaders outside of the world of sport, each of them had an impact on improving the self-image that Blacks had of themselves. (Actually four of them did become significant political personalities—Robeson as a radical social leader in the 1930's and 40's, the late Duke Slater as a Judge, Holland as U.S. Ambassador to Sweden, and Ralph Metcalf, as Representative from Illinois in the U.S. House of Representatives.) As in the fields of literature, art and science, the Black heroes of yesteryear in sports set a standard of excellence and courage for those who came after them to follow.

While it seems like an everyday occurrence to those of us who watch baseball and other sports on television, we should remember that in 1946 there were many who questioned the ability of Black players to perform at a major league level. Actually, the talent of Black baseball players should not have been questioned be-

cause many major league baseball stars of the 1920's and 30's, including Babe Ruth, Lou Gehrig and Dizzy Dean had often noted that some of the Black ball players, the Josh Gibson's, Satchel Paige's, and Buck Leonard's, had tremendous talent and would, in fact, have been major leaguers were it not for the color bar. In the light of the talent of Black players one must wonder why American sport was so long in recognizing the potential of the Black athlete. If we can recall the rampant racism of the 1920's and 30's, we can probably understand why many of the owners of professional teams did not employ Black athletes. There was just too much racial prejudice!

Fortunately, Branch Rickey, then owner of the Brooklyn Dodgers, felt that hiring a Black ball player not only was good ethics, but also, was good business. Some critics suggested that Rickey was just "plain greedy" for bringing Black players into the game. The fact is that Rickey was not only a very shrewd judge of baseball talent and a shrewd business man, but also he was a very shrewd judge of human reactions and human emotions. Many of us remember the scene in the film, "The Jackie Robinson Story," where Rickey insults young Jackie again and again with racial epithets to see what Jackie's reaction would be, only to discover that Jackie would not be provoked. While Jackie Robinson was in later years to be very aggressive in dealing with racism, he showed immense inner discipline in his first years in baseball by subjugating his own personal feelings until such time as he was accepted as a ball player and as a man and could demonstrate his feelings openly.

The exploits of the many outstanding Black athletes in baseball are too numerous to mention. Since Blacks made their breakthrough in baseball some twenty-five years ago, we have not only seen Jackie Robinson, Roy Campanella, Satchel Paige, Josh Gibson and Buck Leonard (the latter three on the basis of their Negro League performance) enter the Hall of Fame, but we have also seen records set by Blacks in a variety of areas, such as stolen bases by Maury Wills of the Los Angeles Dodgers. There have been batting records by Willie Mays of the San Francisco Giants, Hank Aaron of the Atlanta Braves, and Frank Robinson of the Baltimore Orioles and great pitching records by Bob Gibson of the St. Louis Cardinals.

The Black athlete's emergence as a major contributor to football was noticed less than his entrance into baseball largely because Blacks had actually played professional football before 1946. The first Black who played professional football was the legendary Fritz Pollard, an all-American halfback at Brown University in Providence, Rhode Island who played in the 1920's. Pollard was one of the first great professional players, and later organized his own teams to play the other professional teams. Another Black professional football player of note was the late Duke Slater, an all-American football tackle at the University of Iowa, who played with the Chicago Cardinals in the 1920's and early 1930's. But, it was not until 1946 when Kenny Washington, who was a football teammate of Jackie Robinson's at the University of California at Los Angeles (UCLA) in the early 40's, joined the Los Angeles Rams as the first "modern" professional Black football player. Shortly afterwards he was joined by Woody Strode, an end from UCLA, who is now a movie star. Also in 1946, Buddy Young, "Mr. Five by Five," joined the New York Yankees of the American Football Conference, and along with the many Black stars (Marion Motley, Bill Willis and Horace Gillom) of the newly-organized Cleveland Browns blazed a trail of greatness for Black football players in that league. The record books of professional football are now replete with the exploits of Black players, the most notable being the records for ground gaining by a running-back held by Jim Brown, now of movie fame, records which will probably never be broken (not only because of the change of the nature in the game, but also because of the magnificance of Brown's performance).

Professional football today is renowned not only for its offensive maneuvers and its offensive brilliance, but also for its defensive brilliance! It was due largely to the defensive play of Black players like Rosey Grier, who is now a pop record singer, the late Big Daddy Lipscomb, who tragically succumbed to drugs some years ago, the late Dick "Night Train" Lane, who originated the cornerback position,

Emlen Tunell, now assistant coach of the New York Giants, Deacon Jones of the Los Angeles Rams and Willie Wood, star safety man of the Green Bay Packers that defensive football became popular.

Blacks have also dominated the basketball world of the 50's and 60's. One of the reasons for this is that basketball traditionally has been a game that has grown out of the poor neighborhoods where the basketball court does not take up a good deal of room and the game does not require a great deal of equipment. The early great basketball players came from the Jewish, Italian and Irish sports clubs of the big cities. The names of two of the early great teams have an ethnic flavor, the Original Celtics of New York City and the Philadelphia SPHAS (South Philadelphia Hebrew Association). Another great team of the late 20's and early 30's was the New York Renaissance, an all Black team headquartered in the Renaissance Ballroom owned by Bob Douglas in Harlem. As the white minorities began to move out of the inner city ghettoes and Blacks began to move in, basketball teams had more and more star Black players.

While basketball is an exciting game it has not yet generated the type of enthusiasm and fan support that professional football has managed to gain. Professional football is unquestionably the outstanding fan attraction at present. It is reported that more televiewers watched the Super Bowl game (the championship between the N.F.L. and A.F.L. last January than any other televised program in history). The emergence of professional football and basketball as major spectator sports is due in no small measure to the emergence of the Black athlete, as a skilled performer who had color and style, or what Blacks call "soul."

Blacks have been significant forces in sports other than boxing, baseball, football and basketball. The most significant of these "other" sports is track and field. Since running and jumping events require very little equipment, there have been Black stars in these events for many decades. Black domination has a longer history in track than it does in baseball, basketball, and football, largely because this was the first sport where Blacks were allowed to compete with whites in open competition. One reason for the earlier participation of Blacks in track is that there is relatively little physical contact in track. In a climate of such intensive racial prejudice, it was thought that it might be all right for whites to run against Blacks so long as they did not have to touch them. Blacks have been significant forces in the running events at all distances, not just the short distances as has been suggested by those who feel that Blacks cannot handle long distance running. The facts belie this allegation because Blacks have long shown ability to participate in a variety of distances in foot races going back to the 1928 Olympics with achievements of the late Phil Edwards and John Woodruff in the 1932 and 1936 Olympics in the half mile. The 1500 meter (metric mile) champion in the 1968 Olympics and present world record holder at 3000 meters is Kipchoge Keino of Kenya.

Just as there are legendary Black heroes in other sports, the legendary Black track hero is Jesse Owens, the four-time Gold Medal winner in the 1936 Olympics. The Nazi Germans with their beliefs of Aryan superiority called the great Black Olympians of 1936, America's "Black Auxiliaries." Even though the American press derided such accusations, it is true that when Jesse Owens and the other Black Olympians returned to the United States in 1936, there were many places in America where they could not eat, sleep or go to school—a clear indication of their second class or "auxiliary" citizenship.

Sports stars like Althea Gibson, the first Black woman to win a National Tennis Championship. Arthur Ashe, the first Black man to win a National Tennis Championship and golfers, Charles Sifford, Lee Elder and Pete Brown, have brought additional recognition of the potential and ability of Black athletes and have shown that Blacks can excel in other sports. The sports world is finally beginning to realize that Blacks can excel in sports where they have not had previous opportunities to participate. The next breakthrough might well be swimming where Black colleges like Morehouse College in Atlanta, Georgia, are beginning to develop star swimmers or in one of the bastions of national swimming champions like Indiana University.

The sports that have made America so sport conscious, baseball, basketball and football, are sports where the surge of excitement and audience interest came with the increased influx of Black athletes as full-fledged participants. Now **we must look** at the Black Gladiator as a **person**. With all of the handicaps that he has had, **why** has the Black Gladiator moved into ascendency in so many sports? **What** makes him persist after so many disappointments? **What** makes him persist even in the presence of both overt and covert racial restrictions and attitudes? **What** are his hidden dreams and aspirations? **Why** does he feel the way he does about sports?

Today's Black gladiators are in the forefront of a revolution in sports. The civil rights revolution (more recently called the Black revolution) under the leadership of men like Martin Luther King, Jr., James Farmer, Roy Wilkins, Whitney Young, Roy Innis, Stokley Carmichael and Malcolm X has left an indellible impression on the minds of the young, the disenfranchised and the powerless people throughout the world. Finally they recognized that "they can overcome." It is not surprising, therefore, that Black athletes have been the leaders in challenging the failure of American sport to recognize their situation and to deal with it.

The revolution in sports has also been catalyzed by the fact that the sports participants have been finally aware of the business nature of American sport. Previously, sport has been viewed as a frivolous toy of the wealthy in society (the new "opiate of the masses") and sports participants were considered fortunate to have the opportunity to participate in the world of sports. The result of this thinking has been the one sided balance in favor of the owners or groups, such as the NCAA, that run sports. As more and more hundred thousand dollar contracts have been negotiated by young stars and as the costs of franchises in football and baseball run upwards of ten million dollars, even the most naive person is now aware of the fact that sports is business. Thus, a demand for change from the men who make the sports industry run—the **players**. And the Black Gladiators head the challenge.

Other things in sports are also being challenged. Among them are the authority of the coach, the arbitrary way in which athletes move around as pawns on a chess board, and the inhumane way in which some coaches treat their athletes. The statements of many of the "sport drop-outs" reflect the resistance to these types of authoritarianism. It is undoubtedly true there are lessons to be gained by American youth from some of the sport heroes, but as Jim Bouton pointed out in his very popular book, **Ball Four**, some of our sport heroes have "clay feet" (which really is not too surprising because the sport participants have the same frailties as other humans). The harsh treatment that some coaches direct toward their teams may be good preparation for war, but I wonder if it is a good preparation for life, unless one perceives life as a war in microcosm.

When we look at the Black athlete in the context of racially-conscious American society, we also look at the role of sport in society. Some historians have suggested that the great emphasis on sport in American society reflects the lack of maturity of the American culture as well as the overemphasis on individual achievement which is part of the American free enterprise system. Other commentators feel that the emphasis on physical contact in so many sports reflects the excessive violence and aggression that is a part of American culture.

At this time **four years** ago the sport moguls of the nation were racking their brains attempting to determine how to deal with the **proposed boycott of the Black Olympic athlete** that was led by Harry Edwards. As you know, this boycott did not become a reality but, it catalyzed the efforts of Black athletes and their white compatriots to attempt to deal with many of the inequities that exist in sport with regard to race and the various ways in which the sport establishment attempts to use the athlete.

While much attention was given to the revolt of the Black athlete in the 1967 Olympics we should be aware of the fact that the concerns that were verbalized by Harry Edwards and his brothers are concerns that have been verbalized for many years, by Black and white athletes alike. It was mainly because of the climate that had been created in the country during the Civil Rights Revolution of the middle

1960's that it was possible for someone with the leadership capacities of Harry Edwards to mobilize Black athletes to express their concerns and to utilize the media to bring these concerns to the attention of the public-at-large. It is inconceivable to think of American sport today, particularly at the professional level, without the presence and the significant contributions of the Black athlete. Nevertheless, in 1972 many of the concerns that were voiced by the Black athletes in 1968 still remain Let us examine some of these.

While some of the more obvious forms of discrimination against the Black athlete have disappeared (such as housing discrimination in the major cities, differentials in medical care and the quality of coaching), there remain several other concerns which are deleterious to the Black athlete. One of the most significant of these is the phenomenon of "stacking;" a phenomenon wherein the Black athlete is made to compete with other Black athletes for the limited number of positions on professional and college teams. It is quite possible now in some sports for teams to be entirely Black were it not for the stacking phenomenon which forces Blacks to compete against Blacks in order to make room on the squad for less talented whites. While it seems ironic for American sport to be looking for a "great white hope" in 1972, it happens in too many sports, in too many organizations.

One of the **most** obvious **examples** of discrimination in American sport is the discrimination against the Black man as a leader, as a manager, as a front office person This, of course, gets to the core of the matter. In a racism oriented society, the majority group attempts to retain the power of control, thereby assuring their own ascendency in a variety of areas (Loy & McElvogue, 1970). It is inconceivable in 1972 that there are no Black major league baseball managers, no Black major league football coaches and only two or three Black major league professional basketball coaches. Too frequently men who are named as coaches or managers are inconsequential individuals who spend much of their time grandizing the management during their mediocre playing days to such an extent that when their careers are over, they step into positions of leadership. A most recent example of this is the new, young manager of the Minneapolis Twins, whose greatest gain to fame is his youth and the fact that he was a substitute on their championship team. The situation is even worse in the front office! Since the front office makes the important decisions on salaries, player shifts and major expenditures of money, the executive suites in sports are almost snow-white.

Most of you have heard these allegations before and are thinking so what! What can be done about them? What should be done about them??? In my opinion, the best way to deal directly with the question of discrimination in American sport, particularly in the managerial and front office end, is through legal action under the many anti-discrimination laws in the various states and Title VII, the federal civil rights act. It will require considerable legal activity by extremely astute lawyers to implement this particular approach, but in my opinion, in the long run, the legal approach is going to be the most successful. Attempts to embarrass front offices and various organizations do not really seem to have much impact. Therefore, we must either go to the streets with the protest, in terms of boycotts and sit-ins or we must resort to legal action. While it might be suggested that to go to the streets might be more effective, I question whether the Black athletic fraternity and the overall American public will tolerate the lengthy and protracted efforts that would be necessary to handle this through the boycott. On the other hand, selective boycotts might be very, very effective. To do this, however, requires getting the Black athletes and their Latin compatriots together; something that has yet not happened. A study by (Charnofsky, 1967) showed that the prejudices that are typically held about Blacks and Latins are held by Black and Latin athletes about each other, thereby diminishing the possibility of their getting together. Also, some Black athletes are so grateful to be in major sport that they are not willing to take the type of action that is necessary to rectify and improve the situation of all Blacks in all sport. This is something that must change. Black athletes must get themselves together!

As an educator, I am extremely concerned about the role of athletics in the **educational** life of the Black athlete and the Black community. While I am extremely

critical of professional sports for its racism and discrimination, it is quite possible that the college athletic situation reflects more racism than professional sports. This, in a sense, is an overstatement because when one deals with concerns of race in any situation, the main root of the problem is usually race and racism. This concept should never be forgotten when we deal with any aspect of the lives of Blacks, whether it be education, occupation, politics, law enforcement or sport. The entire American college sport scene is a disgraceful one. Black athletes are brought into colleges which in many instances do not give them even a partial education. It would be merely liturgical to cite again the many transgressions of the college athletic scene against the individual, against standards of social dignity and against good education.

We must be prepared to take stringent steps if we are to get away from the college athlete as our form of the Roman gladiator. As we know, the gladiator in ancient Rome was used to amuse the masses, to distract them from the real concerns and problems of society. While college athletics have ceased to be to perform the gladiator function for the student (note the low attendance of students at most college football and basketball games), they have continued to serve a massive "Roman circus" for the general public as well as an income producer for some college building programs and a source of income for many coaches and athletic administrators—all under the guise of developing the human personality through athletic competition. The fact is that the big-time American college athlete is a professional. Modern American college athletics is a business, a role which probably is inconsistent with the overall purpose of the university. I advocate paying big-time college athletes dignified and significant **salaries** for their services without the requirement that they actually attend the college (Brown, 1972). In effect, the colleges will become what they really are, minor leagues for professional sports. If in fact, individual youngsters would want to attend college for credit and degree that would be fine, but in the model that I am proposing, I do not include attendance in class as a requiement for participation on the professional college team. Usually when I mention this everyone says, "you would just destroy college sports." I do not believe this is so. I believe this is calling it like it really is. The bonafide college sports in the smaller institutions will continue to survive. I suggest, however, that in order for them to survive that they not attempt to be a sub-minor league for the larger colleges for this would just perpetuate the system. In fact amateur athletics, if they are to be called amateur athletics, should be made available to everyone who desires to participate without any special reward. I believe this could be done because most of the special awards that have come out of the so-called amateur athletics such as big-time college sports, are those that are generated by the press and by self-serving coaches and administrators. A clear delineation between the professional and the non-professional college athlete should make this a realistic possibility.

There has been some improvement concerning the role of Blacks in the Olympics since the boycott four years ago. We see Blacks participating in a larger number of different sports than ever before. We see more Black assistant coaches and one or two Black head coaches, but still we do not have adequate Black input into the controlling mechanism of Olympic sport, namely the Olympic Committee and the AAU. Again this is a function of raw racism. Most people get upset when I say this because they say Blacks haven't been in sport long enough to develop the skills, to develop the contacts it takes to be on the committed. This is a bunch of nonsense. Blacks have been in sports as long as whites; it's just that they have not had the opportunity to meet the rich and influential white people who dominate American amateur sport in the Olympic Committee. This needs to be exposed. Again, I think that we may have to resort to legal activity in order to bring about the rightful participation of Blacks in American amateur sport.

The revolution in sports started by the Black athletes will have consequences that far outstrip sport because we can't continue to live in a society rich in material resources, but lacking those human values, such as love, respect and freedom. Since sport is a microcosm of society, the social revolution in sports will continue

to be a reflection of demands for change in prevailing power relationships, relations between Black and white, male and female, the haves and the have nots. Increased awareness of the experiences of Blacks in sports should help all of us to understand more the racism that exists in modern America. Hopefully, this understanding will help both Blacks and whites—Blacks in becoming more capable in dealing with racism, and whites in becoming more involved in eliminating it. The Black Gladiators have taken their places in the front ranks of the challengers to the status quo in society through his challenges to the myths and realities of American sport. . . . And "they will overcome."

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Competency Based Teacher Education in Physical Education Prospects and Problems

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Every New Movement or manifestation of human
activity, when unfamiliar to people's minds,
is sure to be misrepresented and misunderstood.
—Edward Carpenter

Social scientists long ago articulated what they referred to as a theory of cycles and circles. A close observation of cyclical modes, with respect to man's behavior reveal such things as those with straight hair wanting it curled and those with curly hair wanting it straightened, those with light skin tanning it while those with darker skin attempting to lighten it. Not to mention American college students going barefoot to classes while students in less affluent settings appearing well-shod, and yes, Americans going back to outside charcoal cooking while families in developing countries were striving for an electric stove. Frankly, I find it quite easy to understand McLuhan's prediction that the West today wants the "inner trip" while the east is pursuing the "outer trip."

Conference writers and planners have seized upon catch phrases such as "expanding horizons," "new directions," "hidden dimensions," "change and challenge," and we join this opportunity by adding "prospects and problems."

This is part of a semantic ritual that symbolized our propensity for verbal castigation (supposedly) followed by inspiration. It is an exercise that feels so good it can lull us into thinking we have done something.[1]

A Chinese philosopher once said: "**Action** is easy . . . to **Know** is difficult." Combined, **To Know How to Act** has to be at least twice as difficult.

To **act** or **react** to the Prospects and Problems of competency-based teacher education in physical education depends on our capacity to be philosophical, i.e., our capacity to analyze our present programs and propose a better one.

Our considerations from a social scientists theory have to be considered as cyclical in that Scott and Snyder in 1954 in their proposal for a functional program of professor preparation in physical education stated, and I quote:

If this plan is inaugurated in teacher education, a complete reorientation of the curriculum is necessary, beginning with the personal problems of the learner . . .

. . . An emphasis upon competencies. In harmony with the way learning takes place, goals should be stated in terms of understandings, attitudes, insights, sensitivities, ideals, value judgments, responsibilities, knowledges, abilities, skills, and appreciations . . .

. . . Course taking as generally understood, would not be eliminated but would be made more meaningful because it would follow and be anchored to

real-life experiences. The curriculum thus becomes the actual experiences, while courses, conferences, seminars, lectures, group study, and the like are considered as resources. Experiences would cease to be considered as requirements prescribed by the educational institution; rather they would be selected by faculty and students to meet desired ends. A needed flexibility is provided to meet individual differences, and a needed direction, as well, is given to curriculum planning . . .

. . . A competency is defined as a skill, insight, understanding, qualification, fitness, or ability which is used to meet a life situation. Competencies provide the individual with intelligent ways of doing things or a means of behavior which resolves the tension between the organism and environment. Since learning takes place through experience, the development of competencies must come through that medium. If the individual is provided with sound learning experiences, he should develop the desired competencies. . . .

Contrast these statements with Webers[3] and Dodls[4]—

According to Weber:

Competency-based modes of teaching are those programs in which the competencies to be acquired by the student and the criteria to be applied in assessing the competency of the student are made explicit and the student is held accountable for meeting the criteria.

Competencies are those attitudes, understandings, skills, and behaviors of a teacher which enable him to facilitate the intellectual, social, emotional, and physical growth of children. Competencies are generally specified as objectives; these are of two types: (1) instructional objectives which specify the attitudes, understandings, skills, and behaviors to be acquired by the student, and (2) expressive objective which specify events to be experienced by the student.

Criteria used in assessing the competency of the student are of three kinds. (1) knowledge criteria which are used to assess the cognitive understandings of the student, (2) performance criteria which are used to assess the teaching behaviors of the student, and (3) product criteria which are used to assess the student's ability to teach by examining the achievement of pupils taught by the student.

According to Dodl:

The term competency is applied in these materials to statements descriptive of functional abilities which teachers must exercise in the conduct of their job related activities. The knowledge considered foundational to the field of education is not included in this project. The focus instead is on specification of competency in terms of what teachers can do.

A direct and recognizable similarity in terminology and concept indicates that the theory of competency performance-based teacher education is indeed cyclical and that then we find ourselves returning to the Chinese philosopher's position of **To Know** is difficult and **To Know how to act** is at least twice as difficult.

What now? To borrow a phrase, "The Times They Are A-Changin'—Are you?" As each of us attempts to answer this question, let us be reminded that somewhere within our being there is something of the spirit of Janus, the God of Beginnings and Endings, who is always depicted as facing both ways—Ring out the old-Ring in the new—Keep both in view!

The cynical will say of the Janus stance, "He doesn't know whether he's coming or going." The cautious will say, "He's keeping both points in mind, thus keeping his option open." The impatient may say, "Make up your mind, face one way or the other, and get going."

The final challenge seems to be that of recognizing the worthwhile among the new and the acceptable among the existing. Regardless, this unending search for new and better ways of educating is incumbent on any institution pledged to research, leadership, teaching, and service in teacher education.

At this point, I am reminded that as Colonel John Glenn was circling the globe, he placed his thumb up to the window of the space capsule. It com-

pletely blocked his view of the reality of the world to the extent that the entire world was blocked from his vision.

The relative distance you and I sit with respect to the questions and decisions before us will determine whether we can block them completely from our vision, or conversely, if we can see the reality of the questions and decisions before us and seek satisfactory answers to them.[3]

If relevance was the keynote of the 1960's, so is **accountability** resounding in the 1970's. Competency-based physical education programs, if implemented, might serve well to support this mandate for accountability on the part of teachers to exemplify effective teaching behaviors and students to achieve specific learning objectives.

If implemented, and already several states have legislated this, other states have appointed special committees to study the desirability of the proposal, and numerous institutions have adopted the concept, one may well expect **PROSPECTS** and **PROBLEMS** along this continuum.

	PROSPECTS	PROBLEMS
	CONTINUUM	
1)	Staff re-orientation	Age factor Resistance to change
2)	Student self-pacing on the basis of pre-assessment,post assessment and recycling	Where does the student go who meets the optimum level before the semester ends
3)	Opportunity for development of new teaching strategies media and materials	Rising costs for released faculty time and for development and for raw materials needed
4)	Making explicit and public instructional objectives	Precisely worded behavioral objectives tend to become narrow and trivial and lose the essence of instruction
5)	Achievement oriented	Time controlled
6)	Emphasis on exit instead of entry	Difficulty of teachers to develop precise instruments to evaluate level of competencies for exit
7)	Evaluating student teachers teaching	Adequate financial resources and instrumentation
8)	Being able to enlarge the domain of objectives from traditionally cognitive to an emphasis on performance and consequence	Implementation of this concept-faculty-administration
9)	Develop varied instructional strategies	Misconceptions that modules are in fact synonomous with competency based programs, wherein reality they are merely one of several vehicles by which competencies are achieved
10)	Increased opportunities for personalization of instruction	Defining suitable psychological constructs in order to personalize instruction
11)	Producing better teachers	Defining what an effective teacher is

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Prospects and Problems: Evaluation of Competency Based Education

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The nature of an instructional program may be communicated from two basic vantage points. First, by the objectives of the instructional program, and second, by the instruments and procedures used to evaluate the program. To date, the primary thrusts of competency based programs have been focused on the development and refinement of the program's objectives and instructional systems. It has been my experience that with both the traditional and the competency based program, evaluation is like the weather; everyone talks about it, but no one does anything about it. The focus of this presentation is on the evaluation prospects and problems of competency based programs. My comments are generic to any instructional program, be it teacher education or physical education.

The terms modules, behavioral objectives, individualization, and personalization are adjectives that describe competency based programs from the curriculum and instruction frame of reference. The terms criterion referenced, norm referenced, formative evaluation, and summative evaluation, are concepts utilized by evaluators to view innovative instructional programs. It is the goal of this paper to view these evaluation concepts in relation to a competency based program. Specific attention will be directed at the problem of operationally defining competency.

First, we need to have a common understanding of competency based instruction. From my point of view, at a very basic level, the process of competency based instruction involves specifying behaviorally what is to be achieved; delivering the instructional activities necessary to produce the desired change in behavior and holding the student accountable for a defined level of performance.

The need for competency based instruction is evidenced by lack of clear definition inherent with many traditional programs. On too many occasions, the objectives of a course are ambiguous and the relationship between the final test and the instructional activities is lacking.

Competency based programs must not be viewed as a panacea for all education's ills. One must recognize that many of the basic problems that have plagued traditional programs will also plague competency based programs. A competency based program utilizes instructional technology to individualize instruction. By using this approach students no longer fall asleep in classrooms listening to my boring lectures. They now fall asleep while listening to my boring slide-tape presentations in the learning resource center. Many professionals feel that student grading will no longer be a problem. Unfortunately, this is not true. If anything, the conflict

between a pass-fail and differentiated grading systems is intensified. The origin of this conflict is the central theme of this paper.

A problem central to all educational programs is the development of reliable and valid instrumentation so the evaluation process can function. Much of the instrumentation problem stems from a poor definition of what is to be measured. How can something be measured if it cannot first be defined? From the evaluation end of the process, the strength of a competency based program is the clear definition of objectives. This is the first step in the development of content valid instrumentation.

Presently, I perceive two basic philosophic positions from which evaluation procedures evolve. Unfortunately, these two positions tend to be in conflict. The basic conflict closely parallels Cronbach's[1] thinking concerning the two disciplines of scientific psychology. The discipline of experimental psychology attempts to maximize the variation between treatment conditions, in this case the instructional program, and minimize individual differences within a treatment group. This position places value on all students achieving a specified level of performance. This position is group oriented with two groups: those who have achieved the specified level, and those who have not achieved the specified level. The second position is a psychometric frame of reference. The discipline of correlation psychology attempts to maximize the variation within a treatment condition, and demonstrate how treatment conditions interact, or have differential effects on different samples of subjects. The psychometric position vigorously recognizes individual differences and attempts to maximize these differences. I must fully admit that I am a member of the psychometric camp; however, it is my contention that both positions have strengths and weaknesses and that a viable evaluation model needs to consider both.

A primary problem facing all competency based programs is to operationalize the definition of competence. The operational definition of competence involves: first, defining the behavior desired, and second, setting a criterion or standard that signals the achievement of the specified behavior. This has been labeled criterion referenced evaluation. Criterion referenced evaluation reflects a group difference philosophy in that all students are expected to reach the criterion level. The approach is best reflected in the recent advent of behavioral objectives. Many authors insist that a criterion level of performance must be stated in the objectives. The stated criterion is the standard by which success or failure is determined. Glaser[2] recommended that criterion referenced measures be used to evaluate student achievement when all students are expected to achieve a defined level. These procedures are especially useful for individualized learning packages that have paralleled the growth of instructional technology.

A basic problem of criterion referenced evaluation is finding an acceptable level of performance. Unfortunately, establishing a criterion implies a dichotomous variable of competent or not competent. One must question if learning is a dichotomous variable, or a continuous variable that has been dichotomized. There are few variables in life that may truly be defined as dichotomous. Even sex is a questionable dichotomy. Presently female athletes competing in the Olympics are required to submit a "sex-test" which suggests individual differences exist within the female category. Most dichotomous variables are artificially developed for a purpose.

The notion underlying the concept of achievement measurement is that behavior ranges from no proficiency at all, to perfect performance and that a student's achievement level falls at some point between these two extremes. The point at which the student's behavior parallels the level of proficiency desired signals the successful achievement of the objective. The process of establishing an acceptable criterion of proficiency is a difficult task. For example, what is a competent swimmer? Someone who can swim a pool width, a pool length, a mile?

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[1]Cronbach, Lee J. "The Two Disciplines of Scientific Psychology," **American Psychologist**, XII (1957), pp. 671-683.

[2]Glaser, Robert. "Instructional Technology and the Measurement of Learning Outcomes: Some Questions," **American Psychologist**, XVIII (1963), pp. 519-521.

Ideally, the criterion level reflects mastery of a specified task. Realistically, the criterion level becomes one that the instructor is willing to accept.

Criterion referenced evaluation is a decision making process with the chance that the criterion may be set too high or too low. I personally visited an institution that required 100 percent achievement on its instructional modules. Psychometrically, I found this most interesting; it denies the existence of measurement error and assumes all measurements are of ratio scale. For many educational decisions, criterion levels are logically established. The process advanced in the discrepancy evaluation model of Provous[3] may be useful for establishing criteria of competence. Basically, evaluation is the decision-making process of comparing performances to a standard. The process of descrepancy evaluation is to examine the difference between performance and the standard. If performance is below the specified standard or criterion, a discrepancy exists. The discrepancy may be due to poor performance or an inappropriately established standard. The model further contends that with time rationale criterion levels will evolve.

If the assumption that achievement is a continuous variable which is normally distributed, the normal curve is a useful model for establishing competency levels. Norm-referenced procedures convey the student's level of proficiency relative to other students. This is a psychometric approach designed to identify individual differences in achievement. Many professionals have rejected the use of the normal curve to establish criterion levels. Evaluation always asks the question: compared to what? We live in a norm referenced environment in which the norm offers a realistic basis for comparison. Joe Carbonari[4], one of my Houston colleagues in the educational measurement department, aptly tested the logic of establishing criterion levels void of a normative frame of reference with this anology. "A rock shall be deemed a boulder when it meets the criterion for being a boulder, but we shall not use information about other boulders in setting these criteria, or, we will certify that this bird can fly when he meets the criterion for flying but we will not use the flight of other birds to guide us in choosing this criterion."

In our basic instructional program at Houston, the instructional objectives of the body conditioning course of weight training pertain to the development of an adequate level of muscular strength. In terms of competency based instruction, the question to ask is: What is an adequate level of strength development? Using regression analysis and over 500 students who successfully completed the course, performance levels for different body weights were developed. Utilizing the psychometric procedure of residual scores, it is possible to determine if a student has achieved an average level of strength development for his body weight. This is a norm referenced system and the residual scores are normally distributed. This procedure offers a rational decision on levels of strength competence and offers each student a realistic goal to achieve. In fact, many students attempt to exceed what is average for their body weight. The failure to use normative data to operationally define competency levels is a denial of the existence of reality; norms are reality that offer realistic standards that facilitate the decision making process called evaluation. Unfortunately, data are not available for all educational decisions and many educators are not motivated to become data-based.

Often times, the measurement system used to evaluate competence dichotomized a variable that may be better represented on a continuous scale. To illustrate, let us assume that an objective of an intermediate swimming unit is to teach students to swim the basic strokes efficiently. Swimming efficiently could be operationally defined by the students ability to swim 50 yards with each stroke; thus, we would have dichotomous variable of success or failure. However, in reality the distributions of performance may be bimodel with degrees of failure and success. At the 1969 meeting of this organization, I presented a paper[5] on the evaluation of

[3]Provas, Malcolm **Discrepancy Evaluation** (Berkely: McCulchon Publishing Co., 1971) 380 pp

[4]Carbonari, Joe "A Grading Problem?" Unpublished paper on student grading with a competency based program University of Houston, 1971

[5]Jackson, Andrew S. and Pettinger, John. The Development and Discriminant Analysis of Swimming Profiles of College Men. **Proceedings NCPEAM** (Minneapolis: NCPEAM, 1969), pp 104-110

swimming in which three different groups of varied swimming ability were compared. One group was composed of students enrolled in an intermediate swimming class, the advanced group consisted of students qualified as swimming instructors and lifeguards, while the last group were members of the Indiana University team who qualified for the 1968 Olympic team. Five of the tests were the number of strokes required to swim one length of the pool and a sixth test was the distance one could swim during a 20-minute interval. Each of these tests could be scored on a pass-fail system, an example being the student could or could not swim the front crawl one length of the pool. As was expected, the superior groups achieved the superior scores. Thus, there were degrees of efficiency. Within each of the groups, variance in swimming ability existed. Mark Spitz certainly demonstrated in Munich that all varsity level swimmers were not simply competent or incompetent.

A viable evaluation system needs to consider both group differences and individual differences. Students must be able to swim one length of the pool before they can be evaluated on how fast or efficiently they could swim the length. The concepts of formative and summative evaluation as developed by Bloom[6] to produce mastery learning consider both criterion referenced and norm referenced procedures. Formative evaluation is useful for evaluating small, well defined units or modules of instruction. Formative evaluation is especially relevant to evaluate precisely defined objectives. The decisions of formative evaluation are used to analyze and diagnose what must still be learned. Formative evaluation is a criterion referenced model designed to individualize instruction. The main purpose of formative evaluation is to determine the degree of mastery of a given learning task and to isolate the tasks that are yet to be mastered. Bloom's mastery learning has been directed primarily at the cognitive domain, and the formative tests are designed to maximize the between group variance and minimize the within group variance.

Summative evaluation is directed toward a more general assessment of the degree to which the larger units of instruction have been achieved. This evaluation procedure is useful in the domains of learning which cannot be as explicitly defined in behavioral terms. Summative evaluation is norm referenced designed to detect individual differences in achievement. The tests used for summative evaluation are designed to maximize the within group variance. Summative evaluation is concerned with degrees of achievement within a normal distribution.

It has been my experience that modulized, self-paced instruction does produce reliable true score variance in achievement. For an undergraduate tests and measurements course in physical education, I have developed eight instructional modules on descriptive statistics. Every module has a self-administered module post-test which is designed to help students evaluate their achievement and diagnose their weaknesses. Students were allowed to take a summative test after successfully passing formative tests that required the student to calculate 15 different statistical procedures. All students have been able to successfully complete the various formative steps. The summative test was a 25-item multiple choice test designed to sample the higher cognitive behaviors of comprehension, application, analysis, synthesis and evaluation. The scores from last semester's students ranged from 4 to 22 and the Kuder Richardson 20 reliability was estimated at .82. The formative system represented achievement as being essentially the same while the summative evaluation revealed that reliable true individual differences in achievement existed.

Because of individual differences in personality constructs, interest, and aptitudes it is not realistic to expect all students to perform at the same level in all areas. Formative evaluation with criterion referenced standards is useful for establishing a lower bound group performance level. Summative evaluation with distribution norms may be used to establish criterion levels of performance and to identify strengths possessed by students.

[6]Bloom, Benjamin S., Hastings, J. Thomas and Madous, George F., **Handbook on Formative and Summative Evaluation of Student Learning**, (New York: McGraw-Hill Book Co., 1971), pp. 923

I see one real problem in the developing of competency based programs: the total dependence on a formative, criterion referenced evaluation model. There is a need to identify criterion levels of performance, but formative procedures will identify minimal levels that produces what our dean refers to as a "safe teacher." Presently, we are aware that the teaching job market is tight. Teacher education institutions need to be selective in training and certifying highly competent teachers. Highly competent is norm referenced which compares the highly qualified to the less qualified. A summative system is needed for this purpose.

At this stage of development, safe criterion levels need to be logically and normatively defined. These safe levels will serve as "bench-marks" for the evolution of valid criteria of competence. We need a starting point. The prospects of the future suggest the use of many combinations of variables to define competence. To illustrate, we know that power is equal to the product of force and velocity. Assuming that "X" amount of power is judged as the criteria of competence, many different combinations of force and velocity are possible to meet the "X" level of competence. This suggests the need to view competence in a multivariate mode consisting of profiles from many relevant variables. In this mode, a weakness in the force component must be off-set by a strength in the velocity component. This view recognized that both Larry Csonka of the Dolphins and Larry Brown of the Redskins may be judged as competent backs in professional football, but the reason for competency is due to important characteristics unique to each individual. The advent of electronic computers and multivariate statistical procedures offers the technological capacity to move in this direction.

The notion of accountability is predicated on the establishment of reliable and valid instrumentation and the refinement of relevant criteria or standards. The traditional program tends to be cognitive based; whereas, a competency based program is performance based and consequence based. This requires the evaluation system to determine if a teacher can teach and if their students achieve. Needless to say, we are in for an interesting, frustrating and expensive era.

Creative Teaching Approaches in Teacher Preparation

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"It is now a fact that nearly all of us can become more creative, if we will. And this very fact may well be the hope of the world. By becoming more creative we can lead brighter lives and live better with each other."

Alex Osborn, **Applied Imagination**
N.Y. Charles Scribner and Sons 1953, p. 397.

We think of creativity in terms of talent in such individuals as musicians, artists and writers. We do not very often think of an educator as a creative person and it is even more seldom that we think of a physical educator as being creative.

We are constantly throwing terms around today such as innovation, change, originality, imagination, newness and creativity but to many of us these terms are confusing when used in an educational setting. To me creativity (the subject of this presentation) is an item or idea which is new and different to the individual who

thought of it. It involves a new concept or the adaptation of an old concept which appears in a new way to an individual.

Educators have been creative for years, but it was not until the mid 1950's that creativity per se became a special area with which educators concerned themselves.

One of the "in" concepts today is creative or innovative teaching. In the last two years many an author has submitted a manuscript with the term creativity in its title and in many cases that catchy word has enabled the author to have his material published and/or purchased. This is a starting point for our profession but let's look at creativity and teaching a little more closely. Just what is creativity?

Creativity is a new sport or a new technique in executing a skill. Creativity is an unusual and weird class. Creativity is enthusiasm and excitement. Creativity is reading a book and allowing the mind to wander. Creativity is a poem.

Sit Up
Bowels—Adominis
Obliquus—Ecstacy
Agony
Up—Down
Sit Up--Sit Down
Hurt, Pain, Smile—
Pleasure
FLAT

Creativity is a word—a word of many different characteristics and styles.

Creativity is the use of gimmics and gadgets such as tools, odds and ends, and food. Almost any item can be creatively employed in a class situation. Food and other items help to lend informality in the classroom and . . . . creativity is informality in the classroom. Creativity is thinking. As in most subject matter areas creativity involves the use of basic knowledge and facts. There must be a working knowledge of the subject matter at hand before maximal creativity can take place. The more knowledge in an area, other items being equivalent, the better chances of successfully applying creativity.

Creativity is found in many places. Creativity is found in the gymnasium and the classroom. Creativity is found in the office with both the teacher and the student. The open and free atmosphere of an office with the absence of physical barriers such as the usual large desk, aids in creativity enhancement. Creativity is found in game situations. Creativity is found in leisure activities such as backpacking in the mountains, swimming in the ocean and in almost all aspects of life.

More specifically what about creativity and teacher preparation—such as methodology, discipline, analysis of skills and organizational problems? In other words how does creativity take place in our professional program? Lets take a look at major methods preparation at Appalachian State University. We do not have a 3 hour methods class per se. We have incorporated methods and activity into what we call skills and techniques classes for 3 hours credit each. The purpose is to practically expose the student to skills and methods involved in learning and teaching a specific skill.

Why not allow your students to experiment with developing an effective serve in volleyball instead of having the instructor giving it to them? Let them analyze the skill by practice and observation in small groups. Allow the students to write down their analysis of the skills and techniques involved. Then allow them to discuss their findings in small informal group situations and finally let them instruct the **teacher** to perform the skill movements through the directions.

Why not give the major student a change of pace in learning skill fundamentals and rudiments of game situations by allowing them to create new strokes? Crazy? Yes, but also an invaluable learning experience and a step in implementing creativity into teaching.

Give your methods majors a chance to create in a practical teaching experience. Here you can see individual instruction of majors teaching non-majors

in a large volleyball activity class. This concept has proven to be very successful over the past two years. The 3 hour major classes are scheduled simultaneously with 1 hour activity classes. Both have their own teaching stations so that it is up to the two instructors involved to work out a teaching practicum. All major methods classes are now scheduled simultaneously with existing 1 hour classes at A.S.U. It is indeed rewarding to see a teacher being created.

Add a flavor of the unknown to your major classes. In kinesiology and skills analysis we talk about spin, speed, trajectory, power, etc., in regards to analysis and teaching. Here is an example of ball flight analysis where the students can see only the ball, not the performer. A number of identical performances are attempted and the students watch for spin, trajectory, speed, etc. to determine faults, if any, in the performer whom they cannot see. The most common skill errors which can be detected by ball flight observation are used. The students sitting on both sides of the court for greatest ball visibility observe the series of hits and then write down the mistakes on a dittoed sheet of paper provided by the instructor. After a variety of skills are performed a number of times each, and the analysis is complete, the students are able to view the performer who was videotaped from behind the curtains. The analysis is completed by taking each skill and its mistakes and discussing them among the group. To the students it is an amazing experience to actually understand what one can learn from watching the flight of a ball.

What about some exposure in a graduate major preparation such as a class in facilities? Why not make class projects a creativity and practical experience instead of the typical pencil and paper term project? I am not condemning this type of project as they are extremely important to the student. But, why not give the class members some practical benefits in the form of creative class projects? What you are about to see are the term projects of a graduate class in athletic facilities. Both a pre project and a post project picture will be shown of the various facilities attacked by the class. Some concepts should be mentioned when attempting to undertake projects such as you will see. Any physical changes in existing facilities should be cleared through the necessary administrative channels such as your Department Head through to the head of Plant Maintenance and Business Affairs. Monies can be obtained for the projects from sources such as major clubs, special funds, and class donations. It is also very possible that the school will donate materials and/or money for inexpensive improvements, especially if the school had thoughts to undertake these changes for the future.

Here are a few views of a weight room project. First, without a dumbbell rack with the weights scattered around the floor which created both a safety hazard and a problem for cleaning maintenance. An old wire spool was acquired free of charge and covered on the top with a piece of plywood. Holes were cut in the plywood so that the dumbbells would remain stationary on the rack. The whole affair was then painted with black enamel. This storage area was used as a locker room by weight club members. It was extremely unorganized and did not adequately serve its purpose. Carpeting was placed on the floor and combination bench—racks were built for clothes—changing and storage. The room was cleaned up and various pictures were mounted on the walls in an attempt to provide a more pleasant and appropriate atmosphere. The total cost of the weight room improvements was less than $13.00.

Here you see a typical drab fifteen year old classroom with blank walls. The room was not overly conducive to learning so a project was carried out by six students the purpose of which was to provide a better classroom environment. The walls were painted a bright yellow and a darker yellow trim was placed on the accenting woodwork. Artificial bricks were placed on the rear wall for accoustical purposes as well as for a visual brightness break. A large bookcase and two bulletin boards were also put in the room. Total cost of this project was about $30.00.

This is the women's cage area used for women's athletic training and for the checking out of physical education gear. This was an expensive project totaling approximately $137.00. The room was carpeted with indoor-outdoor carpeting and contact paper was placed on the old steel cabinets and other hard surfaced items.

The walls were repainted, wall hangings were hung and some reupholstery work was done on an old sofa. The room is still a training room—checkout area, but it now also serves as a meeting room in the evenings for various clubs and it is a semi-lounge area for the women during the day.

Here is a local campus wooded area located near our new continuing education center. The area was not being used at all. It was converted into an initiative course designed similar to the Outward Bound concept of developing group cohesiveness and self challenge. Note that the surroundings are still in tact, but space utilization has been acquired. This course can be used by various graduate and undergraduate courses including adaptive physical education, fitness, elementary physical education, seminars and special physical education. Total cost was under $5.00.

Here is our swimming area which was lacking signs indicating rules and directions on pool use. As you can see all projects were not great successes. As a matter of fact some were dismal flops as with the pool project. There were supposed to be a battery of large signs throughout the pool.

OOPS! Well, then again some projects really were a success from pre to post changes.

Creativity is a class in itself. You may ask why should it be a class in itself in physical education? Physical Education has a great potential for being a leader in the field of creativity. As a general rule we already explore creativity in our modern dance classes and gymnastics classes. The movement education explosion at the elementary school level is also a large inroad into creativity. The diversification of course offerings and the freedom and openness of the gym and/or playing field are also contributable factors for creativity enhancement in our classes. Flexibility and adaptability are two other keys to creativity with which, as physical educators, we have been constantly confronted by weather problems and multi-gymnasium usage. And the old adage of the settings of physical, social, emotional and intellectual aspects of physical education give an extra dimension to the soundness of creativity in physical education since creativity is found in all of these settings.

The following areas can be included in a class of creative health and physical education: Bionics, Futuristics, Creative Writing, Synectics, Brainstorming, Psychodramatics and Environmental Adaptations.

Lets take these areas and give a little background on each beginning with psychodramatics. Psychodramatics is the improvised acting out to afford catharsis and socio-psycho learning concerning any given item or thought. Here you see a class learning about the evolution of various sports such as golf and tennis. Why not make our classes have relevence and meaning to the student through acting or drama, much of which can easily be brought to the classroom? Three years ago when student protests were in vogue I had a group of long haired, chanting, placard carrying actors march into and take over a physical education graduate class without the class members awareness that these intruders were actors. The class members obtained the true feeling of a protest and were much better equipped to discuss problems concerning protests. Using psychodramatics to view the past may also help in placing the student in a true maximal learning environment.

Futuristics is another creative approach to teaching. Futuristics is the predicting of the future for five, ten, or fifteen year projections. What will sport be like in 10 years? What new sports will exist? Have your students invent future games with new ideas in skills and rules. What will the future hold for physical education?

Environmental adaptations can also aid creative approaches to teacher preparation. An environmental adaptation is the alteration of the physical atmosphere of a given classroom through which one can actually alter the psycho-emotional environment of the students. Why not make a classroom a digestive tract and trace a piece of food through the system with the use of sound, movement, taste, smell, and touch? Make the classroom into an athletic arena with 85,000 spectators. Here is a design for an interdisciplinary classroom where the environment can be altered in many ways such as moving walls, changing textures on the walls and floors,

and complete color tone and brightness control for all portions of the room. The designed air conditioning-heat plant is able to change temperatures, humidity and odor at a touch of a switch. The concept of this plan is to adapt the environment to the class situation.

Synectics is another method of approaching creativity in teacher preparation. Synectics is a structured, repeatable procedure to creative problem solving. This is an unusual approach to creativity in that you must use a structured guide in order to maximize creativity. Synectics lends itself to the coaching aspect of activity which in itself is highly structured.

Another technique which can adequately be used in training teachers is Bionics. Bionics is the process of observing the basic principles of nature and then emerging with applications of the principles to meet the needs of mankind. How can a flower such as this be used in physical education? The common cocklebur flower was the inspiration of the manufacturing of velcro—the fastener used on most handball gloves today. What socialization factors are evident with this prairie dog colony and a physical education class?

A last technique which can be employed in teacher preparation creativity is brainstorming. Brainstorming is a conference technique of solving specific problems, amassing information, stimulating creative thinking; and developing new ideas by unrestrained and spontaneous participation in discussion. Why not allow your class as a group to decide on what courses to offer in various aspects of your curriculum? Let your class solve specific skill problems by brainstorming together. Why not brainstorm rules, development and history of a sport?

Creativity is a bag of goodies that you received **today.** Creativity is what you can do with your bag of goodies **tomorrow.** Seriously take your goody bag and in your leisure see what you can create with it. It may sound a little silly, but it is a starting point to help ignite some creative potential in our classes.

Creativity in teacher preparation is a poem:

Two roads diverged in a wood, and I
I took the one less traveled by
and that has made all the difference.

Robert Frost

Creativity is many different things from Bionics to change. Creativity is freedom, it is flexibility and adaptability. Creativity is openness, newness and it is enjoyment. Creativity is, or at least can be, an important aspect of physical education. Creativity is teacher preparation! Creativity is the beginning!

Videotape Data Bank Project

WILLIAM G. ANDERSON
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The Data Bank is a collection of videotapes of physical education classes to be used as a data resource for descriptive-analytic research on teaching, as well as a resource for teacher education.

The basic intent of descriptive-analytic research on teaching is to accurately describe classroom events as they occur in their natural settings and then study relationships among events in an effort to better understand educational processes. The descriptive systems developed in connection with this type of research provide

unique frameworks for examining the teaching process and, thus, have been employed successfully in teacher training programs. Although descriptive research has flourished in many areas of education, it has yet to gain widespread acceptance in physical education.

COLLECTING THE VIDEOTAPES

In the Fall of 1971, a group of ten graduate students and myself, all interested in pursuing descriptive-analytic research on teaching in physical education, initiated the Data Bank Project. Our intent was to collect a substantial number of videotapes of physical education classes to be used as raw data for our individual and joint research efforts. Teachers College provided the funds to purchase the cameras, videotape recorder, monitor and tapes. A sample of schools within geographically reachable limits was selected and appropriate arrangements for videotaping were made. During the calendar year February 1972-January 1973, teams of three project members travelled to sixty schools in three states and collected tapes of eighty-three elementary and senior high school physical education classes. Additional tapes are to be added to the collection depending on the future availability of personnel and resources.

The schools included in the sample were chosen in an effort to achieve diversity and, to the extent possible, representativeness. Five counties (two in New Jersey, two in New York and one in Connecticut) were selected on the basis of diversity in: urban-ruralness, population density, per capita income and location within states. Four school districts within each county were randomly selected; one high school and two elementary schools within each district were randomly selected; within each high school one boys class, one girls class and, when offered, one coed class were randomly selected; and one class from each elementary school was randomly selected. Thus, the total sample included: forty elementary classes (one per school), twenty girls high school classes and twenty boys high school classes (one boys' and one girls' class per school), and three coeducational high school classes. Only indoor classes were included in the sample due to the limitations of the videotaping equipment used.

Every effort was made to tape classes as they naturally occurred. Target classes were not selected until the day of visitation so teachers did not know whether, or which one of, their classes would be taped. The teachers involved were urged to "do what they would normally do," and to avoid specially prepared demonstration lessons. Cameras were placed unobtrusively in a corner of the gymnasium away from any activity areas. We were somewhat surprised to see that the strategy appeared to work. With few exceptions, the videotaped classes closely resembled other casually observed classes taking place in the same schools.

Two taping systems were employed. System I used two cameras with wide angle lenses and displayed a horizontally split screen picture on the monitor which covered all events taking place in the gymnasium. System II used one camera with a zoom lens which maintained a close-up of the teacher while a second camera with a wide angle lens focused on centers of action; these two images were also displayed as a horizontally split picture on the monitor. A cordless microphone with an F.M. Tuner was used to record the teacher's remarks. The taping procedures were detailed in a training manual which was used during all taping sessions to insure uniformity in the resulting tapes.

DEVELOPMENT OF DESCRIPTIVE SYSTEMS

Concurrent with the collection of data bank tapes, project members were engaged in the development of descriptive systems. System development normally involves the following stages: (1) Selecting and specifying a conceptual framework, (2) defining observable categories of behavior (or events) based on the framework, (3) designing coding procedures for use in the recording of observed behavior, and (4) testing the reliability of the system. The accumulated data bank tapes were used in all stages of system development.

At present, several descriptive systems are in various stages of development.

They are uniquely designed to catalogue events in physical education settings. They focus on several different dimensions of the educational process including: the distribution of teacher behavior by professional function, the distribution of student behavior, the in-class decision-making process, goal setting, regulating the learning environment, augmented feedback, pedagogical moves, and non-verbal communication.

ANTICIPATED OUTCOMES

Once developed, most of the systems will be used to code events on the eighty-three data bank tapes. Codings will be computerized, tabulated and summarized. The published results should constitute a relatively comprehensive description of "what happens in physical education classes"—i.e., how teachers provide augmented feedback, how decisions are made, how teachers and students spend their time, etc. Our hope is that this rather detailed description of the state of the art will find many uses in teacher education programs and in the ongoing process of curriculum development in schools. Perhaps it will even be useful to those currently involved in developing competency based training and certification programs.

An equally important payoff of this project is likely to be the descriptive systems themselves. Our hope is that many of them will serve as useful tools in the pre-service and in-service training of teachers. Some of the systems may be used by supervisors (much as the old rating scales were used) to record and analyze the performance of novice teachers. More appropriately, the systems are likely to be used by teachers to monitor and analyze videotape recordings of their own teaching. Along with other researchers in this field, we believe that using descriptive systems as "mirrors of teacher behavior" is perhaps the most valuable potential outcome.

A somewhat more remote and elusive outcome may be the identification of desirable teaching behaviors or teaching strategies. The systems might be used to record teacher behavior while concurrent measures of change in student behavior are taken. Then correlational studies might be employed to identify more or less effective strategies. This approach has already been used in other fields with modest success.

Finally, some ancillary benefits accrue to a teacher education program which has access to a videotape data bank. It provides a marvelously rich resource for all classes involved in the study of teaching and curriculum. The tapes can be used as a "real world base" for examining theoretical models and can also serve as a direct resource in laboratory training programs designed to modify teacher behavior.

Try It, You'll Like It

JAMES R. EWERS
University of Utah

SLIDE FILM NARRATION

The youngest of the eleven colleges at The University of Utah is the College of Health. Under the leadership of Dr. O. N. Hunter, the College of Health offers numerous programs in the divisions of health science, leisure science and physical education. Located in the new $11 million complex, the College enrolls more students in its basic instruction activity program than any other program on campus. Last year more than 13,000 students enrolled in some 41 different sports activity classes. Each student selects courses on an elective basis since the graduation requirement of physical education was rescinded four years ago. These classes are graded on a credit/no credit basis which has shifted the focus of "working for the grade" to the interest of learning sports skills, techniques, and strategies to more fully enjoy the leisure time that awaits all of us. The scope of physical education has broadened to fulfill needs of many more students. No longer do students need to be highly skilled in catching and throwing balls, nor does a person need to be strong or possess the ability to run fast.

It must be recognized that the physical education facilities at the University of Utah are among the best in the country. The natatorium includes three pools, an all-purpose instructional pool, a competitive pool with electronic timing instruments and a diving pool. Four double gymnasiums, a gymnastics room, six handball courts, a weight training room, a matted room for wrestling and judo, carpeted dressing facilities, a faculty exercise area, a physiology laboratory, classrooms and offices are among the facilities in the complex. The 15,000 seat special events center is the home of the running redskins and the entertainment center of the campus. Such outstanding performers as Bill Cosby, Burt Bacharach, The 5th Dimension, The Carpenters and many others have performed in the accoustically perfect special events center.

The geographical setting of the University in the State of Utah provides the person who enjoys the out-of-doors almost unlimited opportunities for year round recreation. Skiing the greatest snow on earth attracts more than 100 faculty and 1300 students each winter quarter. In order to provide classes for all abilities, eight distinct levels of instruction are offered by highly competent teachers, beginning with the students who need help just standing on skis to the expert skier. Cross country skiing is gaining in popularity since being introduced in 1971.

One of the new additions to physical education is sailing. Instruction in the theory of sailing is conducted in the natatorium with the aid of two large fans. Boating safety and the skills to handle different boats is an integral part of this exciting and rapidly growing sport.

Some of the more traditional team sports such as basketball, volleyball, soccer, and field hockey are still some of the best activities to get a vigorous workout in a short period of time. However, individual and dual sports comprise the majority of the class offerings.

Aquatic activities include instruction in elemeniary, intermediate, and advanced swimming skills, life saving, water safety instruction, diving and water polo.

A faculty of experienced teachers provides expert instruction in almost all activities. Most of the teachers are outstanding performers in their respective specialities and have taught physical education to different age and ability levels. Naturally any university program is dependent upon students, in order to be successful. People in Utah are concerned with their health, their physical well being, and are anxious to learn the skills to enjoy the "different world of Utah." The Physical Education Division is presently not prepared to offer enough classes and sections to enroll every university student but every effort is made to accomodate those students who request admission to classes. However, the program is constantly adding new classes and more sections. If you have been turned away from a class, don't give up, register again. If you have not enrolled in a class, Try It. Yoy'll Like It.

INTRODUCTION

Perhaps the phrase "Try It, You'll Like It" has been overused by many advertising agencies but it has been most appropriate for the Division of Physical Education at the University of Utah to assist in the promotion of the basic instruction program. The previous slide presentation is one of the techniques that has been adopted to try to help "sell" physical education to the 20,000 students enrolled in the University.

Four years ago, the University of Utah Faculty Senate approved the recommendation of the Executive Committee that no course would be required of all University students and that all one credit hour classes would be graded on a credit/no credit basis. What did this mean? Since physical education was one of the two classes that was still being required of all students and the only one credit hour class, it was quite obvious that the basic instruction program of physical education was being abolished in a very polite, tactful, sophisticated manner as only faculty senates can do. At that point many of us realized what it is like to be a member of a football coaching staff where the President of the University just announced that the football program might be eliminated unless the team is able to win all of their 10 games this coming season before capacity crowds.

I'm sure all of us have been placed under a degree of pressure at some time. In fact, that very pressure has driven many of us out of the coaching profession. Nevertheless, the faculty in the Physical Education Division was faced with the possibility that several positions might very well be eliminated if the enrollment declined sharply in the ensuing year. Since I was the newest member of the faculty and the person responsible for the basic instruction program I began to realize that it might be best if I did not bother to unpack my bags.

Purpose. My purpose today is to share with you some of the experiences that we have had throughout the past three years when faced with the reality that our program of basic instruction must survive on its own merits.

It was of utmost importance for those of us without the security of the requirement to carefully analyze, weigh and implement those changes in physical education which would enhance our program. Numerous tasks were indentified and very little was left to chance.

CRITICAL DEVELOPMENTS

Student Involvement. The process of involving students on the Physical Education Service Program Committee and requesting all students to feel free to suggest ideas to the Division Chairman helped to create a feeling that the program was for them. Without exception, every suggestion for a new activity to be included in the program or a change in procedure was given careful consideration by this committee. I must admit that it took several committee meetings and a lot of persuasion to convince some rather conservative faculty that karate and yoga should be included in the basic instruction program. To most of us karate had the connotation of "kill" and yoga suggested a spiritual or self hypnotic approach to relaxation

and exercise. However, everyone was willing to listen carefully, investigate thoroughly and accept new ideas with an open mind. Again, we tended to accept the theme, Try It, You'll Like It.

This committee even made such major changes as eliminating a standard uniform policy and girls wearing bathing caps in swim classes. These changes may seem quite small to many of you but try to convince a pool custodian that he is here to serve the students.

Scope of the Program. The scope of the physical education basic instruction program has broadened to include additional classes in judo, karate, yoga, scuba diving, Mexican folk dance, Greek folk dance, tap dance, international ballroom dance which are conducted on campus. However, the majority of the expansion is taking place away from the campus, utilizing public and private facilities. These classes include trapshooting, hunter safety & sport shooting, ice hockey, cross country skiing, roller skating, sailing, kayaking, cycling, rock climbing, and horseback riding.

The administration of most of these activities is conducted in a similar manner. For example, sailing is contracted to a private agency, in this case, Salt Lake Sails Company. This is a business owned and operated by a young couple who are primarily interested in the sale of boats. When I approached them about the possibility of assisting us with the development of an instructional sailing program they were delighted with the idea. In fact, they were in the process of investigating ways to create more interest in the sport of sailing in Utah. After discussing the numerous details relating to student costs, instructor salaries, course content, use of boats, university facilities, available lakes, etc., we decided upon the following:

1. They would serve as the instructors and receive payment for their services from the University.
2. Salt Lake Sails Company would furnish all boats including dingys, catamarans and sloops.
3. Students would pay a $15 per quarter "use" fee to Salt Lake Sails Company as a rental for all equipment.
4. Classes would meet at the University, utilizing a classroom, the natatorium and sailing experience would take place on the Great Salt Lake, Utah Lake, Rockport Lake, and Pineview Reservoir.

With this arrangement the students get expert instruction from an experienced sailor and the use of some $20 thousand worth of boats and the University has no investment and no maintenance. To my knowledge the $15 fee has not deprived any student who wants to register for sailing.

Arrangements with a riding stable, an ice skating rink, a gun club, a roller skating rink, and a kayak dealer have been similar.

One of the most exciting ideas for expansion has been approved and is being implemented Fall Quarter 1973. This is an "Outdoor Adventure Workshop Series." This is to be a series of workshops concentrating instructional and performance experiences into a short period of time, taking advantage of long week-ends, holiday periods and days between quarters. These workshops will include: (1) mountain backpacking, (2) desert backpacking, (3) kayaking, (4) river boating, (5) horse packing, (6) cycling, (7) scuba diving, (8) orienteering, (9) snow shoeing, (10) cross country skiing and other outdoor recreational activities. The purposes of this outdoor adventure program are (1) to teach the skills appropriate to preparing and participating in the designated activity, (2) to instruct students to preserve the natural resources, and (3) to assist students in making sound, safe judgments while participating in outdoor activities.

One outstanding feature in adding many of the above classes is the appeal to the lesser coordinated student. No longer should a student have an unsuccessful experience in physical education if he cannot catch or throw a ball, or if he does not possess the speed and strength to keep up with his classmates.

Employment of Para-Professionals. With the additional class offerings it is virtually impossible to employ full-time faculty competent enough to teach the variety of activities in the program. Para-professionals are employed to instruct

in many of the following classes: scuba diving, horseback riding, skiing, judo, karate, hatha yoga, trapshooting, hunting safety and sport shooting, ice hockey, roller skating, kayaking, rock climbing and selected dance classes. It is interesting to note that the credentials of most of these para-professionals include at least a bachelor's degree. At the University of Utah, faculty members in other departments are teaching hunting safety & sport shooting, kayaking, judo, folk dance, and skiing. Most of these para-professionals are expert performers in their respective sports and have taught the activity in a school or at a commercial studio.

Promotion. This is one of the newest dimensions included in the total program of physical education. Traditionally, advertising and promotion have been excluded from most physical education programs. No longer is this practice in existence. The previous slide presentation is viewed by hundreds of students each quarter just prior to registration. In addition, feature articles appear in the local newspaper at least once per month. The University student newspaper is also a very effective means of communicating to students. Brochures are constantly being developed and revised to announce new programs and regulations. Bulletin board displays are effective. However, it is recognized that the best promotion is through student intercommunication. In other words, satisfied students will be the best promoters of a good program.

In-Service Instructional Workshops. Since the basic instruction program is taught by graduate teaching fellows, part-time para-professionals as well as full-time faculty there is a relatively high rate of faculty "turn-over" each year. In order to get a maximum effort from all teaching personnel in each class several instructional workshops are necessary in order to orient and assist new faculty. It is difficult to measure the effect of in-service workshops on teaching performance. However, you would be amazed at the quality of teaching being generated by a group of faculty who realize that their jobs are at stake if there are no students enrolled in their classes.

University Faculty Involvement in Physical Education. A special effort has been exerted to try to get additional university faculty involved in the instructional classes and in the use of the facilities for recreational use. Faculty and their spouses are invited to participate in the instructional ski program. More than 100 faculty and spouses take advantage of this opportunity each winter quarter. In addition, more than 800 faculty have rented lockers in order to use the facilities at their leisure.

Co-educational Classes. With the exception of an exercise for fitness class especially designed for women, a wrestling class for men and separate basketball classes, all other classes are open to men and women on a co-educational basis. The fact that there is no designation of facility spaces for men and women, except for dressing areas, encourages men and women to be together for physical education activities.

Credit/No Credit Grading. The use of the credit/no credit grading procedure is becoming more and more predominant within departments and colleges at the University of Utah. A larger responsibility for learning the content of the course rests with the student in a credit/no credit class. Students are more receptive to enrolling in new and unfamiliar subject areas when a credit/no credit grading procedure is possible.

In the basic instruction program the credit/no credit procedure appears to compliment the elective program. Students no longer seem to be under the pressure to earn a specific grade. Their interest is focused on the skills and techniques that can be learned in the class. Instructors are concerned with teaching each individual, attempting to help him develop and improve to the maximum of his ability within the limitations of the time available.

Evaluation procedures are restricted to giving the students a personal assessment of their abilities for purposes of information, classification, motivation and guidance rather than for grading. Students enroll in classes because they are interested in pursuing the experiences of the class. The problem of absences and make-ups is basically eliminated with the credit/no credit grading procedure and the elective program

PROGRAM EVALUATION

I'm sure most of you are very much interested in the results of our past three years of functioning in a completely elective basic instruction program. I'm not going to try to measure the results of our experiences in terms of success because that word has so many different meanings. However, I will relate to you some very objective data which have been accumulated.

To most of the faculty in the Division of Physical Education at the University of Utah, the enrollment figures seem to be most important at the present time. This has a lot to do with their retention as a faculty member. As our Dean, Dr. O. N. Hunter has stated on many occasions, "Remember, we are here to serve the students, without them we wouldn't be here."

Growth figures for the entire University over the past five years indicate a percentage increase of 5% in 67-68, 7.5% in 68-69, 7.2% in 69-70, 4.2% in 70-71 and 9.5% in 71-72. Enrollment figures for the Autumn Quarter of 1972 show a slight decline in enrollment from a year ago. In the meantime, the total enrollment figures in the basic instruction or service program show a total of 7,843 in 66-67, 7,807 in 67-68, a decline to 7,382 in 68-69. It was at this point that the requirement of physical education was eliminated. In the first year of the elective program, the enrollment increased approximately 1500 students over the previous year to 8,706. The second year, 70-71 the increase was even more pronounced to 11,370. Although the slide does not show the total of the 71-72 year, this total was 13,874.

The percentage increases are shown from 66-67 to 70-71. Note the total increase of 39.9%. This compares to the total University enrollment percentage increase of 20.5% over the same period.

The number of classes offered each quarter from 66-67 to 71-72 illustrates the expansion of the program in scope as well as in numbers. The 436 classes offered in the 70-71 year served 11,370 students with an average class size of 23.8 students per class.

At the conclusion of two years operating with the elective program, a very complete and careful evaluation was conducted by three graduate students who were unfamiliar with the program. Their evaluation revealed some definite strengths in our program as well as some weaknesses. One of the major tasks in this evaluation was an attempt to assess the quality of instruction that students were receiving. From a random sampling of 933 men and 431 women, it was interesting to note the relatively large numbers of upperclassmen and graduate students enrolled in physical education classes. These students were asked to evaluate the instructor in terms of his ability to communicate, motivate and his teaching methodology. In addition the students were asked to respond to questions attempting to assess the value of the course in terms of participation, intrinsic and carry over value, and an overall rating of the class.

The instrument used in this study was adopted from the tool developed at Queens College in New York City. It appeared to be very adequate for our needs and we are continually collecting data in order to analyze the coefficients of reliability and validity of the questionnaire. Students were asked to respond to each question with one of four responses: 1. strongly agree, 2. agree, 3. disagree, and 4. strongly disagree.

In the area of the faculty's ability to communicate, the mean average was 1.5 which indicates that the responses were evenly distributed between agree and strongly agree. The mean average for motivation was about the same at 1.6. Attempting to evaluate methodology the students seemed to rate the instruction at the same level, 1.5.

Participation in the course was measured at 1.5. Intrinsic and carry over value was slightly higher at 1.7. As one reviewed the raw data it was easy to see why this rating was slightly higher than the others. Question No. 19, I will probably engage in this activity frequently, and Question No. 20, I presently participate in this activity outside of class received a large number of 3 and 4 ratings, disagree and strongly disagree.

Perhaps the most pleasing results of this portion of the evaluation was the

overall course rating This showed a mean average of 1.3 which indicated that students were well pleased with the courses that they were enrolled.

It might be of interest to each of you to know that each instructor s evaluation was recorded and these results were shared with each instructor. Although we have not completed the validity study of the instrument, the evaluation tended to spot those instructors who had received some negative "feed-back" from students and at the same time the instructors who are most highly regarded by their colleagues and administrators seemed to be rated highest by their students.

Another segment of the total evaluation was the cost per student for conducting the basic instruction program. Excluding any maintenance or utilities, the cost of supplies and instruction totaled $80,905. Based upon the 11,370 students, the cost per student per class was $7.11. This is the lowest cost per student of any program at the University of Utah.

The relatively low cost per student can be attributed to two factors: (1) the use of graduate teaching fellows and para-professionals greatly reduces the expenditure for instruction, and (2) students enrolled in physical education classes are required to furnish almost all of their own equipment including golf clubs and balls, tennis rackets and balls, archery arrows, handballs, etc. In classes where it is not feasible for students to purchase the necessary equipment, students may rent the equipment.

The fact that students must furnish most of their equipment in classes may very well be a very positive factor in encouraging students to continue participation in advanced courses and to enjoy the activity during leisure hours.

CHALLENGE

I'm sure each of you are sitting in the audience saying, "Ewers, it's easy to see why the program at Utah would show such a growth rate because of your new facilities, your geographic location, and the autonomy you have being a separate college." I will admit that we have these advantages in our favor and I recognize that many of you are faced with a far more difficult situation. However, I challenge you today to take a careful look at your present program of basic instruction. Are you "tapping" the resources available to you in your immediate geographical area? Have you investigated the possibilities for off-campus concentrated workshop endeavors as well as classes? How many of you have used the excuse that we cannot add horseback riding or yoga to our program because we do not have a faculty member qualified to teach the subject? Have you searched your community to see if a talented para-professional might be available to teach on a part-time basis? Have you inquired in other departments to see if they might have faculty qualified to teach specific classes in your program? Does your program meet the needs of the students at you college or university?

One of our real regrets at the University of Utah is that none of us in physical education was smart enough to predict the positive effects that the elective program of basic instruction has had on the total program of our College and our image within the University.

My intent today was not to degrade the required program or imply that it is inadequate. I hope, through my remarks, that you will try to continue to make your program more relevant, meaningful and attractive. The process of the elective program may very well be the most feasible way to accomplish this task. Don't feel threatened.

TRY IT, YOU'LL LIKE IT!

Why Students Elect Basic Physical Education Courses

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Oxendine's most recent study of the status of basic instruction programs in physical education clearly points out the strong trend toward elective programs in the colleges and universities of our country.[1] Of course this trend is being stoutly resisted by members of our profession everywhere. Surveys such as the one conducted by Cordts indicate an almost overwhelming opposition by physical educators to this change.[2] Most are certain that the abolition of the requirement would be a devastating blow to our profession. So far, however, the reports filtering in from institutions scattered across the land which have given up or lost their requirement have not shown this pessimistic view to be valid. In fact, some institutions, such as the University of Utah, have experienced an increase in enrollment.[3]

In spite of the fact that the evidence thus far is not quite as damaging as many expected it to be, there are legitimate concerns facing those administrators in institutions anticipating or actually experiencing the change from a required to an elective program. One of the greatest of these concerns is that of enrollment. Since budgets and personnel are almost invariably tied to enrollment figures, chairmen, deans and department heads wish to have as many students as possible in their programs. I suspect that if they could be assured that enrollment levels would not drop following a switch from a required to an elective program, there would be much less resistance to this change, which many feel is inevitable. Thus it seems appropriate that some studies be made of why students elect physical education courses when there is no requirement.

Everyone is aware that there are many answers to the question posed in this paper. Max Cogan, in his stimulating address to this group in 1968, which was entitled "Motives for Participation in Physical Education," suggested a whole host of reasons why students may participate in physical activities.[4] Unfortunately no one has followed up his work with research to ascertain the importance of these motives. Much earlier, Cowell and his associates did report a variety of purposes which students gave for entering physical education programs.[5] However this survey, which was done over two decades ago, dealt with junior and senior high school students as well as college freshmen and, of course, physical education was required in the institutions where the survey was made. It appears that a study of why students enroll in physical education courses in an elective program has never been done and it may be that such information would be of value to college physical educators at this time.

THE STUDY

This study was done at the University of California at Santa Cruz which is

[1]Joseph Oxendine. **Status of General Instruction Programs of Physical Education in Flur-Year Colleges and Universities;** 1971-72 (Washington D.C.: AAHPER, 1972).

[2]Harold J. Cordts. "Current Basic Issues," **Proceedings of the 71st Annual MEETING OF THE National College Physical Education Association for Men** (Washington, D.C.: AAHPER, 1968), pp. 64-67.

[3]Max Cogan. "Creative Approaches to Physical Education," **Proceedings of the 73rd Annual Meeting of the National College Physical Education Association for Men** (Washington, D.C.: AAHPER, 1970), p. 133.

[4]**Proceedings of the 71st Annual Meeting of the National College Physical Education Association for Men** (Washington, D.C.: AAHPER, 1968), pp. 56-63.

[5]Charles C. Cowell, Arthur S. Daniels and Harold E. Kennedy, "Purposes of Physical Education as Evaluated by Participants, Physical Education Supervisors, and Educational Administrators, **Research Quarterly,** 22 (October, 1951), pp. 286-297.

the youngest campus of a well known and highly regarded university. When it first opened its doors to students in September of 1965, it not only had an elective physical education program, as does its sister campuses, but a decision was made that all of the physical education courses would be non-credit. (This was due primarily to an earlier decision that **any** courses offered for credit would carry five units of credit.) It was also decided at this time that no letter grades would be given for any of the courses offered on the campus.[6] Since students in our country have been fairly well conditioned to work for credits and for grades, the elimination of these two potential inducements means that a program operating on this campus will succeed solely on its own merits. This, of course, makes it imperative that the program be sensitive to the needs and interests of the students and it was out of this concern that the decision was reached to try to find out why students elect to take the physical education courses.

Because the students at U.C.S.C. are so independent and since there are so many different types of activities in the program (over 30), it was decided that every student should be asked what his reasons were for enrolling. This meant that a questionnaire would have to be used. The common weaknesses of this type of research were acknowledged and attempts made to avoid as many as possible of them. Much revision and a field test occurred before the simple one-page instrument was ready for use.[7] All of the students enrolled in the Physical Education program for Spring Quarter 1972 were asked to fill out the form during one of their first class meetings. A total of 704 usable responses were received and all of the twenty-seven activities offered that quarter were represented in this total.

RESULTS

The first analysis of the data examined all of the reasons the students indicated as to why they had enrolled in the physical education courses. It gave some interesting information, some of which probably could have been anticipated by anyone familiar with the program and the students at UCSC but some of which was surprising. The top reason marked by the students was "To learn new skills or improve skills learned previously" with 89% of the students selecting it. A close second, however, was "To have fun and relax" which 83% chose. In third place with 72% marking it was "To improve or maintain my physical health." There was a substantial drop down to the fourth-place reason, "To get a change from studying." It was selected by 46%. The fifth spot was a close contest between "To make new friends" chosen by 36% and "To improve my physical appearance" selected by 34%. An even closer margin separated the seventh-place finisher, "To gain more grace and poise and overcome awkwardness" from the one in the eighth position, "Because it will help me become a better student." The former was marked by 24% while the latter was selected by 23%. "Because of the instructor's reputation" was chosen by 16% for the ninth spot. The last three were closely bunched with "To improve my ability to get along with and understand others" indicated by 13%, "To become better able to defend myself and others" by 11%, and "To give me a feeling of belonging to a group" by 9%.

In reflecting upon these results, we at UCSC were delighted to find that almost 90% of the students approached our courses with a strong expectation of learning. We were delighted since this is the basic tenet in the philosophy which guides our program. We were interested to find so many giving the "fun and relaxation reason" (83%). We had been aware that many of UCSC's students are tense and not very happy and as a result we had decided we should conduct our educational activities in as relaxed an atmosphere as is possible. It is apparent that we must stress these two points in our orientation sessions and talks with students and advisers.

The staff was pleased to learn that almost three-quarters (73%) of the students selected the "improvement of physical health reason." We have not had a strong physical fitness emphasis in our program but we continually stress that intelligent

[6] This policy has since been amended so that Boards of Studies in the Natural Sciences can offer a letter grade option for some of their non-introductory courses.

[7] A copy of the form can be obtained by writing to the author at the following address: Fieldhouse, U.C.S.C., Santa Cruz, California 95060.

people choose to be physically active because the activity is good for them in many ways. This response demonstrates that the bulk of our students are clearly aware of their need of physical activity.

The fact that almost a half of the students (46%) selected the "change from studying reason" further underscored our feeling that Physical Education is of considerable value in making the learning environment of our campus as good as it is and that we should continue to stress this point.

Since we at UCSC strongly believe in the so-called social values of Physical education, we viewed the response of 36% of the students to the "make new friends reason" as supportive of our efforts to see that this objective is fulfilled. Two other reasons are related to this objective and while they did not rank very high, they certainly were selected by a substantial number of students. "To improve my ability to get along with and understand others" was chosen by ninety-two students (13%) and sixty-five (9%) selected "To give me a feeling of belonging to a group." This finding will strengthen our resolution to work harder on the social objectives.

The reasons falling in sixth and seventh places are related and have to do with self-image. "To improve my physical appearance" was selected by one-third (34%) of the students while one-quarter (24%) marked "To gain more grace and poise and overcome awkwardness." We feel that perhaps we have not paid enough attention to this matter of self-image. We must attempt to improve our contribution to this important psychological objective.

While we felt that an instructor's reputation could be an important reason for students to select a course, we were surprised that it ranked as high as it did—in ninth place with a 16% response. The reason for our low expectation was that only two of our instructors have been teaching in the program for four years and most have been associated with it less than two years. Undoubtedly this response will receive a higher rating in future years. This conjecture is based on the fact that one-third of the students in the courses taught by one of the instructors who has been teaching at UCSC for over four years indicated they had enrolled because of his reputation. While this man is an excellent teacher, we feel we have some others who are equally well qualified and thus will draw students as their teaching becomes better known on the campus.

It was not unexpected that so few students (11%) indicated "To become better able to defend myself and others" as a reason for their enrollment. Naturally this reason received a strong response from the students in our Oriental martial arts courses (Aikido, Judo and Karate) but otherwise the response was light and was perhaps tied to a hope for improved physical fitness. Since most of our students could probably be classified as peace-loving idealists, it is doubtful that this will ever be an important reason, at least in the foreseeable future, at UCSC.

The second analysis of the data examined only the "most important" responses of the students. Naturally the percentages were all lower but surprisingly, the rankings were exactly the same as for the analysis which involved all of the responses. Thus it appeared that nothing of value could be gained from pursuing this analysis further.

The third and final analysis of the data involved grouping each of the activities into some type of meaningful catagories. This was done somewhat arbitrarily but on the whole, most physical educators probably would not disagree too strongly with the classification. The catagory "Dance" includes Ballet, Folk, Jazz and Modern Dance courses. "Martial Arts" includes Aikido, Judo, and Karate. "Individual and Dual Sports" includes Archery, Badminton, Fencing, Gymnastics, Handball, Racquetball, and Tennis. "Conditioning Activities" includes Figure Control, Jogging and Physical Conditioning. "Recreational Activities" includes Cycling, Horsemanship, Mountaineering, Sailing, Scuba Diving, Sky Diving, Surfing, and Swimming. "Team Sports" include Basketball, Field Hockey and Volleyball. This grouping includes every course offered that quarter except Yoga, and since it has a fairly high enrollment, seems to attract a special type of student, and does not fit neatly into any of the other catagories, it was examined separately.

The method used for this analysis was to compare the percentage of responses

made by the students in each group with the overall percentage. Those percentages which were significantly different (at the 5% level) were noted.

The responses in the Dance catagory were in line with the overall responses through the first five places but they were higher for "improving my physical appearance and "gaining more grace and poise," which would be expected since many more women than men are involved in this catagory. They were low on "physical activity will help me be a better student" which may be due to the fact that dance teachers generally stress the artistic side of this activity much more so than the physical activity side They were also low on "becoming better able to defend myself," which is easy to understand.

The Martial Arts responses were the most different of the various catagories, being different on seven of the twelve possible reasons. They were lower on the "fun and relax" and "change from studying" reasons. Apparently these students take their courses more seriously than the other groups because they were quite a bit lower than any other group with the exception of those in Yoga. They were higher on the other five reasons: "To gain more grace and poise and overcome awkwardness," "physical activity will help me be a better student," "the instructor's reputation," "improving my ability to get along with others," and naturally "becoming better able to defend myself." These responses seem to indicate that the students see not only the physical attributes of these activities but they also see them as being social rather than anti-social activities. There is also an indication that the news of our new and very fine instructors is spreading.

The Individual and Dual Sports group was higher on four responses, "learning new skills," "having fun and relaxation," "improving my physical health," and "helping me be a better student." It is apparent that our students recognize the value of learning or improving their skills in the so-called lifetime sports and that they also recognize that this can be an enjoyable experience. It appears that they are thinking in terms of the value of the physical activity to them also. This indicates perhaps that their instructors in the past have stressed the physical values of these sports.

As would be expected. the responses for the Conditioning Activities were much the highest for three of the "physical reasons." These were "improving my physical health," "improving my physical appearance," and "helping me be a better student." Naturally they were much the lowest for "learning new skills." In a way it was surprising that this group did not respond lower on additional reasons, such as those concerned with the social objectives but apparently the students see these as being fulfilled in this type of class also.

Half of the responses for the Recreational Activities group were significantly different. One of the two that were higher was "learning new skills," which seems to indicate that the students are seriously interested in learning and not just in having a good time as some opponents to the inclusion of this type of activities in a program charge The other higher one was "making new friends," which apparently points out that these students recognize that these activities do make excellent social entrees. The students responded less strongly to four of the "physical reasons," which could be expected since some of these activities are not very demanding physically and the students are more likely to think in terms of skill learning and fun and relaxation rather than physical fitness. These four were "improving my physical health," "gaining more grace and poise," "improving my physical appearance," and "better able to defend myself."

The Team Sports responses were also different for half of the reasons. They considered the "skills reason" less important than any other group but they had much the highest response to the "change from studying reason." Somewhat surprisingly, they were stronger than any other group except the one for Conditioning Activities for the "improving my physical health reason." They were the highest on "the making me a better student reason." Thus they do see these sports as being more than just "fun and games". They also see the social values of these activities because they had the highest response to the reasons "giving me a feeling of belonging to a group" and "improving my ability to get along with others." Per-

haps those of us who have been down-grading team sports in our programs should reflect upon these responses. They may, if properly conducted, make more of a contribution toward our objectives than we have been giving them credit for doing.

The responses to Yoga were interesting because they were the highest of all groups for the "grace and poise reason," even higher than for Dance, and were second to Conditioning Activities on the one for "improving my physical health." Some of our colleagues who may have read Ryan's article in **JOHPER** a couple of years ago denouncing Yoga may feel that the students are being misled by enrolling in it for these reasons.* However we at UCSC have carefully investigated this activity and feel it can make these contributions and belongs in any program. The fact that the activity itself is appealing to the students seems to be borne out by the low responses for "instructor's reputation" and "a change from studying."

In concluding, a presentation of some of the write-in reasons, which the students were invited to do, seems to be in order. While the response to this invitation was not high, approximately 10% did write in one or more reasons. Some merely paraphrased one of the twelve on the form but a number were unique. The most frequent of these was simply that of enjoying that particular activity. Other reasons mentioned fairly often had to do with such matters as discipline; psychological, emotional or mental health; supporting their academic programs, especially in marine biology, environmental studies, and theater arts; and a realization that they need to know more about their bodies and movement. Some of the other reasons were quite interesting. Some examples are as follows: "Because Aikido is the most challenging course, mentally and physically offered by U.C.S.C.," "to gain new perspective on the out-of-doors" (Mountaineering), "to give something I have never done a try" (Surfing), "to learn a survival skill that may prove to be useful" (Archery), "For the hell of it" (Fencing), "to become familiar with a different world" (Scuba Diving), "It's a kind of anthropological-ethnographic independent study" (Folk Dance), "to build calm and strength inside myself" (Judo), "To get a suntan" (Sailing), "to become more flexible" (Yoga), "to beat old friends" (Badminton), "because physical movement is beautiful and an important part of art" (Ballet), "to improve my mind-body, person-earth relationship" (Cycling), "because of the phallic symbolism of foils and romantic ideas of sword play" (Fencing), "As a former robot, I'm interested in exploring human movement" (Gymnastics), "To overcome my fundamentalist anti-body socialization, and the resulting anxiety about dancing" (Karate), "to keep up with my boyfriend on backpack trips" (Jogging), "thrills" (Sky Diving), and "to have something non-controversial to do with my mother" (Tennis).

While it is impossible for other institutions to make full use of the results of this study, perhaps it will spur on some to do similar studies. Hopefully, out of the collective efforts will come some very useful information that may help our profession make the transition from a required to an elective basic physical education program somewhat easier

*Allan J. Ryan, Yoga and Fitness, **Journal of Health Physical Education Recreation**, 42 (February 1971), pp. 26-27.

Implementation of Off-Campus and Unique Activities

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The current trend toward elective programs has put us in the "student market place" of course offerings, and we as a profession must work to have a sellable "product." Students have found the traditional physical education program repetitious, time consuming, and nonrelevant in their mode of life. Through an evaluation of our activities there has been an upsurge of off-campus and unique (or new) activity offerings, from spelunking to skiing show that activities which were once regarded as " . . sophisticated pursuits of an exclusive leisured class . . . now represent an essential component of an liberal education for all."[1]

Max Cogan of Northeast Missouri State College has reported many new off-campus and unique activities.[2] This writer felt that it might be valuable to follow-up on these activities and study the procedures for implementing them. A questionnaire was mailed out during the Spring and Fall of 1972 to two-hundred colleges and universities. Information on such items as fees, transportation, types of instructors, facilities, etc. was requested. One-hundred and forty-five colleges returned over four-hundred questionnaires dealing with twenty activities. Forty six states were represented.

GENERAL IMPELMENTATION PROCEDURES

Although each activity seemed to have its own particular implementation procedures, many of the organizational aspects were generally the same. Most of the activities to be discussed required: longer class sessions than the traditional programs, special fees, transportation, nondepartmental instruction, and non-university facilities and equipment.

Class Time

A majority of these activities had classes that met once a week for 2-3 hours over a 7-12 week period. In general, they met less times but for a longer period each time than the traditional on-campus course. Evenings and Saturday mornings were very popular meeting times. Several schools used the weekends and interterm periods for intensive study in activities such as hiking, camping, scuba-skin diving, mountain climbing, skiing, et al.

The 4-1-4 calendar structure provided an opportunity for innovative programs during the one month intersession. On the secondary level year-round schools are also bringing about innovative programs in their 45-15 week plan.

Fees

In almost all of the activities there was a fee to cover such expenses as rental of facility, rental of equipment, off-campus instructors fee, transportation, food, and other supplies, and in some cases insurance. Fees range from $1.50 to over $300 depending mainly upon the necessary equipment and the location of the activity site. Several schools cut the expenses involved in extended trips, such as one and two week scuba-skin diving trips, by camping out. In some cases the bus drivers fees were waived in exchange for "free lessons".

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[1]Robert Newton. "Outdoor Education in the "60's," **Outdoors** (A publication of the Physical Education Association of Great Britain and Northern Ireland) 40:1, December, 1969.

[2]Max Cogan. Creative Approaches to Physical Education," (Paper presented at 73rd Annual Meeting of the National College Physical Education Association for Men, Chicago, Illinois, December 27-30, 1969). "Developing Quality Instruction," (Paper presented at Mid-American Conference: Role of General Physical Education Programs in Higher Education Programs in Higher Education, Illinois, February 1, 1972)

The fees are normally paid directly to the university during registration. The facility, rental, and/or instructors fees are then billed directly to the department. Those departments who tried to collect the fees directly from the students reported many problems. The extra fee charge was not reported as a deterrent in any of the responding colleges. It was also recommended that it be a flat fee—no exceptions. The bookkeeping involved in keeping records of who attends class, who has equipment, who doesn't use the provided transportation, etc., can be quite cumbersome.

Transportation

University buses, commercial buses, facility owned buses, air flights, university owned automobiles, and student owned automobiles provided transportation for those activities taking place off-campus. Over fifty percent of the schools required a transportation fee. In some instances, the student provided his own means of travel to a given location from which the course fee would cover air-travel or boat transportation to the activity site. Several schools used student cars and reimbursed the drivers according to the mileage.

Course Credit

This area found the usual range, 0-2 semester hours. The emphasis seemed to be on the quality of the course, not on a set number of participation hours. Several schools required class time that went beyond normal requirements while others met for less time. It seemed obvious that those students selecting these activities were taking them because of sincere interest—credit and cost were secondary to learning.

For courses that are offered between terms the student should sign up for the post-semester. It was found that if the registration took place during the preceding semester, students would sometimes fail to attend and it was also very difficult to report grades.

Instruction

This is the area of implementation that would seem to be most questionable. The rise of community experts, or "non-educators" brings about a feeling of "farming out" our students. However, this practice seems justifiable because of the expertise of these part-time or on-the-site instructors. Very few of our trained physical educators have had enough exposure to many of these activities to give the level of instruction required. However, it is important that a department member work with the "specialist" to give some educational guidance. In many cases such as skiing, ice skating, and horseback riding, the department member served as an assistant. This gives the instructor an internship that allows him to gain proficiency in that activity.

There are certain drawbacks to these arrangements, but the insight that the student receives in being taught by an expert, in the actual activity setting is tremendous.

Facilities

When a person in a large city has time for activity, he will be using the local sports centers or the nearby mountains and woods. Why not develop their skills at these sites while they are still in school. It helps break the bondage of the classroom wall; . . . "the student has been intimately thrown in contact with the facilities he will use as an adult . . . this goes a long way toward starting him on the reality of a carry-over experience in adult life."[3] Certainly we have the natural resources for creative off-campus programs.

Moving the student to an off-campus location certainly relieves the pressure on the already over-crowded facilities of most campuses. Although many schools reported inclement weather as a major problem in such outdoor activities as skiing, and horseback riding, others have ideal situations. One school reported that they had access to a covered arena for horseback riding. Several schools use indoor

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[3] Harold Swanson as quoted by Max Cogan. "Creative Approaches to Physical Education." Paper presented at 73rd Annual Meeting of the National College Physical Education Association for Men. Chicago, Illinois. December 27-30, 1969. p. 135.

climbing walls (for indoor mountain climbing practice), artificial ski hills, skiing and golf simulators, and even artificial surf.

In summary, the following might serve as a guide to developing and implementing a new course of this type:

1) Decide what general content you want in the course.
2) Contact a local facility as to their willingness to help start the program. Be ready to inform them of the approximate number of students who would be involved and the desired time slots.
3) Discuss and plan the program to the smallest detail with the facility. General areas to be discussed should include:
   A Fee that the facility (including instruction) would expect. Be sure to itemize equipment and services that would be included.
   B Instructors: who they are, qualifications, number available, etc.
   C Possible means of transportation. It is not unusual for the facility to furnish transportation.
   D Specific times.
   E Specific content that will be presented.
   F Specific number of students to be included.
4) Check on your university liability insurance. If not suitable, check with the facility as to their coverage. Most universities will have an adequate policy.
5) Decide on means of transportation. If it is to be a bus, know the mileage rates as well as the drivers hourly pay. It might be possible for a staff member to drive and save this expense.
6) Figure out all costs involved and set a standard fee. Decide on method of collecting the fee and how the facility will be paid.
7) Obtain department and/or university approval for the course.
8) Obtain written agreement in form of a letter stating what the facility will furnish, cost, etc., (renegotiate each semester).
9) Publicize the activity through campus newspaper, leaflets, and student union slide presentations.
10) In simple terms—pick up the phone and "create" a new exciting activity for your program.

SPECIFIC ACTIVITY IMPLEMENTATION

In order to present the following information in a more compact manner, the activities have been grouped into several general areas. Following the specific activity in parenthesis are various course titles used for that activity. As one would expect the implementation for certain activities was much more involved than others. Several of the activities merely required the willingness of the instructor to put into practice his interest in a given activity.

Winter Activities

*Skiing (Pre-ski, Skiing in Colorado, Alpine Skiing, Ski Touring, Cross-country Skiing, Conditioning for Skiing): Skiing probably had more diversity than any other activity studied. The distance traveled was farther than for other activities. Therefore, longer class sessions were necessary. The average class session was three hours long and the average distance traveled was almost twenty miles. Two colleges not included in the above figure traveled over 500 miles for interterm programs.

In almost all cases the students fee included ski equipment, instruction, transportation, and lift passes. Fees averaged forty-five dollars for a 20-30 hour class, however where overnight or weekly accommodations were required, the fees were higher.

Wayne State University started a Conditioning for Skiing class this fall which employs a skiing simulation device on which fundamentals of skiing could be taught indoors. Additional activities are included in "preparation for the arrival of snow."

Several of the schools reported dry land sessions before going to the slopes. Ability grouping is a common practice. Student assistants were used by some of

the schools Graceland College (Iowa) takes a 700 mile, four-week trip to Colorado between terms for their course. A fee of approximately $200.00 covers everything except transportation. Colgate reported over 400 students registered for their course which takes place at a ski facility just 300 yards from the gym!

Ice Skating (Figure Skating, Recreational, and Ice Hockey): Ice skating classes were held mainly in public owned facilities such as city recreation parks. The fee was fairly uniform—being approximately $25-$30, for a typical 8-10 week course.

Curling: Private club facilities were used in most cases. Fees were between $7-$15 which included brooms and rental.

Water Activities

Canoeing and Sailing (White Water Canoeing, Boating): In general, canoeing and sailing were taught in on-campus pools and lakes or at nearby lakes and rivers. However, almost all the canoe programs required one or two float trips. The basic expense in canoeing seemed to be for canoe-rentals and basic supplies for these trips. These fees ranged between $7-$10 for canoeing and for sailing ranged between $10-$30, although one college did charge $65.00. In several of the colleges the activity was offered on a club basis with university student activity organizations handling the expenses.

Some type of deep water swimming test was required in almost all cases before they were allowed in the boats. Canoeing and sailing were both Red Cross oriented—the Red Cross boating manuals being the prevalent text.

When commerical or state owned facilities were used for sailing it was a common practice for the facility to have experienced sailors on the beginners' boats for the first few sessions. Physical education personnel seemed to do more instructing in these areas, than others studied. A popular sailing finale was a picnic with regatta!

***Skin and Scuba Diving:** Over fifty percent of the colleges surveyed indicated that they had a skin diving or scuba diving course. In many cases it was a combination course. The courses were basically on-campus except for the open dive tests. All of the fees except one ($90) ranged from $10-$50.

The fee range was related to the amount of equipment furnished by the college or the instructor. The student was usually required to provide his own mask, fins, and snorkel. It was quite common to have a professional instructor and this also was a big factor in the total fee. A majority of the respondents did not charge a course fee, but the initial equipment cost for the student plus air, etc., did make it an expensive course.

Skin and scuba diving courses tended to require more class time than the normal activity course. This was due to the total hour requirements of several types of certification—YMCA, NAUI, PADI, etc. The certification and open water checkouts were optional in most programs.

Class size was usually held to 10 to 15 per instructor while in the water, and then they were combined into lecture sections of 20-30. The biology department and physical education departments joined forces quite often in interdisciplinary courses. Ohio State University works with its International Field Studies for a 10-day trip to the Andros (Bahamas) Island. All of the students taking this trip had to have had either Beginning Scuba or a minimum of 20 hours in an accredited course. Advanced diving skills, marine studies, and camping skills were emphasized. Camping out and having the students provide their own transportation to Florida cut the cost of this course to below $200. Graceland College (Iowa) conducted a water sports course in Grand Caymen, which also had a fee of approximately $200. This fee included three weeks room and board and transportation from Miami. However, they are reorganizing so that the students will have the basic YMCA course on campus and then have an option to complete their certification in Caymen.

A preliminary swimming test was recommended and several colleges cautioned against theft of equipment.

Selection of the instructor should be done quite carefully. If the physical education instructor has a basic scuba certificate he might teach everything up to the final tests where a certified instructor could come in.

Fishing (Angling, Bait and Fly Casting, Casting, Ocean Fishing): Only one school reported a fee ($10 for equipment) for these activities. The University of Albuquerque offered a course in "Fishing in New Mexico" and took advantage of several New Mexico rivers and lakes.

Surfing, River Floating, and Water Skiing: Arizona State, even though it is inland offers surfing at an artificial surf facility near the campus. Because the facility is commercial it was the only surfing course with a fee.

It was suggested in water-skiing that the class size be kept to approximately 10 per boat. The fees for water-skiing were around $25.

River floating in combination with camping skills certainly makes for an adventure packed course. The University of Montana conducts a course which meets in the classroom for several weeks and then moves to a river for practice. The course then ends with a three day float and camping experience. The recreation staff and personnel from the U.S. Forest Service provided the instruction. The only fee was for transportation and food.

Nature Activities

Among the activity titles reported in this classification were: Campcraft, Survival Camping, Winter Camping, Outdoor Education, Camp Leadership, Spelunking (cave exploring), Hiking, Mountaineering, Rock Climbing, Outward Bound, and Backpacking.

Overall the fees involved were for basic food and camping supplies. Transportation was an additional, but minimal fee.

Pre-planning for these activities was very important, in most instances this was part of the course content. Well planned procedures helped reduce the expense.

There seemed to be a trend toward lead-up hikes, cook-outs, on campus climb, etc., before culminating the course with an extended camp-out, hike, climb or combination. Weekends were used quite frequently with weekday class meetings.

Outward Bound programs seemed to be developing a great deal of attention around the country. It is extremely important in the program to have trained instructors and to have an outward bound school facility available. The fees for the course were between $75-$100, including meals, busing, equipment, and instruction.

Miscellaneous Activities

Horseback Riding (Equitation, English Riding): Horseback Riding was one of the most popular activities among respondents. Although most of the facilities were commercial several privately owned facilities (breeders) were used. One college uses a riding stable in a nearby public park.

It was quite common for the riding stable to provide transportation. One college limited each class section to four students so that the lessons were almost private. Several programs charged a fee for individual lessons and this fee was normally between $3.00 and $4.50 per lesson. Fees that were administered on a unit basis (8-10 weeks) ranged between $15.00 and $60.00. Weather was mentioned as a problem at several colleges. A horse show was a popular finale.

Bicycling: The only fee charged in the various bicycling courses was a minimal one for campouts and maintenance kits. One college used their all-weather track.

Parachuting: (Pre-Sky Diving, Sport Parachuting, Ground Training for Sky Diving): Most colleges teach this course strictly on the ground with jumps being optional at the end. In most cases the student made the arrangements for the jump on his own. Fees of around $5.00 were charged for each plane trip.

Riflery (Trap Shooting, Rifle and Pistol, Rifle and Hunting Safety): It was quite common in this activity to have the instruction handled by the Military Science Department. Only fees involved were for ammunition and clay pigeons.

SUMMARY

The activities discussed in this paper possess unique qualities. They are challenging and adventurous, several contain elements of danger and require interpretation of a natural environment. They impose their own quality of discipline and involve "contests" against the natural elements. These are features that todays college student will find irresistable. Students are looking for relevant and challenging courses. The sources for such programs exist—if the interest is there!

Individual Learning Center Concept

CHARLES P. GREENE
Miami-Dade Junior College

Meeting the needs of individual students has long been accepted as a desirable goal, necessary to the total educational process. In most disciplines, numerous attempts have been made to provide programs and opportunities to meet individual needs related to skill level, background, interest, etc. Unfortunately such attempts have not met with much practical success and education in general has steered the straight and narrow course of gearing programs and educational experiences to reach sort of a happy medium. This approach perhaps has provided the course of least resistance and consequently has been openly accepted by the majority of teachers.

Educational emphasis is witnessing a shift from the traditional teacher-dominated environment to a wider role being played by the learner. It will involve not so much what we give as teachers but what they, the students receive as learners. The legislature, administrators, and society in general want to see a better product for the dollars spent. While the process for meeting educational goals will be screened quite thoroughly for justification of expenditures, the final product will warrant and justify such outlays of money. Accountability is with us to stay.

The physical education profession will need to meet this shift in emphasis through a variety of means. At Miami-Dade Junior College South Campus we expect to partially fill this void with the development of an independent learning resource center geared to meet the individual needs of our student body. We feel this is a significant approach. By providing such a center, properly staffed and equipped we hope to make the learning environment and learning itself an attractive process.

The basic idea in such an individual learning center in physical education is to provide an opportunity for a student to learn at their own pace, learn with or without the guidance of a full-time instructor, and to be able to practice a particular skill when they have the time and interest rather than during prescribed class time. It would also provide an opportunity for anyone interested in learning or improving a particular sport skill to do so without enrolling in a class.

Of primary consideration is the location of such a learning center. It should be situated in a convenient area wherein the student flow of traffic will pass it on their way to and from classes and activities. A poor location will limit any success the center might experience. a good location will practically guarantee at least exposure to a large proportion of the student body.

At Miami-Dade, South our center is located adjacent to one of two main hallways that guide traffic to the various indoor and outdoor activities. Being located in a substantially well traveled area we gain a maximum amount of exposure and from a curiosity stand point alone, expect to attract a considerable volume of students seeking improvement in a variety of skills.

Considerations for the development of the center had to include visual aids, practice areas, reading room, literature, handout materials, staffing, future development and evaluation:

VISUAL AIDS

A variety of visual aids are to be employed in the center to include a videotape machine, tape recorders, slides, sequence pictures, books, magazines, loop films and others. The basic principle behind the use of visual aids is that they are easily accessible to the student at his convenience. Historically, visual aids have only become available after much pre-planning and 'red tape' and most students

have not felt the inclination to "suffer" through such an ordeal. The immediate availability of such aids tends to encourage rather than discourage such usage.

Another problem which we hope to eliminate regarding the use of visual aids is the time lag between use of the aid and the actual opportunity to exercise the skill. Simultaneous coordination of the visual aid and the performance of the skill will allow for immediate re-enforcement and feedback. This operation can be adapted not only to the video tape unit but also to such aids as super 8 mm loop films (single concept) and sequence still pictures. The adjacency of such aids enables the student to evaluate his performance by comparison with a proven performer. Any combination of aids can be employed at one time.

Regarding the development of visual aids, we have found the super 8 mm cartridge to be an economical approach to building your own library. In every program of athletics and physical education there are evidences of individual skills in just about every phase of activity. By capturing these single concept skills on super 8 mm film, your collection of loop films can grow from year to year at a much lower cost than the professional purchase price. Each school year you will most likely find a skilled performer that can demonstrate even the most complex skills. If not, then a professional purchase would certainly be justified. Furthermore, students can identify with performers they personally know and having these "resource" people on campus can only create further interaction and a much more meaningful experience.

PRACTICE AREAS

Providing an area to practice movement skills can assume various proportions. Adjacent to our resource center we have set up two netted areas (three sides and ceiling) with available floor devices adapted to particular sport skills. Our area can be used for hitting golf balls, batting baseballs off a tee, kick balls off an artificial grass surface, striking tennis balls, etc. A large range of activities can be adapted to this physical layout. In all however, the visual aid is available for on-the-spot usage.

Certain activities do not lend themselves to a "general" practice area and therefore create a somewhat different approach, a multi-center approach. Such skills as aquatics, gymnastics, combatives, dance and outdoor sports would be obviously too impractical and cumbersome to relocate in our learning center. However, by adapting a portable unit that can be operated by the student and easily checked out, the visual aids can be moved to the pool, dance studio, combatives room or wherever needed, retaining the close proximity of visual aid and practice performances. This is the one principle we attempt to sustain.

READING ROOM

Although restricted to a limited number of volumes and publications, the reading area should be quiet, comfortable, accessible, and materials should easily be checked in and out. The proximity of books to the actual reading area should encourage students to read without the delays often caused by the conventional checking in and out found in most libraries.

HANDOUT MATERIALS

Duplication capability of printed materials is available at most colleges. This presents a tremendous opportunity to distribute a variety of sequence pictures, depicting a multiplicity of sports skills. Such single concept skills as throwing a ball, hitting a golf ball, shooting a basketball, kicking a soccer ball, etc. can be recaptured and made available to the entire student body. Having a copy of the sequences in their desired skill can help to reinforce their learning and create a great deal of interest on campus. Other materials as they become available can be duplicated and made accessible to the student. A "take home" policy has many obvious advantages.

STAFFING

A professional staff member should coordinate the entire effort. Additional

teaching members can be utilized to develop new ideas and techniques to include development of specialized loop films, slides, tapes, picture, etc. Office hours for certain specialists and consultants such as the tennis and golf coach can be scheduled in the learning center so that students can avail themselves of their expertise. It is very essential that the professional staff take an active part in the use of the center.

A work-study program can provide sufficient clerical help to maintain an efficient operation of the center. Qualified student workers can be trained to collect, distribute and operate available equipment and materials with a limited amount of training.

Individual staff members can utilize the learning center for their scheduled classes' Homework, outside assignments, independent projects, etc. can be assigned, utilizing the center for same. Outdoor activities can utilize the facility during inclement weather.

FUTURE DEVELOPMENT

In planning new complexes and facilities, consideration should be given to the development of suitable areas designed specifically to be used as an individual learning center. Feasibility studies can provide the necessary information for the best possible approach. Not only can the best location be determined but a suitable design for such a facility can also be determined. Rather than be restricted by existing available space, new ideas can be implemented while planning for suitable facility size and shape.

Modern technology can probably provide us with an efficient means of accounting for the actual usage of a learning center. Computer print outs could be programmed to give the teaching faculty the data necessary to determine the amount of work produced in the learning center. Individual needs could certainly be given an opportunity for expression. Class assignments in the center could be completed without direct teacher supervision.

Physical fitness programs could be handled through the center whereby students could adapt their time to a convenient schedule or when they had the inclination to exercise. The desire for a workout does not always coincide with a rigid, fixed schedule. Conditioning programs geared to the scheduling wishes of the student would have an excellent opportunity for success. Credit toward course work could be completed in a variety of units, accounted for, and grades given.

CONCLUSION

The individualized learning center concept is only limited by the imagination of those who use it. If we are truly to meet the needs of individual students then opportunities must be provided for student self expression outside the confines of a teacher dominated environment. The learning center concept is a step in that direction.

Intramurals: Profession, Discipline, or Part Thereof?

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The main objective of this paper is to present to the field of physical education and sport, and specifically to those who are related primarily to the promotion of intramural athletics, some ideas about the past, present, and possible future of that aspect of sport that has commonly been designated simply as "intramurals." Interestingly enough, this term is just about as common as the term "P.E." on the North American continent. These ideas about intramurals ask the fundamental question: "Is Intramurals a profession, a discipline, or part thereof?"

To meet this paper's objectives, the following questions or topics will be considered in order: (1) Definition of the terms "profession" and "discipline"; (2) The fractionating influences in physical education today; (3) Intramural athletics—then, now, and in the future; (4) A model for the profession; (5) Implications from the proposed model for intramurals; and (6) A summary with recommendations for the future.

The ideas about to be expressed in this paper are the result of long observation of programs of intramural athletics; close personal association with several of the field's leading intramural direcotrs; a recent relationship as administrator of a faculty of physical education in which both physical recreation and intramurals **and** intercollegiate athletics programs are included; and the writer's study of the philosophy of physical education and sport, which includes a pragmatic orientation and recent disciplinary concern.

Definition of the Terms "Profession" and "Discipline"

The current controversy or problem within the field of physical education and sport about whether it is a profession or a discipline of necessity applies to intramurals, itself presumably a subdivision of physical education. One simple definition of a **profession** is an occupation or a vocation requiring knowledge and understanding of some department or field of learning. Traditionally a professional person serves mankind; follows a code of ethics; is licensed or certificated to practice; considers his work a lifetime career; and does not consider the amount of money he earns to be of primary importance. Of course there are other criteria that could be added to this list.

A **discipline** is, on the other hand, a branch of instruction or learning. Thus, a professional person bases his practice upon the knowledge and understanding provided by the disciplinary investigator in one or more fields of instruction or learning.

Based on a preliminary analysis of intramural athletics up to this point in the discussion, intramurals would have to be categorized as a subdivision, or sub-unit within the profession of physical education (which itself is typically thought to be a subdivision of the teaching profession). In responding to the question, "Is your professional practice based on undergirding disciplinary knowledge," the intramural director would probably indicate some hesitancy before responding relatively

weakly that the field was moving in that direction. By such an answer he would be basing his case on physical education's effort to orient itself disciplinarily, but he would be hesitant about making any significant claims for the scholarly body of knowledge developed by "intramurals people" for use in the professional practice of intramural directors. Does this imply that intramurals directors need only to be personable organizers with a broad, but possibly superficial, background in sports? No attempt will be made to answer this rhetorical question definitively, but there is a definite problem here.

The Fractionating Influences in Physical Education Today

Before proceeding further with the "intramurals case," it is imperative that a look be taken at the field of physical education as it presently exists. (Parenthetically it must be stated that this exposition assumes that the 1960's has been a traumatic experience for most of the population, and that the impact of this past decade has been such that the critical subsystem of education is malfunctioning to a most serious degree.)

Whether or not mankind is on a collision course with the future because the tempo of civilization is increasing so fast that many people are unable to adjust satisfactorily, there seems to be ample evidence that the field of physical education is on a "collision course" with itself! Its professional leaders are gradually being **forced** to make an effort to understand what idealistic youth mean when they use such terms as "relevance," "accountability," and "involvement." At the same time higher education is facing greater financial expenses with seemingly steady-state or declining legislative allotments. This means that certain subject-matters and professional faculties on campus will inevitably have higher priorities than others. This problem is compounded further by possibly indefensible required P.E. programs, academically inferior teacher education curricula, and intercollegiate athletic programs that have typically lost sound educational perspective in almost all regards.

Still further, there are internal problems of a truly major character within what has been loosely called "the field" or "the profession." These are explained as follows.

1) "**Specific Focus Approach vs. "Shotgun Approach**"—should the profession now attempt to unite behind the idea that the professional task within formal and informal education is to teach humans to move efficiently and with purpose in sport, dance, play, and exercise within the context of man's socialization in an evolving world **or** should the present generalist curriculum be retained?
2) "**The Physical Education vs. Athletics Encounter**"—does the profession in the United States dare to speak out time and again in a statesman-like forcible manner against practices in competitive athletics which don't even have a rightful place at any educational level or in society?
3) "**The Male-Female Dichotomy in Physical Education**"—can men's and women's departments at all educational levels be amalgamated equitably, efficiently, and rapidly so that greater professional strength will be gained at the same time that money for the total operation is being saved?
4) "**Professional Preparation Wing vs. Disciplinary Wing**"—can the field of physical education make the adaptation to the newer professional-disciplinary approach? This implies that all who teach in the various undergraduate curricula will be scholars (with all that this implies).
5) "**The Bio-Science vs. The Humanities-Social Science Conflict**"—is it possible for faculty members teaching in the natural and bio-scientific aspects of the field to live in peace with colleagues forming undergraduate and graduate options in the humanities and social science aspects of physical education and sport?

As if these problems aren't enough, the profession is additionally confronted with a situation in which the field of health and safety education **and** the field of recreation are successfully earning separate professional status (and would rather

not have the term "physical education" on their letterheads). Moreover, the field of physical education can't even decide what to call itself; **required** physical education is in trouble in a great many places; and intercollegiate athletics "rolls on" in "lofty contempt" of so-called physical education (possibly the subject held in least regard traditionally in academic circles). It must be mentioned in passing also that intercollegiate athletics is "running on a financial treadmill that is set at an impossible angle" for it to survive in the form which is now generally recognized. This brings the discussion around again to the topic at hand—intramural athletics. What is its state of health?

Intramural Athletics—Then, Now, and in the Future

Strangely enough with all of the woes that are plaguing the field at present, it is intramural athletics that **seems to be** healthy and thriving both ideologically and practically. No matter which educational philosophy is held by the evaluator, intramurals tends to emerge as a program of "sport for all" which defies the onslaughts of campus critics. Since its beginning early in the twentieth century as an organized entity, it is safe to say that its popularity has never been higher. The various theories of play that are extant seem to allow at least a significant place for individual, dual, and team experiences in a form of competitive athletics that is fairly well organized but not overemphasized. Even the use of public funds for the promotion of intramurals meets with general approval, because people sense intuitively that there is room potentially in the program for all students, male and female alike.

After painting such a rosy picture of intramurals, however, somehow or other there is a dark side to the representation. The intramurals function has been taken for granted in the past, and this seems to be true even today. Intramurals is regarded as a service program and not as an educational one. There is still the feeling both within the field and without that intramurals can "make do" with inferior facilities and equipment. The officials in intramurals contests, for example, can be at the same level as the players according to the opinion of many—fairly good, that is. After all it's all for fun anyhow; so what if the official makes a few poor calls? Students just take part in intramural athletics to "let off steam," and such "emission tends to provide a safety valve" for campuses that otherwise might even be more troublesome were it not for strenuous physical activity provided by the "establishment" for the aggressive mesomorphs.

And what about the status of the intramural director and his associates in the athletics or physical education hierarchy? Here we tend to find a similar situation—at least in the eyes of colleagues. Certainly intercollegiate athletic coaches and officials rarely provide more than lip service to the present "intramurals ideal," while often using the provision of such **service** as a good excuse for the continued drive to keep up gate receipts. Intramurals organizers don't fare much better with their presumably academic colleagues in physical education departments. Promotions and comparable salary levels are somewhat more difficult to achieve because the intramural director is usually so busy managing his program that truly scholarly efforts on his part are a rarity indeed. Thus, when the higher administrative posts within physical education and/or intercollegiate athletics are filled, it is almost self-evident that the good old "missionary" running a fine intramurals program is passed by for the proven scholar or the successful coach.

It is at this low point that the main thesis of this presentation emerges. The idea is simply this: the development of physical education and sport on this continent has reached the time when intramurals's supposed inferiority can be overcome through the use of a revised definition that can guarantee at least equality of status within the very near future to all properly conceived, well-organized, and adequately financed programs. An explanation about how to arrive at this halcyon state must begin with the presentation of a conceptual model for the entire field.

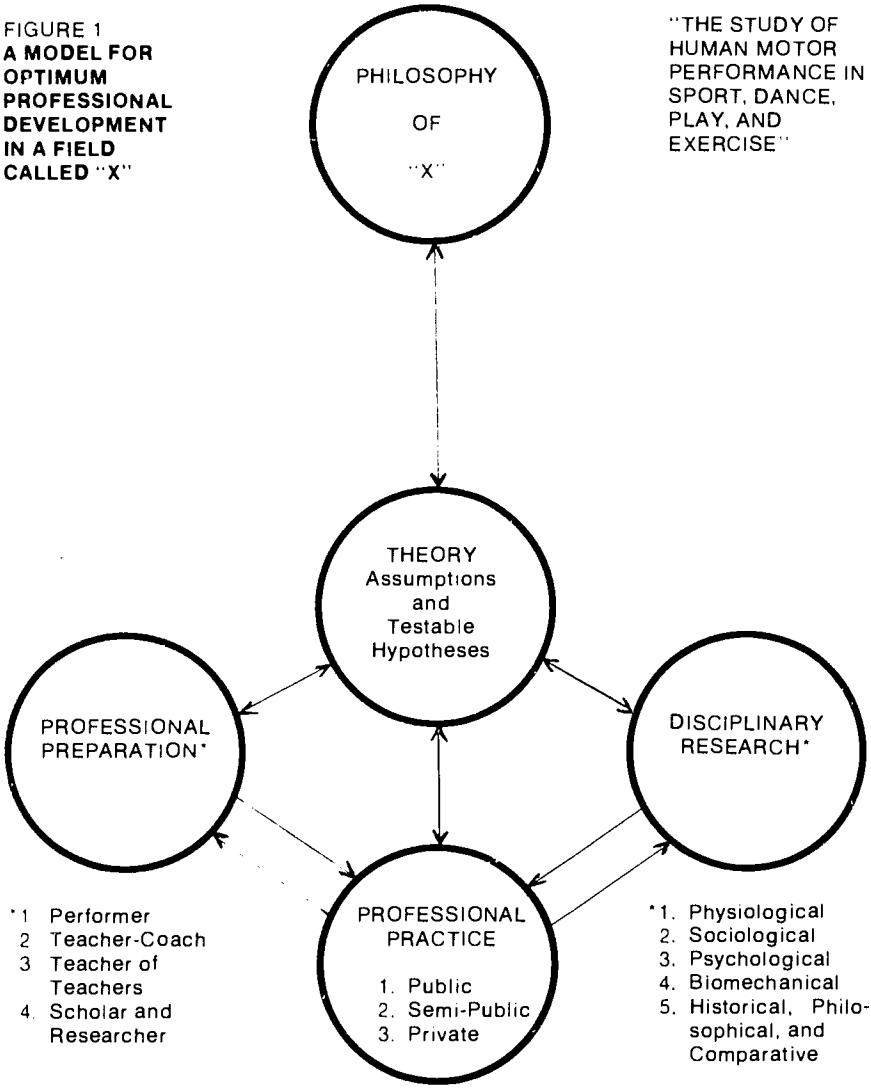
A Model for the Profession

A model for optimum professional development in a field called "X" has been developed. This model can serve for any given field based on its broad outline, but here it is designed to encompass that which at the present time probably ought

to be called "physical education and sport." Such a designation for the field undoubtedly only represents a "holding action" for the next period immediately ahead. For purposes of this discussion, the following definition of the disciplinary aspect of the field is conceived as follows: "the art and science of human movement as related to the theory and practice of sport, dance, play, and exercise." The position taken here is that it is logical and in the best interest of intramurals to adopt a similar disciplinary definition immediately and to begin the conduct of its professional practice on the basis of the body-of-knowledge available.

This model (see Figure No. 1) includes the following five subdivisions, all of which are applicable to what is presently called intramural athletics: (1) professional practice, (2) professional preparation, (3) disciplinary research, (4) a theory embodying assumptions and testable hypotheses, and (5) operational philosophy.

FIGURE 1
A MODEL FOR OPTIMUM PROFESSIONAL DEVELOPMENT IN A FIELD CALLED "X"



E. F. Zeigler

Professional practice can be characterized as (1) public, (2) semi-public, and (3) private. **Professional preparation** should be designed to educate (1) the performer, (2) the teacher-coach, (3) the teacher of teachers, and (4) the scholar and researcher. **Disciplinary research** includes (1) the physiological, (2) the sociological, (3) the psychological, (4) the biomechanical, and (5) the historical, philosophical, and international aspects of human motor performance in sport, dance, play, and exercise. The assumptions and testable hypotheses of **theory** should comprise a "coherent group of general propositions used as principles of explanation for the phenomena" (Random House Dictionary, 1967) exhibited in human motor performance in sport, dance, play, and exercise. Lastly, inclusion of the **philosophy of "X"** as an overarching entity in the model propounded is based on the belief that the value system of a society will in the final analysis gradually be realized within a developing social system.

Implications from the Proposed Model for Intramurals

Are there certain implications for intramurals that might be drawn from the discussion to this point? It could be argued that intramurals is popular and is making headway—good reasons for "leaving well enough alone." On the other hand the way that the world is going today, mere maintenance of a "low profile" in a period of turmoil is certainly not sufficient planning for the future. With the current decline in the growth curve of higher education, it is inevitable that all programs will be undergoing continuous evaluation. Those programs on campus which can stand close scrutiny will be supported increasingly, but those programs which can't present **evidence** that certain educational objectives are being achieved will be challenged. The mere statement that such-and-such a percentage of the student population is taking part, or that so many teams are in various basketball leagues, will no longer suffice. Evidence might also be mustered to claim that a certain percentage of the student population masturbates, but on what basis can the case be made that one activity is better than the other?

The argument is, therefore, that it is high time for intramural directors to become thoroughgoing, highly competent professional people whose professional practice is based on disciplinary investigation resulting in a sound body of knowledge. Up to now the approach has been that of the evangelist ever exhorting his "sheep" to greater involvement with the "flock" in an amalgam of physical recreational activities. What does it all add up to? Who knows?

The essence of this position is, then, that intramurals has the wrong name and the wrong emphasis; that the old physical education triangle is now terribly dated, and that the intramurals subdivision of the field of physical education is somewhat like "the headless horseman ever ready and willing to ride off in any one of a number of directions at the same time." The recommendation is that intramurals should probably call itself something like "Physical Recreation and Intramural Sport," and the entire area should direct itself immediately to the matter of "hammering out" in joint session an acceptable definition for the disciplinary undergirding of the profession that individual professionals are seeking to practice all across the land at all educational levels. Acceptance of new, instructional, and physical recreational objectives immediately realizable, as well as long range goals of a more intangible nature, must become a reality soon. A disciplinary-professional approach stressing the art and science of human movement in sport and play would serve notice to the entire field—and to those outside of profession itself—that "second class citizen days" for intramural directors and their associates are on the schedule for relegation to history's trashheap.

Educational institutions can no longer justify the concept that public funds should be used for low-organizational, intramural sports programs that serve as "recess periods" for those men and women students who are presumably not suited or capable of acceptable human motor performance. Educators do have the responsibility to provide instructional and physical recreational programs of the highest calibre for the ninety-five per cent of the student population who should have the opportunity to learn about "the art and science of human movement as related to the theory and practice of sport, dance, play, and exercise." Such achieve-

ment for all young people—the learning of sound physical recreational skills—is being recommended as a part of "the good life" for all to be used whenever desired in their later lives. Up to now the finest instruction, facilities, and equipment—and the prime time—have been available to the people who needed it least! Obviously the needs and interests of the larger majority must be met. This is not to say that the program for the gifted or accelerated man or woman should be eliminated, but it is obvious that better balance is needed.

A Summary with Recommendations for the Future

Looking to the future, the profession of physical education and sport—a name for the field that is being recommended for the immediate future—should emphasize that human movement undergirds sport, dance, play, and exercise. Understanding the theory and practice of such movement—actually the "non-verbal humanities"—can only come from knowledge, skill, and understanding of a basic disciplinary core. A division or department of physical recreation and intramural sport can relatively soon demonstrate scientifically that active and creative physical recreation should be a part of a way of life during school and college years—and thereafter! Thus, its program can be either instructional or recreational in regard to physical recreation and sport.

A realistic assessment of the current situation will show that there is a need for improved **cost-benefit analysis**. Those concerned with the administration of these programs should explain clearly to all concerned what the realizable objectives of the program are; how these objectives can be achieved by those taking part; and how the results will be evaluated to demonstrate conclusively that further—and possible increased—financial support is justifiable.

With such an approach it would be possible to respond to the opening question about the possible disciplinary or professional status of intramurals. Physical recreation and intramural sport are important, integral aspects of the profession of physical education and sport. This emerging profession operates in public, semi-public, and private agencies, and it includes performers, teachers and coaches, teachers of teachers, and scholars and researchers. Professional practice is based on a disciplinary core of knowledge developed through scholarly and scientific investigation. The field is developing a theory of human motor performance in sport, dance, play, and exercise based on study of the physiological, sociological, psychological, biomechanical, and historical, philosophical, and international aspects of the phenomena being investigated.

Based on this analysis of the original question, physical recreation and intramural sport programs are **potentially** integral parts of the educational program offered to all in the department, school, or college of physical education and sport. Whether those concerned with this phase of the program truly achieve such professional status based on a core of sound disciplinary knowledge will depend on many factors in the years immediately ahead. The long range goals would most certainly seem to warrant a "good old college try" on the part of us all.

"Every Man An Athlete: The United States Military Academy's Intramural Program"

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For over 170 years, the primary mission of the United States Military Academy has been to train and instruct the Corps of Cadets so that each graduate has the qualities and attributes essential to his continued development throughout his career as an officer in the Regular Army. A keystone in that mission is one of the most comprehensive physical education programs in the world. Throughout his four years as a member of the Corps of Cadets, each individual is an active participant in a physical education program which is designed to develop his physical abilities; to enable him to acquire carryover skills in individual and team sports; and to provide him with unlimited opportunities to develop many of the desirable qualities of leadership. The laboratory for this program is the intramural athletic field.

Over a half century ago during his tenure as Superintendent of the Academy, General Douglas MacArthur was moved to write these familiar lines which aptly expressed his athletic philosophy:

> Upon the fields of friendly strife
> Are sown the seeds
> That, upon other fields, on other days,
> Will bear the fruits of victory.

He fully recognized that because athletic activities involve many of the deepest and most powerful of human emotions, participation in athletics offers unlimited opportunities for the inculcation of many of the desirable attributes one would associate with being an officer and a leader of men. Under General MacArthur's guidance, one of the nation's first intramural athletic programs was established at the Academy in 1921. As conceived by MacArthur, the intramural athletic program has survived substantially in its original form. Today, intramural athletics are an integral and required part of the physical education program for **every** cadet who is not a member of a varsity or club squad. Herein lies the true worth of intramural athletics at West Point, where the opportunity exists for every cadet to be a participating athlete.

ORGANIZATION OF THE CORPS OF CADETS

Competition in intramural athletics is based upon the military organization of the Corps of Cadets. Approximately four thousand strong, the Corps is organized as a military brigade of four regiments, with each regiment composed of nine companies. Each company in the Corps is represented by one team in each sport each season. The thirty-six cadet companies are the units around which the intramural athletic program is conducted.

THE THREE SPORTS SEASONS

The academic year is divided into three intramural seasons. Within each season and each academic year, a wide range of sports are included in the program to provide team and individual, as well as contact and non-contact activities.

Fall	Winter	Spring
Flickerball	Basketball	Cross Country
Football	Boxing	Lacrosse
Soccer	Handball	Team Handball
Track	Squash	Touch Football
Triathlon	Swimming	Water Polo
	Volleyball	
	Wrestling	

ADMINISTRATION

Under the overall supervision of the Associate Professor of Intramural Athletics, the responsibility for the administration and conduct of the intramural program rests with the chain of command of the Corps of Cadets. Primary administrative responsibility lies with the Cadet Brigade Athletic Officer. He is assisted by a Cadet Athletic Officer for each Regiment. The Brigade Athletic Officer and the four Regimental Athletic Officers comprise the intramural council which acts on all protests and recommends changes in the intramural regulations. The job of the Associate Professor of Intramural Athletics is to guide the Brigade Athletic Officer, draw up the overall schedule, arrange for facilities, and insure the availability of the essential equipment.

The cadet with the responsibility for setting up the program within each company is the Company Athletic Sergeant. The duties of the Athletic Sergeant include all aspects involved in the organization, supervision, and management of intramural athletics in his company. He assigns all cadets who are not currently on varsity or club squads to one of the intramural sports as a team member, official, or administrator. He appoints the coaches for each sport based upon recognized leadership ability and previous experience in the sport. The coaches assume complete charge of organizing, conditioning, and directing their teams during practice and competition. In order to prepare them for this task, they are given a coaching techniques course in their specific sport. The officials for each sport are carefully trained by instructors from the Office of Physical Education and are then organized into teams by the Cadet-in-Charge of the sport to actually officiate the contests. One First Classman per sport is selected from each cadet regiment to act as the Regimental Cadet-in-Charge. These cadets supervise competition on the field by assigning officials from the "officials pool," designating the fields for each contest, reporting game results, and, in general, making certain that the activities are operating properly.

Additional supervisory assistance is provided by staff instructors from the Office of Physical Education who are assigned as monitors for each intramural sport. Each monitor advises the Cadet-in-Charge of the sport, conducts a series of officiating clinics to prepare the officials for the activity, and insures that all regulations regarding participant safety are rigidly enforced.

EQUIPMENT

All equipment for intramural teams is supplied by the Office of Physical Education. High quality, well-maintained equipment is issued to every company for each sport each season. The rigorous nature of many of the activities makes the use of quality, protective equipment a necessity. Each cadet is charged with the responsibility for the proper care of the equipment which he is issued and must return it at the conclusion of the season.

TIME ALLOTMENT

A one-and-one third hour period in the late afternoon is devoted to intramural competition for all cadets not on varsity or club squads. This means that every cadet, unless medically excused, is involved in athletics as a player, coach, or official. Each regiment of the Corps attends intramurals twice weekly on alternate days from 3:40 to 5:00 p.m.

RULES ON ELIGIBILITY AND PLAYING TIME

Definite rules on eligibility and playing time are specified. The most important rule on eligibility is also perhaps the most unique. In brief, this rule allows a cadet to represent his company in a specific sport only twice during his four years of intramural athletic competition. The only exception to this is that a coach (a First Classman) and an Assistant Coach (a Second Classman) may exceed two seasons in a sport. The rule thus makes it possible for a cadet to participate in at least six different athletic activities while at the Academy. Consequently, he learns a variety of sports, thus widening his interests and increasing his chances of finding a sport which he will want to continue to play after graduation. In team sports, every member of the squad must play in each contest for a prescribed period of time at least 25 percent of the contest, and it is the duty of the coach to manage his substitutions so as to accomplish this objective. In individual sports such as handball, squash, and tennis, each team member must play in a minimum of one half of the matches. Failure to meet these participation requirements is basis for forfeiture of contests. The size of squads is carefully specified so that the number of substitutes is kept to a minimum, thus making for maximum participation.

SCHEDULES

The intramural schedule is arranged so that each team is allotted adequate time: first, for proper conditioning and for coaching in fundamentals and team play; then, for practice contests; and finally, for round-robin tournament competition. An intra-regimental, single round-robin tournament is conducted in all sports except boxing and tackle football. A round-robin tournament modified to include competition between either four or five team leagues (one-half of a regiment) is held in boxing and tackle football. In all sports, regimental champions compete for the brigade championship. For the cadet seeking individual honors, a brigade open tournament is conducted in track, boxing, wrestling, handball, squash, tennis, and cross-country. With the exception of tennis, these tournaments are held at the counclusion of the appropriate intramural season.

THE BANKERS TROPHY POINT SYSTEM

An all-sport point system covering the fall, winter, and spring seasons is used to determine the annual Intramural Athletic Champion. Each sport is assigned a point value based on team size. Thus, tackle football, for example, has a higher point value than squash. Points are awarded according to the company standing in the sport within the regiment or double-regiment at the end of the season.

The Bankers Trophy points for the three intramural seasons are cumulative throughout the year and the highest total determines the championship company in each regiment. At an appropriate cadet ceremony, the company ranking first in the regiment is awarded the coveted Bankers Trophy, symbolic of intramural athletic supremacy.

CONCLUSIONS

Since it's founding in 1802 with ten cadets enrolled, West Point has graduated more than 30,000 young men representing practically all sectors of American life. The names of Grant, Lee, MacArthur, Patton, Eisenhower, Aldrin and Borman give its alumni an honored place in this country's annals. In the past fifty years, an integral part of the varied programs which are designed to prepare each graduate for a career as a professional military officer has been the intramural athletics program. At the United States Military Academy, **every man is truly given the opportunity to be an athlete.**

RESEARCH

Phenomenological Research in Physical Education

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When phenomenological research becomes the subject for discussion, the same questions seem to arise again and again: What does one observe as a phenomenon? What is the method that one uses to determine the essence of a phenomenon? And what is an example of a methodological analysis of a phenomenon? The following study is an attempt to answer the above questions using Husserl's concepts of phenomenology as a basis from which to discuss the first two questions, and using the phenomenon of physical fitness as an example for methodological analysis.

PHENOMENA

Throughout his works, Husserl's intention was to provide a method and technique that could be used for grasping the essence of any object that the human mind can consider: things, events, actions, or thoughts. As a result, essences can be looked for in simple things, such as colors and musical notes, or in complex things, such as logical concepts, scientific theories, esthetic, moral and religious values, and social and political structures (i.e., all those things about which men speak without knowing thoroughly of what they speak).[1] One might say that the fundamental concern of phenomenology lies in the description, analysis, and assessment of very actual and possible experience, opinion, belief, value, attitude, or activity—every mode of consciousness of life.[2] More specifically, phenomenology is probably at its persuasive best in the realm of values.[3] Phenomenology is thus a criticism of all human engagements, of consciousness, and of criticism itself.[4]

METHOD

Whether the object in question be some physically perceptible thing, a social structure, or a moral value, the phenomenologist attempts to discover an intuition of precisely what the object is. This eidetic intuition is the fundamental form of all particular transcendental methods.[5] To arrive at an eidetic intuition requires the application of intricate methods of phenomenological inquiry tediously developed by Husserl during his lifetime. He felt that, by using these methods, one generation of scholars after another could proceed to search out reality.[6]

The need for a phenomenological approach to scientific inquiry probably grew from the notion of naturalism, that only empirical science can yield knowledge of the world. Empirical science has assumed from the beginning that knowledge is ordered and of a measureable nature. Mathematical physics and chemistry were

[1]Quentin Lauer. **Phenomenology, Its Genesis and Prospect** (New York Harper and Row, 1965), pp 20-33
[2]Richard M Zaner **The Way of Phenomenology** (New York Western Publishing Co., 1970), p. 203
[3]**Op. cit.**, Lauer, p 10
[4]**Op. cit.**, Zaner, p 107
[5]Edmund Husserl, **Cartesian Meditations, an Introduction to Phenomenology**, Trans Dorion Cairns (The Gague Martinus Nijholf, 1960) p 72
[6]**Op. cit.**, Lauer, pp 44-45

therefore taken as the model of all science, and this without question. From this assumption, a field of study was judged to be scientific by its use of the techniques, methods, and principles of this model. As a result, scientists viewed philosophy as a kind of janitor in the house of science: its proper roots were in science, and its task was strictly the analysis, clarification and interrelating of empirical scientific results.[7]

The idea which science (empiricism) cloaked, or ignored or at least denied, or believed non-existent, was that one's experience is far richer than empiricism would like to admit. Not only are there many different ways to experience the same thing (perceiving, remembering, imagining, depicting, or expecting), but some things are not accessible to, nor can they be reduced to, sensory perception—numbers, values, and logical forms, for example. Phenomenology as a critical philosophy says that there is a method that can go to the things themselves so that one can study their very essences.[8] Thus, before we as philosophers can make any reflection on an object, we must first know the object. We must use analysis of the phenomenon, an accurate description of the thing as that thing becomes an awareness, as our first step before anything else can be done.[9] Max Scheler's preferatory remarks to his study of Ressentiment lucidly explicate the matter:

> It is one thing to sift the data of inner observation conceptually and to set them up as compounds, then to decompose these into ultimate "simple" elements and to study, through artificial variation by observation and experiment, the conditions and results of such combinations. It is quite another matter to describe and understand the units of experience and meaning which are contained in the totality of man's life itself and have not merely been created by an artificial process of "division" and synthesis.[10]

Hence, the general theme of the phenomenological researcher is to reinstate the primacy of "secondary" or "subjective" qualities through the application of methodical steps including the epoché, reductions, ideation, and essential intuition.

The epoché is directed against scientism. Scientism seizes upon one set of phenomena and makes it fundamental, and all other phenomena somehow are derived from it. The phenomenologist, on the other hand, is determined to consider the claims of all types of appearances, putting aside the issue of real and illusory appearances. His aim is to disclose and clarify the essences of phenomena —whatever presents itself—by feeling, sensation, conception, memory, imagination. The epoché, therefore, is "bracketing out" the "reality" of science thus suspending the making of decisions based on empirical evidence only. Hence the epoché involves a deliberate attempt to place aside all metaphysical or scientific interpretations which one normally places upon phenomena. Thus, the aim of the epoché is to bring out the untampered-with innocence of the phenomena.[11] In another way of putting it, the scientist abstains from believing in the being of this world and directs his attention exclusively to his consciousness of the world.[12]

Since the epoché is negative in the sense that it does not grasp for the essence itself, but instead eliminates objective bias by the naturalist environment, it is necessary to have a positive counterpart. This is evident in the various levels of reduction applied to the residue left after the epoché. Since the reductions are based on the subjective self, this self must become as objective as possible. In other words, one must constantly maintain his focusing and disregarding while he is carrying on his critical effort.[13] Husserl lists six levels of reduction to be applied to the phenomenological method of research.

First is the psychological reduction, which is concerned with the phenomenon

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[7]**Op. cit.**, Zaner, pp 53-55

[8]**Ibid.**, pp. 38-39

[9]Gustave Weigel and Arthur G. Madden, **Knowledge, Its Values and Limits** (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961), p. 13

[10]Max Scheler, **Ressentiment**, Trans. William W. Holdheim, Ed. Lewis H. Coser (New York: The Free Press of Glencoe, 1961) p. 37

[11]Erwin W. Strauss, **The Primary World of Senses**, Trans. Jacob Needleman (London: Collier-MacMillen Limited, 1963), pp. 54-55.

[12]Marvin Farber, Ed., **Philosophical Essays in Memory of Edmund Husserl** (Cambridge, Mass.: Harvard University Press), p. 169

[13]**Op. cit.**, Zaner, p. 78

of consciousness and its idealization. This reduction insures one's recognition of any naturalizing of consciousness and of ideas by any naturalization method—psychologism.

Second is the eidetic reduction, which aims at the idealization of objectivity; i.e., purifying not only the operation but also the object of that operation. The object must be seen as an unbiased object.

Third is the phenomenological reduction, which has as its topic a subject that under no circumstances is objectified and hence a pure subject. For example, when an object is given as object, it is given as an intention of a subject, and consequently the subject is also given — a datum of consciousness. Therefore, when one looks at an object without presupposition, one is able to view or see its essence.

The fourth reduction is the universalization of the subject by objectifying it. Husserl felt that the subject could be made objective since it could be made the object of reflection. When the phenomenologist makes the subject an object, it is possible to know it better. One can arrive at a knowledge of its essence, which is subjectivity.

The fifth reduction is termed the pure transcendental ego, which is the result of the universalizing of the subject by objectifying it. In other words, to know subjectivity is to know that which is transcendentally related to the objects which are its intentions. Husserl further argues that since there is no objectivity which is not intentional, then to know intentions is to know objectivity. There is only intentionality to be known, but it must be thought through if the results are to be called knowledge. This thorough grasp of intentionality is knowledge of the transcendental ego. By knowing the transcendental ego one knows objectivity.

The sixth reduction deals with the temporary pure flow of consciousness. The subject is the a priori source of all objectivity, but one must realize that it is not an unchanging source. Since it is a subject, it has a history of its own. It, as subject, is the sum-total of all objective relations, since the cessation of this dynamic constitution would mean the cessation of subjectivity. This sixth reduction is almost a return to the first reduction, but with the recognition that consciousness is only of a temporary nature.[14]

An overview of the above six reductions can be seen in the following quote:

> . . . The phenomenologist [must] try to attain the proper sphere before he begins to analyze and describe the content of his cogito cogitatum. The method of reduction is to lead him to this sphere. It makes him pass from the realm of derivative acts, marked by culture and especially by the influence of the sciences, to that of acts which make things present to us "bodily" in an original fashion, in an experience that is characteristic for each type of being. Once he has arrived in the proper sphere, he can begin to analyze and describe accurately whatever manifests itself primordially there to him. This analysis and description have to be noetico-noematic, i.e., in this description and analysis attention must be paid to both the noetic and noematic aspects of the whole "given," in other words, to both the act in which the cogitatum is given and to this cogitatum itself which originally appears in this act.[15]

The epoche and reductions have assured that only phenomena will be considered. Next it is necessary to perform ideation. Through the technique of ideation, phenomenology has been characterized as descriptive; however, one could perhaps be more accurate in characterizing it as meditative. The process of making essences stand out in consciousness begins with an original phenomenon, whether from perception or imagination. This original appearance serves merely as an example upon which ideation can be built. However, descriptive explanation is only the first stage of critical inquiry and must be completed by another. What has been explained must be analyzed; i.e., one must inquire into the founding-founded relations among the explained strata of whatever is in question. The founding strata must be analyzed before the founded ones since the latter presuppose the former.

[14] **Op. cit.**, Lauer, pp. 51-57.

[15] Joseph J. Kockelmans, Ed., Phenomenology (Garden City, New York: Doubleday and Co., Inc., 1967), pp. 138-39.

For example, paper is made of wood, so wood must be analyzed before paper. To analyze, in the critical sense of phenomenology, is to objectify the lower (founding) strata to the roots, all the while making clear how the various strata specifically interlace and interconnect. Husserl called it the "zigzag" method. The process itself consists of submitting the phenomenon to various viewed aspects (perceptual and imaginative). This process could go on for an infinite number of times; however, that is not necessary. It may be possible to grasp the essence of something after only one or two actual experiences. Sometime during the process of ideation, an identical element will be seen that is involved in all variations. This identical element is the essence or sense of the object under investigation. Or, as Husserl defines it, essence is that which is left and identical when all possible variations have been investigated.

There has been some argument about whether one philosopher's ideation is any more valid than another philosopher's ideation, especially when the ideation of one is contradictory to the ideation of the other. The phenomenological process does combat this somewhat by a strong basis for internal criticism. By using the same methods, one can show that the essence arrived at is justified by the process itself—the validity of the act of cognition is contained in the necessity of the act itself. In other words, when the identical object in an act of consciousness is constant, it is necessary; hence, its validity is guaranteed.[16]

Essential intuition, or the recognition of meanings of things which are realities, is the end result of the method—the essence of things, events, processes, and intuitions themselves are simply seen. One must see the essence, and he must also see that no one else can see it any other way. This is the final generalization of the object under investigation. It is, therefore, a universal essence which has been generalized as valid by the phenomenologist. And yet one will be brought to modify his own intuition by contact with the intuition of others. By taking in the thought of many men, the investigator makes his own intuition a "bit" more substantial.[17] Or as Sarte says, "Thus a thing can always be perceived more adequately, and this process of 'fulfillment' as Husserl calls it, can go on even to infinity."[18]

PHENOMENOLOGY OF PHYSICAL FITNESS

If there are several different theories about what constitutes an intention, then either the intention has not been properly constituted or the theoriticians have failed to define the intention from its constituents. Since there are a number of theories regarding the intention and constitution of physical fitness, apparently the intention has not been properly constituted, or an accurate intention has not been derived from its constituents. For instance, one of the many theories of physical fitness explains it as a part of total fitness, saying there is a separation of physical fitness from total fitness and that it is just one segment of several (also including social and mental) which make up total fitness. Another theory defines physical fitness as strength. This definition omits such constituents as coordination, flexibility and mental alertness. Still another theory explains physical fitness as that degree of cardiovascular efficiency which allows an individual to do his regular day's work, meet emergencies, and enjoy leisure time activities. However, this categorical definition of physical fitness is confusing because one doesn't know what constitutes an emergency or what constitutes leisure activity.

By eliminating all of these and any other possible theories of what constitutes physical fitness and what its intention is, one is carrying out the first step in the phenomenological method as developed by Husserl, called the epoché.

Once the epoche has been introduced and the phenomenon has been reduced strictly to consciousness, the phenomenologist's next concern is to acquire a pure and unbiased consciousness. This is done through the process of the six levels of reduction.

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[16] **Op. cit.** Lauer pp 58-61
[17] **Ibid.**, pp 61-64
[18] **Op. cit.**, Kockelmans, p 318

In applying the reductions, physical fitness would be viewed simply from one's own experience (here and now) and would not be biased by any previously held concept of what physical fitness is. In other words, one must forget or put aside the concepts and experiences he normally uses in arriving at his assessment of what physical fitness is. The operation of thinking about physical fitness must be untainted by previously held concepts. One's consciousness must not consider physical fitness as seen in a dancer, for instance, or in an athlete, or as it determines a nations's preparedness for war. The consciousness considers physical fitness in and of itself, physical fitness as simply a datum of consciousness. This refraining from objectifying allows one to see the essence of physical fitness.

Further application of the reduction process requires that physical fitness be realized as a temporary pure flow of consciousness; that is, the physical fitness which is known at this particular time. A phenomenological analysis of physical fitness does not speak for a phenomenological analysis of physical fitness ten, fifty or one-hundred years from now. One must accept the possibility that there are yet undiscovered constituents that would change the essential meaning of physical fitness.

After completing the epoche and the reductions, the next step in the phenomenological method is observation, reflection, free variation, and meditation, which Husserl calls ideation.* Following are some ideations concerning physical fitness. It must be emphasized at this point that all this is an attempt to see through as many founding elements as possible.

As one observes humans, he sees certain characteristics that make them what they are: walking, jumping, running, sleeping, eating, growing, kicking, striking, embracing, laughing, crying, or communicating. All of these characteristics of the human being require some aspect of physical movement, or one could say that these physical movements belong to the constitution of human beings. For instance, when a man is observed walking, he may be going in and out of buildings, down a street, or to and from his work. He may be carrying sacks of groceries while he walks. In many cases the human being may be seen walking for the purpose of obtaining some object or goal necessary for his existence.

The human being may be observed running to escape something that is bearing down on him—a car or another being—or to escape some other threat such as fire or flood. Man may be observed jumping when he must cross some obstacle such as water, a fence, or some other type of hazard. The ability to run and to jump will aid the human being to move suddenly from the path of danger and may at times save his life.

Humans may be observed sleeping after sickness, hard work, intense play, or some other strenuous activity. Usually the individual seems to arise from sleep refreshed and ready to go about whatever business he chooses at that particular moment. Likewise, he may be seen eating and drinking several times during the day. The consumption of food and water seems to be of utmost importance to man's existence, for observation again reveals that those who do not eat become thin, and in some cases the lack of food and water may result in death.

Growth may be observed in all human beings. The hair grows longer, fingernails become more extensive, and the individual may become taller and sometimes wider. This growth seems to be related to the independence of man. As he reaches the point where his growth in height and width level off, he seems to leave his family and goes off on his own. Thus human beings are declared capable of dealing with the problems of existence in this world.

Human beings may be seen embracing other human beings or objects. This act of embracing seems to be a part of emotional expression and takes place, for example, to defend against an aggressor, to show tenderness toward children, or as a part of sexual relationships. These activities seem to contribute to the continuation of the species and demonstrate one's ability to get along in the world.

Laughing and crying may also be observed as kinds of emotional expression.

*Refer to pp. 5-6 for a more extensive coverage of ideation

For example, one may be observed laughing when he is in the company of others, be they young or old. Crying may occur when humans are alone or in groups, as when someone has been sick or injured, or at the side of a person who has died, or after someone has talked harshly to them or screamed at them. These movements are signs of a human's well-being or bereavement as he struggles to remain in command of his existence in this world.

Communication of a verbal, physical, or written nature may be seen as a means of indicating to others the status of one's condition in reference to his environment. For example, if I am happy and feel well, I will communicate this to others by verbally saying that I feel well, or by writing friendly letters of my feelings, or by physically showing it through activity of play, work, or laughter. Likewise if I feel badly, I will somehow communicate this to others. Hopefully, if the situation warrants, others will aid me in my fight against my personal environment. If I am unsuccessful in my communication, my existence may come to an end. For example, a drowning person screams for help, and a life guard makes the rescue. Man is thus a social animal and through his communicative skills enhances his position in coping with his environment.

It can be observed that as one approaches death, all of these physical movements gradually decrease. If one then dies, he can be said to lack that physical fitness necessary to cope with his world—that is the surrounding environment ceases to exist for him, and he is no longer in need of any of the aforementioned movements. At this time, no metaphysical stance will be taken regarding spiritual existence, but the constituted intentionality of the physical fitness necessary for man to cope with his environment has been eliminated, and to mother earth he will return.

From the above ideations, one can intuit that the term physical fitness means the possession of the ability to make the physical movements necessary for man to exist, man's ability to cope with his environment. This is the essential intuition that can be drawn from the intention of the constituting material obtained through ideation. This one common element causes, or is the result of, human physical fitness—physical movement.

To be sure, there are degrees of physical fitness. However, they are founded from the founding strata of the above analysis. The environment of the athlete, for instance, requires a higher level of physical fitness to cope with his environment than does that of the philosopher who does not enter the athlete's world. A soldier must be able to sustain physical movement through long marches and other obstacles created by a hostile environment, while the ability of an elderly lady to cope with her environment does not normally require such strenuous or sustained physical movement. But it must be remembered that all of these environments are created by man and are simply variations of the necessary ingredients of physical fitness in order to survive. One who says that certain individuals are not physically fit must qualify his statement by saying that the individuals are not physically fit for football, for war, or for whatever environment he is making reference to.

When one has stated that the human being needs a higher degree of physical fitness for a particular activity, then and only then can he state the constituent parts that need to be improved by increased activity. For example, the gymnast needs strength in the arms and strong, limber stomach muscles more so than most individuals. The coach who knows what exercises constitute an intention of improving these areas of the gymnast's body will then prescribe such activity as push-ups, sit-ups, and backbends. However, since this strength is far above what the average person needs to cope with his world, this is not physical fitness in the basic (founding) sense. This is physical fitness beyond (founded) the normal intention of physical fitness.

The element of pain seems to be the indicator to man that he has entered into an environment that he is not physically prepared to cope with. The pain indicator tells him that he needs to strive to improve certain portions of his body to sustain physical motion. However, one normally adjusts to his physical environment by simply being a part of it. For instance, if one begins a job digging ditches, he

may be achy and sore for several days, but the pain disappears as the body adjusts to the new physical burdens. Normally, a person does not do calisthentics or enter a physical fitness training program (a forced situation) to prepare himself for his environment. Likewise, natives in uncivilized parts of the world become physically fit for hunting (to capture animals for food) by hunting, not by doing some superimposed physical activity. This may imply that it is ridiculous for some people in America to build great muscles through weight-lifting when our environment does not demand that kind of physical fitness. Or, it may point out the esthetic nature of one to present a beautiful, well-conditioned body.

Furthermore, mental alertness is an important aspect of man's ability to cope with his environment. For instance, when a man has had a crippling disease or an accident that has left his legs paralyzed, he learns to cope with his environment by using his mental abilities to compensate for his physical disabilities. In other words, he learns to foresee situations that he cannot handle and avoids them. In like manner, when one learns that he is the prime suspect for a heart attack, he may start to watch his diet or participate in a jogging program. He forces himself into unnatural activities in attempt to forestall more severe consequences.

Recaptitulating, it seems as though physical fitness is necessary for man to cope with his environment. Each environment requires greater or lesser degrees of physical fitness for survival, and man must adapt his physical fitness level according to his personal environment.

A Multi-Group, Inter-Sectional Personality Study

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INTRODUCTION

A vast amount of research activity has been directed during the past decade towards studies involving personality traits of divergent segments of the population. Within the discipline of Physical Education, a plethora of investigations have been completed attempting to identify the "Athletic Personality."* Unfortunately, this research has for the most part been confined to intact groups with limited objectives and limited numbers. Very little research has been attempted which aspired to not only identify personality differences between population segments; but also to locate the reasons for these differences. Therefore, the need for research of a broader scope becomes quite evident, and this investigation is a small step in that direction.

The problem was to identify the personality differences of college students from two greatly distant areas in the United States. In addition, after personality differences were located according to selected groups, the cultural and environmental reasons for these differences were investigated.

The Cattell 16 Personality Factor Questionnaire was the instrument utilized to

*(Bird[1], Kane[2], Kroll[3], Kroll and Carlson[4] Peterson, Weber, and Trausdale[5], Rushall[6], Rushall[7], Werner and Gottheil[8])

assess the personality traits of 480 college students. The subjects were 240 men and 240 women attending two widely separated universities—one in the far West (The University of Utah) and the other in the mid-east (Illinois State University). The subjects were randomly selected from the populations at each university according to the following criteria: athletes (male and female), intramural participants (male and female), music majors (male and female), and other students (male and female students not involved in any of the aforementioned extracurricular activities). There were 120 subjects in each of the above four categories (60 male and 60 female—30 from each of the two universities made up the 60). In total, there were 16 groups of 30 subjects each; or eight groups of 30 subjects from each of the two universities. Figure 1 illustrates the composition of all the groups.

Figure 1.

Category	Subjects	Sex		Institution	
1. Varsity Athlete	120	60 male	60 female	30 West	30 Mid-West
2. Intramural Participant	120	"	"	"	"
3. Music Majors	120	"	"	"	"
4. Random Sample of College Students	120	"	"	"	"
TOTAL =	480				

EXPERIMENTAL DESIGN AND STATISTICAL ANALYSIS

The design of this experiment was basically that of a between group analysis using volunteer groups as data. The data were categorized and analyzed in a variety of ways.

Initially, the investigators analyzed the results of each personality trait by utilizing a three-way analysis of variance statistical design. The three variables were groups, sex, and college. Significant interactions were located in thirteen of the sixteen personality traits.

In order to locate the source of the significance in each trait, the two-way analysis of variance was used on each significant three-way. The two dimensions of the two-ways were sex and group. The two-way analysis of variances resulted in significant interactions in three of the sixteen personality traits. Therefore we once again collapsed the "boxes" in order to determine the source of significance and conducted one-way analysis of variances on the significant two-ways. Examples of the statistical results can be found in the Appendix.

In addition, t-tests were utilized as well as a correlational matrix between the sixteen personality traits. In order not to become overly sophisticated statistically, and not to make the investigation so complex it would be virtually impossible to decipher, the investigators decided to report the results according to the significant differences (t-tests) in profile form.

HYPOTHESES

The study due to its size was multi-purposed and designed to investigate the following hypotheses:

1) There is no difference in the personality traits of male students at Illinois State University, and the male students at the University of Utah according to matched groups.
2) There is no difference in the personality traits of female students at Illinois State University, and the female students at the University of Utah according to matched groups.
3) There is no difference in the personality traits of male students at the University of Utah and Illinois State University.
4) There is no difference in the personality traits of female students at the University of Utah and Illinois State University.
5) There is no difference in the personality traits of students at Illinois State University and the University of Utah.

FINDINGS

The investigation revealed the following findings in relation to the previously cited hypotheses:

1) The null hypothesis that there were no differences in the personality traits of male students at Illinois State University and male students at the University of Utah, according to matched groups, was rejected.

The analysis revealed that the varsity male athletes at Illinois State University were more intelligent than their counterparts at Utah. However, the Utah male athlete was significantly more emotionally stable, happy-go-lucky, conscientious, imaginative, shrewd, apprehensive, self-sufficient, and less trusting.

The male intramural participant at the University of Utah was significantly more emotionally stable, more assertive, conscientious, tender-minded, imaginative, experimenting, self-sufficient, and less forthright than the male intramural athlete at Illinois State University.

The music males at the two universities have much closer agreement on personality traits than do the varsity or intramural athletes. The music groups differed on only five of the sixteen traits. The male music subjects at the University of Utah were significantly more conscientious, suspicious, imaginative, shrewd, and less humble than their couterparts at Illinois State University.

The male random sample at Illinois State was more intelligent and tender-minded; while Utah random male sample was more emotionally stable, conscientious, and shrewd.

2) The null hypothesis of no differences between female students in matched groups at the two universities on personality factors was also rejected.

The University of Utah female athlete was significantly more intelligent, venturesome, imaginative, and experimenting; while the Illinois State female athlete was more apprehensive and tense.

The University of Utah female intramural participant was more emotionally stable, self-sufficient, and controlled, while the Illinois State intramural female was more outgoing, and suspicious.

The female music major at the two universities were almost completely different. The two groups differed on eleven of the sixteen personality factors. The Illinois State females in music were more outgoing, intelligent, emotionally stable, happy-go-lucky, venturesome, tenderminded, and controlled; while the Utah females in music were more conscientious, shrewd, experimenting, and self-sufficient.

The random samples of females between the two universities revealed that the two groups only agreed on two of the sixteen traits. The two groups were similar on only factors O (self-assured vs. apprehensive), and Q_4 (undisciplined self-conflict vs. controlled). On the remaining fourteen personality factors there were significant differences between the two groups.

3) The null hypothesis that there was no difference in the personality traits of male students at the University of Utah and Illinois State University was rejected. The male student population at the two institutions were significantly different on eight of the sixteen personality traits. The Utah male students were more emotionally stable, more self-sufficient, more assertive, more conscientious and persevering, more imaginative, and were more suspicious. The greatest difference between the two male populations occurred in the factor N results. The Utah males were more worldly and socially aware compared to the Illinois State male who was more forthright and unpretentious.

To speculate, the rural-urban background differences between the two populations appears to have a definite effect upon personality. The Utah males gave an overall appearance of being more mature individuals possibly due to the urban background. Regardless of reasons, the two

male populations were found to be definitely different. The cultural implications here are great.

The Utah male personality is well within the average for college age males according to Cattell's norms. However the Illinois State male deviates from the national norms on the following traits: (B) more intelligent, (C) affected by feelings, (G) expedient, (L) trusting and (N) forthrightness. (See profile number 1)

4) The null hypothesis that there was no difference in the personality traits of female students at the University of Utah and Illinois State University was rejected.

The results indicated that the Utah female was more worldly, emotionally stable, venturesome, imaginative, free thinking, conscientious, and self-sufficient than their counterparts at Illinois State University. The Illinois State female student was significantly more apprehensive and tense. It must be pointed out at this time that the overall general campus atmosphere at Illinois State during the duration of this study was highly unusual.

As data were being collected for this investigation, there was a murder, four rapes, and numerous physical assaults against Illinois State female students. Therefore, the personality traits of the females examined appears to be a direct extension of the campus' general atmosphere.

Again, as in the male student differences, the general trends revealed that the Utah female student was more mature and socially controlled. The investigators feel that a possible reason for this finding is the urban background of the Utah female compared to the rural background of the Illinois State female. (See profile number 2)

5) The null hypothesis that there would be no difference in personality traits of students at Illinois State University and the students at the University of Utah was rejected.

The profile for the University of Utah students was average on every trait when compared with the national norms supplied by Cattell. However, the Illinois State student profile was not average on four of the sixteen traits. Illinois State students were more intelligent, more affected by feelings, more expedient, and more forthright than their counterparts at the University of Utah. The Utah student was more mature, emotionally stable, conscientious, and shrewd. (See Profile No. 3)

CONCLUSIONS

The inference that we must draw from this study is that the matched groups studied do not have a definite personality structure. We found close agreement of personality between the intramural and varsity athlete on the Illinois State University campus, but found wide differences between the Utah varsity athlete and Illinois State University varsity athlete. The closest the study came to identifying a personality type is the music male of the two universities. We found that deviations between male groups on both campuses were quite normal. We also found that deviations between female groups on both campuses were quite normal.

The findings indicated that both the male and female groups at Illinois State University were significantly different from the male and female groups at the University of Utah. We must conclude from the finding that the University of Utah students and Illinois State University students are from different populations.

A number of factors may have influenced this study. The urban background of the Utah student body as compared to the more rural background of the Illinois State University student. The recent study by Willits, Bealir and Crider indicates that the rural resident is significantly more conservative and indicates a lack of willingness to depart from traditional attitudes. The significantly strong N-factor, Naivats, simple, unpretentious and factors Q_1, Q_2, Conservatism and Group dependent scores by Illinois State University on the Cattell 16 P F would indicate a strong rural background. The strong O factor and Q_4 factor, apprehensive and tense, overwrought, scored by the Illinois State University females may have been

influenced by happenings that occurred on campus during the testing period of this study. The campus suffered through the traumatic shock of one coed raped and murdered, four other rapes including a double rape, and a number of other incidents. Women that had to be on campus either went in groups of 3 and 4 or had a male escort. All of this turmoil may have very well led to the high apprehensions and tenseness display by the Illinois State female.

In conclusion, the groups studied by this investigation exhibited very little in common as to personality traits. Also, the cultural differences appeared to be reflected in the overall group profiles; and lastly, the immediate environment appeared to have a profound influence upon the personality profiles of the groups in this investigation.

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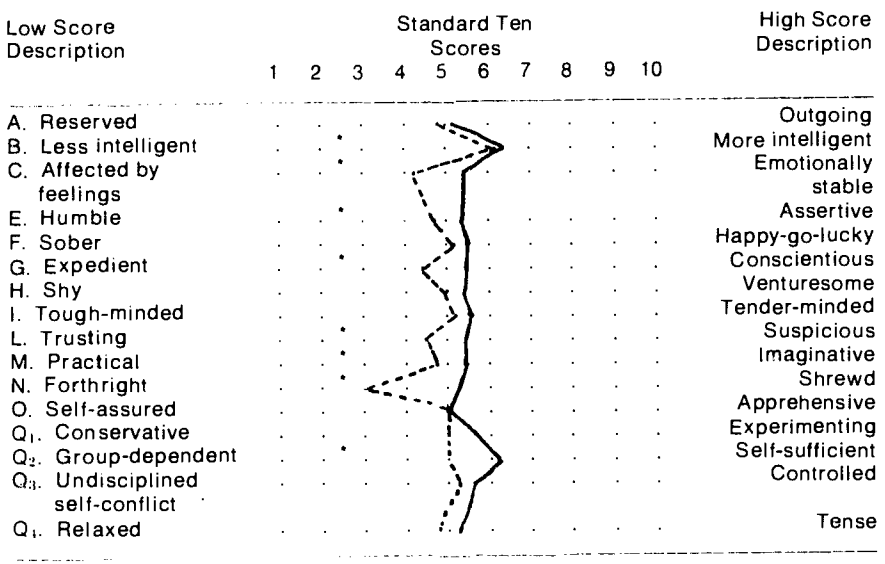
APPENDIX

PROFILE I

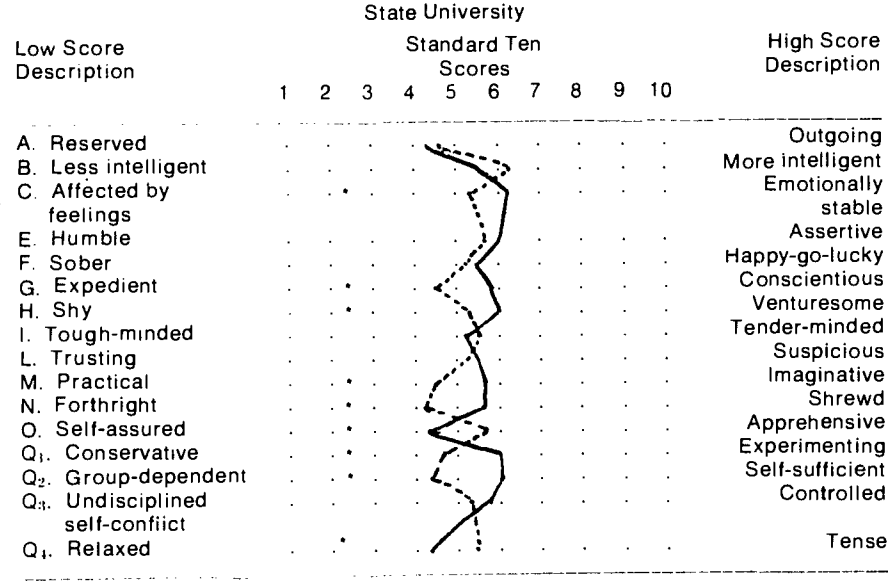
16 PF Test Profile for Male Students at the University of Utah and Illinois State University



—Utah
---Illinois State
*Significant @ .05

PROFILE II

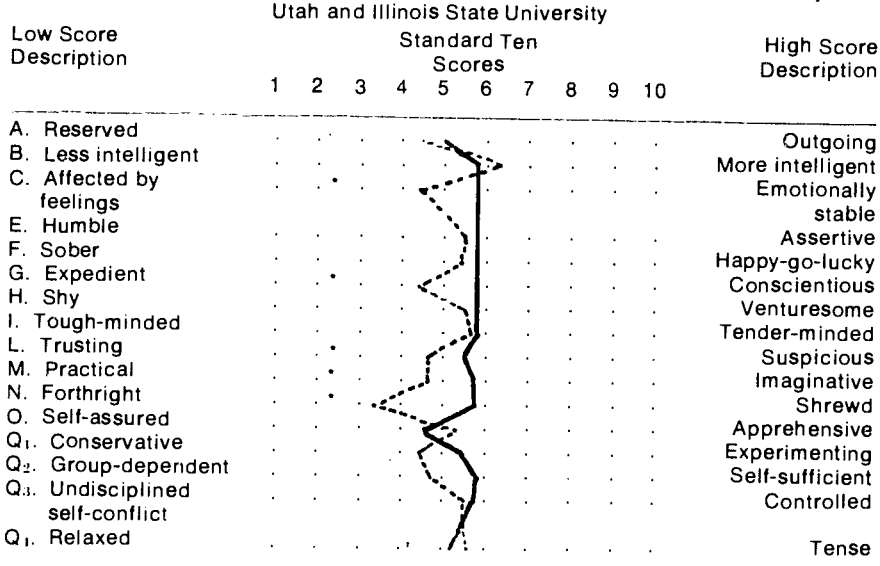
16 PF Test Profile for Female Students at the University of Utah and Illinois State University



—Utah
---Illinois State
*Significant @ .05

PROFILE III

16 PF Test Profile for Overall Comparisons between Students at the University of Utah and Illinois State University



—Utah
---Illinois State
*Significant @ .05

Aerobic Capacity and Adrenocortical Response To Work and Cold Water Stressors

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Plasma hydroxycorticoids (17-OHCS) have been shown to increase in an organism following the presence of different environmental stressors (4,13,22,23,24). Since the most abundant 17-OHCS in man is cortisol, it has been used in research as a criterion of response to stressors of cold and work. Although most investigations have shown that cold stressors increase plasma cortisol concentration (7, 12, 17, 30, 36), some studies have reported no change in cortisol after cold exposure (3, 29). Research done with work as a stressor has shown variable results in response of plasma cortisol. Researchers have reported a decrease (10) or no change (21) in plasma 17-OHCS in subjects exposed to a work stressor although most investigators have observed increased levels following work (5, 11, 26, 27, 28).

There is some evidence indicating that cortisol response to work is related to level of physiological efficiency in terms of oxygen utilization during work. Of the three studies found that examined the relationship between levels of cardio-respiratory fitness and response to work, one study reported that athletes exhibit a smaller change in plasma cortisol concentration than non-sportsmen as a result of work (15). The other two studies reported no relationship between cardio-respiratory fitness and plasma cortisol concentration (31, 34). Although research concerning cortisol response among humans differing in cardio-respiratory fitness has been confined to work as a stressor, it is conceivable that similar cortisol response may occur with other kinds of stressors. This was examined by Klein et al. (20) who compared responses to orthostatic, hypoxic, and work stressors in subjects differing in levels of cardio-respiratory fitness. No apparent relationship was found between levels of fitness and response to these different stressors when the response criterion was heart rate. Perhaps if a more valid measure of stress response had been used cross-tolerance may have been observed. Using criteria of death and cardiac necrosis in animals some investigators have found that a high tolerance to a work stressor was indicative of a high tolerance to bone fracture, restraint, and cold (1, 2, 37).

PURPOSE OF THE STUDY

The primary purpose of this investigation was to determine adrenocortical response to work and cold water stressors in male subjects varying in cardio-respiratory fitness.

REVIEW OF THE LITERATURE

The relationship between physiological stress and cortisol response is evident in several research studies conducted with humans and rats. Frenkl et al. (15) compared non-sportsmen (22-26 years of age) in their physiological response to work. Non-sportsmen were divided into two teams which participated in 60 minutes of football competition against one another. The athletes were also divided into two teams and competed in the same manner. Plasma cortisol levels were measured after competition ceased. The water polo players exhibited smaller increases in plasma cortisol level and more rapid return to the pre-exercise level than did non-sportsmen. Sutton et al. (34) classified 14 male subjects into two levels based on maximum aerobic work capacity. The subjects in the higher level exhibited maximum aerobic capacity of 58-78 ml 0_2/kg/min and the lower level 24-32 ml 0_2/kg/min. Each subject was exercised until exhausted. Results showed similar plasma cortisol levels for fit and unfit subjects, although the more fit group completed over twice the quantity of external work.

In a study in which all subjects did the same external work but at different rates, Rose et al. (31) measured the plasma cortisol level immediately before and one minute after a one mile run. Subjects were nine healthy males, ages 19-55 years, who exhibited aerobic capacities of 43.53 to 68.02 ml/kg/min. Plasma cortisol levels observed before and after the mile run were not found to be significantly different. Additionally, no relationship was found between aerobic capacity and plasma cortisol response to the run. Rose et al. did not draw samples during the recovery period. Consequently, comparisons between subjects in rate of recovery were not possible.

Reports from studies on cold stressors have been contradictory. Goldstein-Golaire et al. (17) used an air temperature of 4°C and a duration of two hours to stress 13 middle-aged subjects but found no significant changes in plasma cortisol levels. However, Wilson et al. (36) found that plasma cortisol level was raised significantly when men and women were subjected to temperatures of 0°C for a three hour period. Apparently, the level of intensity and duration of the cold determined plasma cortisol response. The duration of exposure can be minimized considerably if cold water rather than cold air is used as a stressor. In a pilot study by the author, nine middle aged males exhibited significant increments in plasm cortisol after being partially submerged for three minutes in water 5°C.

Relatively few studies have determined whether tolerance to a work stressor indicates similar tolerance to a different kind of stressor. Klein et al. (20) compared hypoxia, altitude, work, acceleration, and orthostatic tolerances between athletes and non-athletes using heart rate as the criterion. Heart rates of athletes were shown to be significantly lower than those of non-athletes. Bartlett (2) determined whether adaptation to a work stressor affects the ability to resist hypothermia among rats. Daily exercise was shown to result in some inhibition of hypothermia. Bajusz and Selye (1) studied the degree of cross-resistance of rats to cold and bone fracture after adaptation to work stress occurred. The trained rats increased their tolerance to cold and bone fractures as seen by lower incidence of cardiac necrosis in the exercise group. The importance of physical exercise as a factor for increasing resistance of the body to unfavorable influences was studied by Zimkin and Korobkov (37). Results showed increased tolerances to hypoxia and overheating among subjects possessing high work capacity.

The literature reviewed indicates that plasma 17-OHCS levels increase when human subjects have been exposed to work or cold stressors. The relationship of aerobic work capacity to plasma cortisol level during stress response is not yet conclusive. No studies have used plasma cortisol level to determine transfer of tolerance from one stressor to another. However, several studies were cited which used other stress criteria and found positive transfer of tolerance among different stressors.

PROCEDURES

Twelve male subjects between the ages of 17 and 36 years were measured for maximum aerobic capacity. Stressors of work and cold water were administered to the subjects, followed by the collection of blood samples periodically over a span of two hours. A blood sample was also collected just before exposure to a stressor. Percent body fat was determined by underwater densitometry. Body fat was considered as a factor to control since it may be related to the criterion score. The aerobic capacity test and stressor exposures were administered at 4:00 P.M. daily.

Maximum Aerobic Capacity—Maximum aerobic capacity was determined using a modified method of Taylor, Henschel, and Buskirk (35). A series of three minute runs separated by five minute rest periods were performed by the subject. The first run was at 0% grade and 7.0 mph. After each run an increase of 2% grade occurred with speed remaining at 7.0 mph. Expired air was collected and metered during the third minute of each exercise period. Expired air was analyzed for oxygen and carbon-dioxide content.

On the basis of the maximum aerobic capacity test, the subjects with the highest aerobic capacity were designated as the high group, and the subjects with the lowest aerobic capacity were considered the low group. The two groups were referred to as higher or lower to distinguish between them. However, the actual aerobic capacity of the subjects was considered good to excellent according to the norms established by Cooper (9).

Work and Cold Stressors—The stressors used in this investigation were a submaximal treadmill run and partial immersion into cold water. Subjects refrained from eating at least two hours prior to testing. A bed rest of thirty minutes was taken before being exposed to the stressors. Administration of all stressors was separated by a minimum of 72 hours. Several days prior to being tested on the submaximal run, subjects practiced on the treadmill at the same speed and grade used during the stress exposure. The submaximal run was performed at a speed of 7.0 mph and at 4% grade for a period of nine minutes (1.05 miles).

Before subjects were exposed to the cold water stressor, the testing procedure was explained and demonstrated using a televised tape. Subjects wore only a swim suit while being immersed by a chair hoist to the axillary level. The ambient and water temperatures were $23°C \pm 2°C$, and $9°C \pm 2°$ respectively. The duration of exposure to the water was five minutes.

Collection of Criterion Score—Blood samples were taken immediately before (basal) and after (0 minutes) exposure to the stressors. During the recovery period

samples were taken at 30 minutes, 60 minutes, and 120 minutes. All sampling of plasma cortisol was done between 4:00 P.M. and 8:00 P.M. on the day of the exposure to the stressor. Samples were drawn from the medial cubital vein using a 20 gauge disposable needle and 10 ml heparinized Vacutainers. Immediately after collection of the samples they were placed in an ice bath, and within five minutes were centrifuged at 0°C and 3,000 rpms for 15 minutes. The plasma was then pipetted into clean test tubes, capped, coded, and immediately frozen to -10°C to await the analysis for cortisol content. Analyses were done by the Endocrinology Department of Temple University Medical School using a Competitive Protein Binding Assay developed by Murphy (25) and described in Appendix A. Using this method, 96 ± 7% recovery of the cortisol standard was attained.

Design and Statistics—The t-test for uncorrelated groups was used to determine if significant differences existed between the two groups on the basis of age, body weight, and percent body fat. The data of plasma cortisol were analyzed by a 2 x 2 split plot design with two levels of aerobic capacity, high and low groups; and two levels of stressors, work and cold water.

The criterion score was the difference in absolute scores between the basal level and each of the cortisol values obtained after exposure to the stressors. To assure that the assumptions for this design were met, which are equality and symmetry of covariance matrices, all scores were weighted using coefficients of orthogonal polynomials and the data were normalized using matrix algebra. The Bio-med program, MANOVA, was used on a 6400 series computer to calculate resultant F-ratios. The .05 level was considered as the level of significance.

RESULTS

The comparisons between the groups on the basis of age, body weight, and percent body fat are shown in Table II. No significant differences were found on any of the variables.

TABLE II
Means, Standard Errors, and t-ratios Between Groups
On Variables of Age, Body Weight, and Body Fat

Group	Variable	Mean	SE	t
Higher		22.2		
	Age (yrs)		.547	0.913
Lower		22.7		
Higher		72.2		
	Body Wt. (kg)		5.500	1.400
Lower		79.9		
Higher		17.6		
	Body Fat (%)		2.504	0.559
Lower		19.0		

The insignificant differences between groups on all variables eliminated the necessity for statistical control of them.

Changes in plasma cortisol from basal levels in response to submaximal work and cold water stressors are illustrated in Table IV.

The results indicate that the group lower in aerobic capacity exhibited a higher plasma cortisol response to both the work and cold water stressors at each recovery period except at 120 minutes after the cold water. The peak response was registered at 30 minutes into the recovery for all subjects. The submaximal work and cold water stressors elicited changes from basal plasma cortisol level ranging from 3.5 to 15.0 ug/100 ml of plasma and 1.0 to 14.5 ug/100 ml of plasma respectively.

TABLE IV
Mean Change in Plasma Cortisol
After Submaximal Work and Cold Water Stressors

Stressor	Aerobic Capacity	Minutes into Recovery 0	30	60	120
Work	Higher Group	2.24	2.71	1.95	0.14
	Lower Group	3.80	7.24	3.81	0.27
Cold Water	Higher Group	3.57	4.10	0.90	− 0.53
	Lower Group	5.43	7.35	2.66	− 0.86

values in ug/100 ml of plasma

Verification of these observations depended on the results on the analysis of variance. Significant differences were found between levels of aerobic capacity ($F = 7.07$) but not between response to work and cold water ($F = .01$). Apparently, higher aerobic capacity results in a smaller response in cortisol to submaximal work than among individuals of lesser aerobic capacity. The nature of the external stressor, work or cold water, elicites a similar response in cortisol.

When external work was the same for all subjects, the subjects of lower aerobic capacity exhibited a greater response since physiological stress was at a higher level than it was among the subjects of higher aerobic capacity. The relationship between level of physiological stress and cortisol response is evident in previous research with stressors of work. Frenkl et al. (16) showed that when trained rats were compared to untrained rats on the basis of plasma corticosterone, after working with similar external loads, the trained rats exhibited less plasma corticosterone. When Frenkl et al. (15) attempted to maintain the same or similar physiological stress among rats differing in aerobic capacity by having the trained rats perform more work than the control rats, the trained rats still exhibited less corticosterone after work. The procedure described by Frenkl (15) in his study to achieve similar physiological stress for all rats is not precise enough to guarantee similar stress. It is conceivable that the untrained rats were actually performing at a higher level of physiological stress and, therefore, evidenced a greater secretion of corticosterone. Or, the trained rats may have secreted less corticosterone than the untrained rats because of the effects on secretion of prolonged and intensive physical training to which the trained rats were subjected. Selye (33) has postulated that intense and severe work over a prolonged period of time will reduce the ability of the adrenal cortex to secrete plasma cortisol. Frenkl and Csalay (14) and Chin and Evonuk (6) have shown that exhaustive training of rats for a six week period will reduce plasma corticosterone level at basal by approximately 25%. As a consequence, any comparison between untrained and trained rats on plasma corticosterone after a work task would reflect these basal differences.

Some insight into the effects of similar physiological stress in humans, varying in aerobic capacity was gleaned from Sutton et al. (34). They found that subjects differing in aerobic capacity did not differ in plasma cortisol after an exhaustive run on a treadmill. The results obtained from the ten subjects in the present study support Sutton's findings in that no significant differences were found in cortisol response between the four subjects of higher aerobic capacity and the six subjects of less capacity after a similar physiological stress.

The higher concentration in plasma cortisol exhibited by Frenkl's untrained rats and by humans in this study having lower aerobic capacity may be a consequence of the type of substrate used for energy production. As a work task increases in severity the substrate used for energy production varies in relative importance. The energy for work performed primarily aerobically is provided by free fatty acids and glucose (32). Increased carbohydrate and decreased lipid usage have been observed in untrained subjects (18, 32) and those having low aerobic

capacity (8, 19) when each group was worked submaximally. However, as the work becomes more intense the energy needed to sustain the movement is made available increasingly by anaerobic metabolism. When this occurs the increased amounts of lactic acid in the blood have an inhibiting effect on the utilization of lipids and corresponding increase in the use of glucose as the energy source (18). According to the glucostatic hypothesis postulated by Nazark (28) the greater depletion of glucose in the blood may then stimulate the glucoreceptors in the liver and brain and thus cause a greater secretion of ACTH from the anterior pituitary gland. The subsequent release of cortisol from the adrenal cortex has a compensatory effect by increasing gluconeogenesis and in turn, the availability of glucose for energy production.

It follows that when both trained and untrained individuals perform the same work the untrained find the work more stressful physiologically. The more rapid build-up of lactic acid in the blood of the untrained compared to the trained reduces the utilization of lipids and increases the use of glucose (18). With the depletion of blood glucose stimulation of the glucoreceptors occurs, resulting in a corresponding increase in plasma cortisol exceeding the level in the trained.

There are differences in physiological response between work and cold water stressors. The basic response to work involves the physiological mechanisms concerned with the dissipation of heat, whereas the response to a cold stressor involves the retaining of heat. Some of the differences in response are evident in vasodilatation which occurs during work but is inhibited in cold. A concommitant response is shown in heart rate which increases in work but decreases in cold. The response of the metabolic processes are obviously different because of the nature of the energy demanded of the body. In the performance of work the metabolic demands are greatly increased. The increased heat in the muscle tissues in turn stimulates the metabolic processes. Although some heat is produced during shivering in cold water, the physiological mechanisms concerned with heat conservation are primarily affected.

Although there are different physiological mechanisms operating during work and cold a common mechanism is reflected in the response of plasma cortisol which is similar for both stressors of work and cold. Perhaps this common mechanism is related to energy production because the cortisol levels are needed to restore them.

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Influence of Acute Physical Activity on State Anxiety

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A review of the literature dealing with physical fitness and psychopathology suggests that physical fitness is implicated in the pathogenesis of various psychiatric illnesses (Morgan, 1969a). For example, depressed patients have been noted to score lower than nondepressed patients on tests of muscular endurance (Morgan, 1968a) and cardiovascular fitness (Morgan, 1969b). Also, length of hospitalization has been found to correlate with levels of muscular strength and endurance at the time of admission to a psychiatric facility (Morgan, 1970c). Furthermore, it has been demonstrated that depressed adult males experience a significant reduction in depression following six weeks of participation in an endurance fitness program (Morgan, Roberts, Brand, and Feinerman, 1970). It appears that habitual physical activity not only plays a role in the development and maintenance of mental health, but the prognosis for the physically fit individual is brighter than that for his sedentary counterpart once an emotional disturbance occurs (Layman, 1972).

While the long-term effects of leading sedentary versus physically active life styles on one's mental health seems to be reasonably clear, there is almost a total lack of evidence relating to the psychotherapeutic efficacy of acute physical activity. This is unfortunate for at least two reasons. First, it may well be that an individual's decision to lead an active or sedentary life may well reflect the quality of exercise experiences at an acute level. Intuitively, one would generally expect that persons who have had undesirable exercise experiences (e.g., intensity or duration not optimal) would tend to avoid the subsequent adoption of exercise programs. Second, physical activity is frequently prescribed by psychiatrists and internists as a means of reducing tension (Byrd, 1963). While the optimal intensity and duration of physical activity required to provoke physiological gains is well documented (Astrand and Rodahl, 1970), there is simply a lack of information concerning the intensity and duration at which exercise should be performed when attempting to improve psychological states such as anxiety, depression and aggression.

Not only is there a lack of an empirical foundation upon which to base exercise prescription for the improvement of psychological states, but there is some evidence which suggests that physical activity may be contraindicated in certain types of individuals. For example, it has been proposed that lactate, an exercise metabolite, can provoke anxiety symptoms and attacks in anxiety neurotics (Pitts and McClure, 1967; Pitts, 1969; Pitts, 1971). Also, Pitts (1969) has stated that anxiety symptoms could occur in normal persons under stress as a result of excess

lactate accumulation. Pitts (1969) has pointed out that some of the symptoms of anxiety neurosis are similar to those produced by physical activity, and he also has reported that physical exertion can bring on or intensify the patient's symptoms. The Pitts-McClure hypothesis received a great deal of publicity which prompted a number of investigators in the United States (Grosz and Farmer, 1969; Fink, M., Taylor, M. A., and Volavka, J., 1969), Scotland (Lassers, B. W. and Nimmo, I. A., 1969) and England (Kelly, D., Mitchell-Heggs, N. and Sherman, D, 1971) to evaluate the role of lactate metabolism in anxiety neurosis. It is fair to say that the Pitts-McClure hypothesis has been both corroborated (Fink et al., 1969; Kelly et al., 1971) and refuted (Lassers and Nimmo, 1969; Grosz and Farmer, 1969) by this research. Resolution of this obvious controversy would improve our knowledge of anxiety neurosis, as well as the prescription of exercise.

The **actual** influence of physical activity on anxiety states is quite important since ten million Americans are reported to suffer from anxiety neurosis. Furthermore, between 10 and 30 percent of those patients seen by general practitioners and internists are anxiety neurotics (Pitts, 1969), and therefore, this disease represents one of modern man's major health problems. In view of the fact that blood lactate concentrations increase with exercise, the Pitts-McClure hypothesis and the corroborative work of Fink et al. (1969) and Kelly et al. (1971) has special meaning to the planning of physical activity programs. For example, Pitts (1969) has concluded that a high concentration of lactate can produce some anxiety symptoms in almost anyone and it regularly produces anxiety in anxiety neurotics. Also, he has stated that the symptoms of anxiety neurosis are similar to those produced by physical exertion, and most anxiety neurotics report that muscular exertion can precipitate or intensify symptoms. While the experimental evidence is not convincing, it appears that anxiety neurotics **tend** to have a higher heart rate, oxygen uptake, and lactate accumulation for standard work. This may simply reflect sedentary life styles, which, of course, would be accompanied by low levels of physical fitness.

The Pitts-McClure hypothesis quite clearly contraindicates physical activity for the anxiety neurotic. Indeed, such therapy would increase anxiety symptoms and provoke attacks in such patients, as well as normals to a lesser extent, according to their theory. It should be emphasized, however, that infusion of sodium lactate **does not** reproduce the physiological changes which accompany muscular activity (Grosz and Farmer, 1969). For example, infusion of sodium lactate produces a metabolic **alkalosis**, whereas the increase in blood lactate with exercise is accompanied by a shift toward an **acidosis**. Also, according to Grosz and Farmer (1969) the infusion of sodium lactate evokes a rise in sodium bicarbonate which in turn produces "... an adaptive hypoventilation (compensatory respiratory acidosis) and the concomitant feelings of discomfort (p. 618)." Grosz and Farmer (1969) have also demonstrated that the blood lactate level is only about 3-4 millimols at the onset of anxiety symptoms, which does not seem sufficient to account for the observed anxiety attack with infusion of sodium lactate. At the same point in time, however, there is a definite alkalinization occurring. Grosz and Farmer (1969) assume a position similar to that of Lassers and Nimmo (1969) regarding the view that the anxiety symptoms are provoked as a result of lactate complexing with calcium. They argue that lactate levels of 3-5 millimols is only capable of complexing with less than 3% of ionized calcium, which would need to be reduced at least 30% to reproduce hypocalcemic symptoms. Grosz and Farmer (1969) concluded that "... Pitts and McClure's experimental study neither supports, nor, in fact, tests their hypothesis that anxiety attacks are produced by the lactate ion, and the effect of the lactate ion on ionized calcium (p. 619)."

Pitts (1971) has responded to the critique of his work by Grosz and Farmer (1969) by stating,

> "Grosz's articles are obscurely written with main emphasis on scholastic theoretical disputes over the mechanism of production of the differential responses of anxiety neurotics and normal controls to lactate infusion. It seems clear that infusion of lactate produces anxiety attacks in anxiety neurotics but not in controls (p. 89)."

This does not seem to be a fair response to the critique of Grosz and Farmer (1969). Their paper is not **obscurely written** nor is there anything wrong with concern over the **actual** mechanisms involved. Indeed, the argument by Grosz and Farmer (1969) that the anxiety-producing agent is **sodium bicarbonate** is far more convincing than the view that such symptoms are produced by excess lactate. Identification of the mechanism(s) involved has therapeutic implications. Also, the lactate versus bicarbonate views has important implications for future research. For example, Kelly et al. (1971) have suggested that,

> "If lactate ion does participate in the production of anxiety symptoms, the possibility of treating anxiety with lactate ion antagonists would have to be considered; if, on the other hand, low levels of ionized calcium result in anxiety, then treatment with calcium should benefit patients with anxiety neurosis (p. 139)."

The mechanism involved has profound implications for the role of physical activity in the total therapeutic milieu, as well as the life styles of non-hospitalized persons. The critical test of the Pitts-McClure hypothesis does not seem to have been performed. This would quite simply involve an objective assessment of anxiety reactions to lactate-producing physical activity in normal **Ss** and persons ma t-ing high levels of anxiety.

In a series of investigations (Morgan, 1968b, 1970a, 1970b; Morgan et al., 1969; Morgan and Hammer, 1971; Morgan and Costill, 1972; Morgan et al., 1972) over the past several years, we have administered physiological and psychological tests to hundreds of athletes. These athletes tend to be extraverted and stable as measured by the Eysenck Personality Inventory (EPI) with the exception that distance runners have been found to be introverted (Morgan and Costill, 1972). Also, these athletes have tended to score low on measures of state and trait anxiety as measured by the State-Trait Anxiety Inventory (STAI) and the IPAT 8-Parallel-Form Anxiety Battery. However, approximately ten percent of these athletes have scored high on either anxiety or neuroticism, and about five percent of the total number would be regarded as anxiety neurotics. This research is cited here, because contrary to predictions derived from the Pitts-McClure hypothesis, these anxiety neurotics consistently experience a **reduction** in anxiety symptoms following both competitive and non-competitive physical activity of a lactate-producing nature. Indeed, they typically experience anxiety attacks in the pre-competitive period as they anticipate the athletic contest, and win or lose, there is a remission of anxiety symptoms following competition. Our observations in this context have been primarily clinical in nature, but they are amazingly consistent across athletic sub-groups, as well as level of competition. The remainder of the present paper deals with the review of recent empirical evidence which supports our clinical impressions.[3]

Support for the above observations has been noted in a recent study (Morgan and Hammer, 1971) where wrestlers from the University of California (Davis, Riverside, San Diego, and Santa Barbara) completed alternate forms of the IPAT 8-Parallel-Form Anxiety Battery in (1) early season, (2) four hours before competition in a round-robin tournament, (3) one hour before the tournament, and (4) between fifteen and thirty minutes following the tournament. The competition called upon anaerobic mechanisms thus provoking repeated increments in blood lactate across time (about six hours). The findings are illustrated in Figure 1, and the statistical analysis revealed that anxiety increased significantly in the pre-match setting, and the post-match anxiety was significantly lower than the pre-season, weigh-in, or pre-match anxiety levels. Hence, rather than an increase in anxiety which would be predicted from the Pitts-McClure hypothesis, the converse was observed.

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[3]The objective psychometric tools employed to assess state and trait anxiety in the investigations to be discussed were the (1) Profile of Mood States (POMS); (2) alternate forms of the IPAT 8-Parallel-Anxiety Battery, and (3) the State-Trait Anxiety Inventory (STAI).

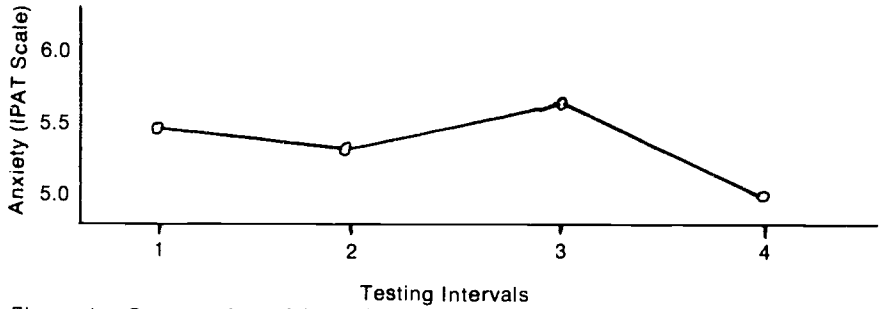

Figure 1. State anxiety of 29 college wrestlers tested in (1) early season, (2) four hours before competition in a tournament, (3) one hour before competition, and (4) between 15 and 30 minutes following the tournament.

It has also been demonstrated that normal **S**s exercising at cardiac frequencies designed to provoke either aerobic or anaerobic (lactate-producing) mechanisms do not necessarily experience increases or decreases in anxiety or depression (Morgan, Roberts and Feinerman, 1971). However, both forms of exercise evoked a sense of "well-being" in over 85 percent of the **S**s tested. More recently Gillett, Morgan and Balke (1972) evaluated the state anxiety of 40 adult males (1) before, (2) immediately following, and (3) 20-30 minutes following a vigorous physical workout lasting approximately 45 minutes. The findings of this investigation are illustrated in Figure 2.

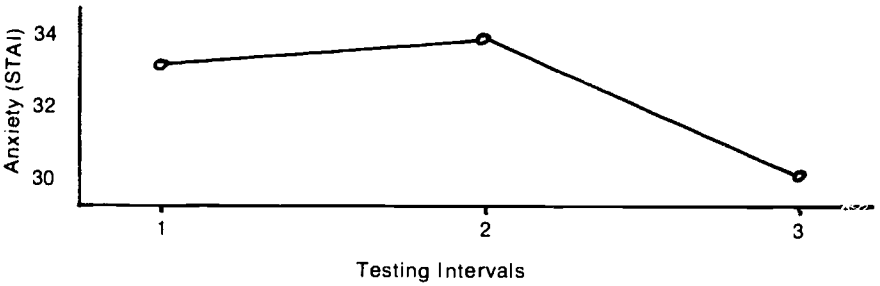

Figure 2. State anxiety of 40 adult males tested (1) at rest, (2) immediately following a 45-minute exercise bout, and (3) 20-30 minutes following exercise.

It will be noted that a slight increase in state anxiety occurred between the pre-test (1) and the immediate post-exercise (2) period, but this increment was not significant. The decrease which took place between the pre-test (1) and the second post-test (3) was significant ($P<.001$), as was the decrement between the first and second post-exercise tests ($P<.05$). If one simply examines the psychological responsivity of high-anxious **S**s the trend is different, but the findings still refute the Pitts-McClure hypothesis. For example, ten of the **S**s were classified as high-anxious (e.g., at least one standard deviation above the population mean), and their responses to the exercise are illustrated in Figure 3. Analysis of these data revealed that exercise was associated with a significant ($P<.05$) reduction in state anxiety in the high-anxious **S**s, not an increase as would be predicted from the Pitts-

McClure hypothesis. Indeed, Pitts and McClure (1967) have stated that anxiety symptoms could even occur in normals as a result of marked increase in lactate production.

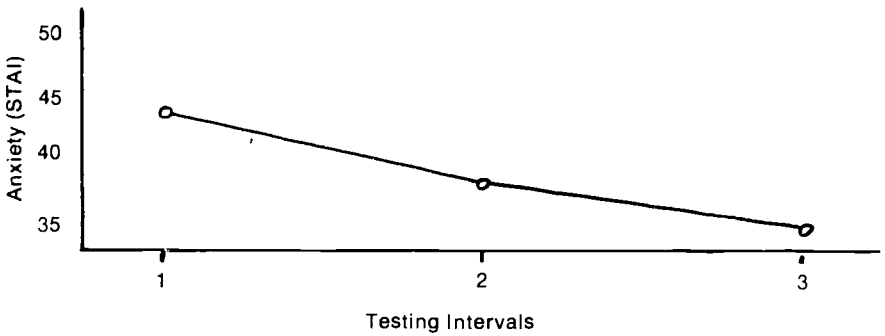

Figure 3. State anxiety of high-anxious adult males (n = 10) tested (1) at rest, (2) immediately following a 45-minute exercise bout, and (3) 20-30 minutes following exercise.

Also, Morgan and Bahrke (1972) evaluated the state anxiety of fifteen adult males before a vigorous workout (fifteen-minute run), immediately following the exercise, and 15-30 minutes following the exercise. The subjects showered between the second and third evaluations. The findings are illustrated in Figure 4, and it was found that significant decreases in state anxiety took place in both post-exercise settings.

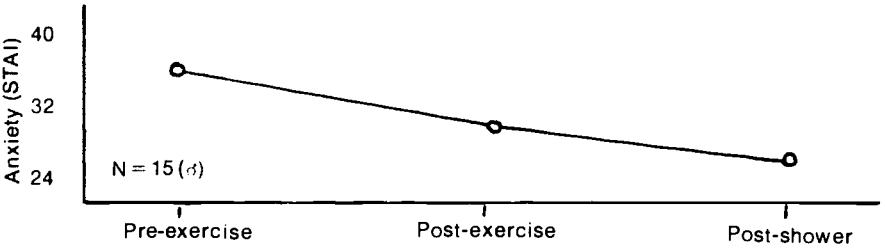

Figure 4

Morgan and Nagle (1972) evaluated the biochemical response of six male anxiety neurotics and six male normals to a maximal muscular exertion which involved running on a treadmill at 7 mph and increasing grades. The findings of this investigation are illustrated in Figure 5. It will be noted that both groups of subjects had similar resting values of blood lactate, and the maximal test of physical capacity resulted in similar lactate production for the two groups. Also, none of the subjects experienced anxiety attacks. These findings challenge the ecological validity of the Pitts-McClure hypothesis.

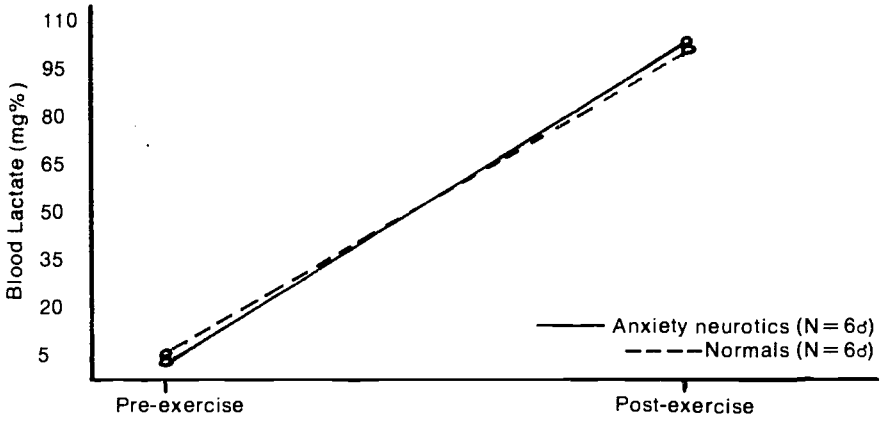

Figure 5

Anderson and Morgan (1972) recently evaluated the state and trait anxiety of seventeen adult females before and following a modified Balke treadmill test. Both state and trait anxiety decreased, but as expected, the decrement in trait anxiety (an enduring dimension) was not significant. However, the exercise did produce a significant reduction in state anxiety. These findings are illustrated in Figure 6. While blood lactates were not evaluated in this investigation, the level of work performed is known to provoke significant increases in blood lactate (Åstrand and Rodahl, 1970).

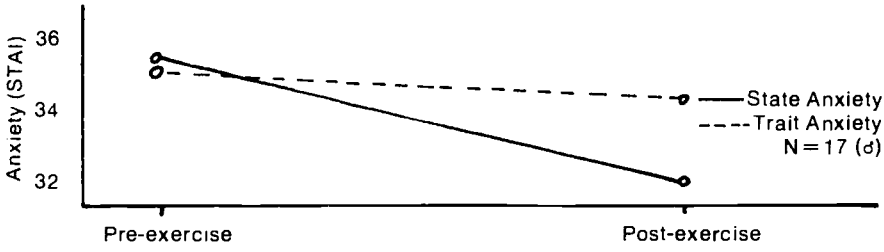

Figure 6

One might argue that a more crucial test of the Pitts-McClure hypothesis would involve the assessment of anxiety in high-anxious subjects before and following muscular exertion. Therefore, high-anxiety (N=4) and low-anxiety (N=4) female subjects were also evaluated by Anderson and Morgan (1972), and it will be noted in Figure 7 that state anxiety was reduced in the high-anxious subjects. These findings are clearly in disagreement with predictions derived from the Pitts-McClure hypothesis.

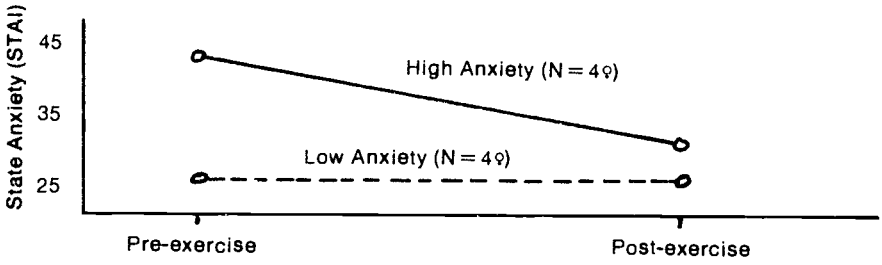

Figure 7

Further refutation of the lactate theory of anxiety neurosis has recently been noted by Morgan and Balke (1972) who evaluated selected psychological states of sixteen adult males before and after an exercise electrocardiogram which resulted in muscular exertion involving about 80 percent of each subject's maximum. The Profile of Mood States (POMS) was administered to these subjects before and following the muscular exertion, and the results are illustrated in Figure 8.

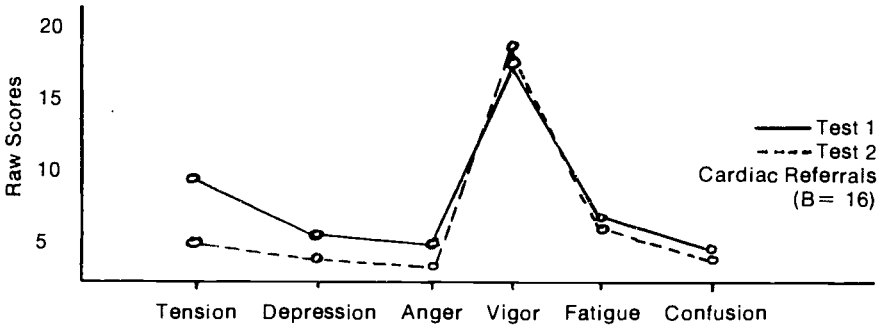

Figure 8

Of the six psychological states which were evaluated, tension-anxiety was the only one to change significantly, and it will be noted that a decrement occurred in this case. Our clinical impressions noted earlier and the results of six independent investigations seriously challenge the Pitts-McClure hypothesis. Indeed, our findings reveal that muscular exertion **reduces**, not **increases** state anxiety. Furthermore, this observation holds for both normal **and** high anxious subjects.

The views expressed by Pitts and McClure (1967) and Pitts (1969) that lactate accumulation can produce anxiety symptoms and attacks in both anxiety neurotics and normals and the opposing views of Grosz and Farmer (1969), Morgan and Hammer (1971), and Gillett et al. (1972) indicating that exercise resulting in lactate accumulation is associated with a **decrease** in state anxiety, suggests the necessity of additional investigations directed toward an understanding of the psychobiochemical correlates of acute physical activity. Also, since norepinephrine levels increase during **moderate** work and epinephrine rises with **heavy** work (Frankenhaeuser et al., 1969), it would seem desirable to include the assessment of catecholamine metabolism in subsequent investigations. Indeed, there is a considerable body of literature which suggests that catecholamine metabolism and not lactate accumulation might well be the factor governing post-exercise affective states.

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The Use of Television in Physical Education

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From a very modest beginning in the late 1950's, notably with exercise programs, television has been incorporated into physical education to a rather substantial degree today both in extent and variety. There is no doubt that television usage in physical education will continue to increase during the next few years. Gilliom[5] indicates that we are on the brink of an explosion in the use of television and that in the near future every student in this country will receive some of his physical education through television. According to Hixon (7, '71) the potential impact of educational and instructional television is as great in education as commercial television is in society in general. He lists several reasons for the expanded use among which are: an increased amount of valid and supportive research; increased availability of complete television courses on videotape; expanded impact of the National Instruction Television Center and the Resource Center on Media in Physical Education; the availability and increased usage of portable closed circuit television systems; general improvement of television equipment and an expanded supply of teachers with television skills. One might add to this list the increased visability of television usage in other curricula areas as well as the general receptivity and encouragement of administrators to use this new means of instruction.

Evidence of the recent interest of some physical educators in the use of television as well as other media is the establishment of the AAHPER Resources Center on Media in Physical Education. This center grew out of the work and recommendation of the Committee on the Utilization of Television in Physical Education, a standing committee of the Physical Education Division of the AAHPER.

As we discuss the use of television it should be emphasized that this medium does not insure a good learning situation. It can result in a good, bad or indifferent learning climate depending upon the skill used in the management of the program. However, television does have two important capabilities which are of vital importance to the physical educator, namely (1) it can deliver to the learner more vivid and dramatic feedback than is possible by the traditional methods of verbal feedback, and (2) it is capable of delivering audiovisual messages to vastly expanded audiences separated by both space and time.

Physical education is a "natural" for the television medium in that it (physical education) involves activity in which the visual image is essential for an understanding of the performance. This visibility is not so necessary in most other academic areas where a lecture with audio presentation only could be practically as intelligible. However, any advantage for physical education implies that movement activities or demonstrations are to be used as opposed to verbal presentations which are more typical of classroom courses.

EXTENT AND VARIETY TELEVISION USE IN PHYSICAL EDUCATION

National Patterns. The extent and variety of television usage is, of course, limited to the available facilities at various schools and colleges. It is clear that an increasing number of new buildings being constructed both at the public school level and in college and universities which include capacities for closed-circuit television as well as portable equipment. Administrators are becoming more receptive to the idea of purchasing television equipment because of its assumed value in support of innovative teaching. Unfortunately, once acquired, there is common tendency to "protect" the equipment to the extent of seriously limiting or nullifying its use.

Television equipment of all types will continue to improve and become more serviceable. In addition, prices will probably continue to decline. Fifteen years ago a videotape recorder was priced at $275,000. Today a portable can be purchased for well under $1000. As physical educators are becoming more familiar with its use they are able to work with engineers and manufacturers in the development of equipment which is more applicable for physical education purposes. Recent efforts have led to the development of battery powered and portable equipment. In addition, more standardized equipment and supplies providing greater interchange among different manufacturers have been developed.

Although the costs of television equipment may appear to be burdensome or even prohibitive at first glance it becomes clear with added use that it is inexpensive in view of the numbers of people reached through the various facets of this medium. These include the use of (1) **closed circuit systems** which are restricted to physical connections or wires usually within the building or several buildings in close proximity (though cable television is also closed circuit) and (2) **open circuit systems** which radiates or transmits a signal through the airwaves from an antenna which may be received by stations at various distances depending upon whether the transmitter is from a ground station or a satellite. Videotapes (the film used in television productions) may be shown on individual monitors or through either closed circuit or open circuit systems. In addition, videotapes may be reproduced in any number for general distribution. With extensive use of these facilities including the larger audiences, the television equipment can be viewed as extremely inexpensive.

Hixon (7,'61-62) presents a thorough review of the actual and potential uses of television in physical education which include the following: (1) the distribution of expert instruction to expanded audiences either concurrently or by delayed videotape replays, (2) demonstrations by experts, (3) augmented feedback to learners, (4) self instruction tapes for out-of-class use, (5) recording athletic contests economically and for quick analysis, (6) accommodating overflow crowds at athletic or other events, (7) self-analysis by teachers and sports officials, and (8) the conduct of research on a variety of topics.

In terms of patterns of use, Gilliam (5, 9-15) outlines three categories of programs in relation to physical education classes. The most complete (though less prevelant) is the **total series.** This refers to a complete course as presented on educational television such as the cooking, language, fitness, or sports instruction programs. Such programs are very limited in the area of physical education and sports though it seems desirable to develop similar instructional programs. Particularly helpful would be a corollary to Sesame Street, or other children's programs, which emphasized perceptual-motor activities. In addition, physical educators should be encouraged to develop full courses, or at least a series of lessons in such activities as modern dance programs, instruction in golf, archery, racket sports and others. It is probable that if such programs were well done they would be received

favorably by either educational or commercial television. In addition, the programs would be available for instruction in the school or university setting.

Gilliam also refers to the use of television as a **major resource.** This is where television is used as the primary course content but is not a complete course in itself. The instructor serves in a supplementary role. Such a program can provide innovation while allowing the instructor to institute modification or supplementary activities in relation to it.

A third kind of programming, referred to as a **supplementary series** is used to illuminate or supplement certain portions of the course. In this situation the instructor retains control of content and pace while using selected television materials as needed. This approach is the most widely used in the area of physical education and probably all other academic fields. When teachers are generally competent in their area this use approach may be adequate. In addition, Gilliam refers to television "bits" as instructional aids which are more limited than the supplementary series in that it uses very short segments of a demonstration, speech or athletic contest or practice for illustrative or feedback purposes.

In public school physical education television has been used most frequently by persons at the elementary level principally by classroom teachers who recognize their limited ability in teaching motor skills. Typically the children observe the lesson, get an idea of how the activities are performed, then spend the next few sessions taking part in these activities. The television session provides the teacher and children with a model for performance but may inhibit creativity in certain types of activities. Physical education specialists both at the elementary and secondary levels have been more reluctant to make use of television techniques perhaps because of their greater confidence in their own teaching ability along with an unfamiliarity with television equipment. At the college or university level, a few institutions have recently instituted fairly extensive use of television. Ohio State appears to have been the leader in the television usage and research during the 1960's. During the past two years, Temple University has instituted an extensive program of television usage in health, physical education, recreation and dance programs.

PROGRAMS AT TEMPLE UNIVERSITY

At Temple University the television facilities include a main television control room in the physical education building with a capacity for transmitting programs to all gymnasiums, pools, classrooms and laboratories in the facility as well as the capacity for using any area in the building as a studio for transmission to all other areas. In terms of equipment there are approximately 30 television monitors distributed, or available for distribution, to all parts of the building. There are five one-camera units and three two-camera units. These are self contained units with camera, recorder and monitor which include a facility for "stop action" but do not include slow motion capacities. The two-camera units make possible the filming of a subject from two angles, the use of split screen projections, phase-outs or the holding of double images. All cameras in the close-circuit system use one inch tape. In addition to the tape the system can handle 16 mm films, Super 8 (home movies) and slides. Also, there are portable units which are used primarily in relation to teacher behavior courses or student teaching both at the university and in the surrounding schools. These units use one-half inch tape and are compatible with most equipment that is provided in public schools.

To aid the faculty and stimulate their use of the television facilities there is provided a professional programmer, an engineer and a booking agent. In addition, a camera crew composed primarily of students in the professional television department are secured as needed. There is some access to a producer for special projects. The programmer is a faculty member in the Education Media Department who is available one-third time to the HPERD Department. He works directly with faculty members in developing plans for maximizing program effectiveness through the many dimensions of television. He also provides direction to the engineer and other members of the television crew. An extensive (or efficient) tele-

vision program in physical education will simply not function without this kind of technical help.

At Temple University television is being used rather extensively for instruction in all activity areas, in classrooms and laboratories as well as for several other educational purposes. In gymnasiums, pools, and dance studios the equipment is used primarily to provide (1) instant replay by videotape for feedback to students who are learning motor skills, (2) demonstrations of motor skills being taught, and (3) instruction in the areas where the teacher is not fully prepared to exhibit certain skills or explanations. Although one-camera units are satisfactory for most purposes, the two-camera units prove especially helpful in some areas. In aquatics activities such as conoeing or swimming the two-camera units enable simultaneous filming above water and below the water level (through windows). The monitor then shows a horizontal split screen placing the above and below water actions in proper relation to each other. This provides a dramatic feedback phenomenon which is not possible without use of the two-cameras.

In classrooms television is being used in a variety of ways. In teacher preparation classes microteaching makes regular use of the videotape process enabling students to observe themselves in the actual conduct of a class with young children or perhaps their peers. During the replay session the student instructor is able to observe himself for his own analysis as well as to receive specific evaluative comments from peers and the course instructor. This procedure has obvious advantages over the traditional system whereby less believable comments are provided only by the instructor. Videotape also facilitates the observation of model teaching lessons from various school situations. This, of course, has the advantage of providing students with information from a variety of school settings without actually having to travel to each of the schools.

A very helpful by-product of the microteaching sessions is that the students gain skill and confidence in the use of the videotape equipment. In fact, undergraduate students have been the most enthusiastic and willing students in the use of the television equipment. As they move into teaching situations the extent of use is bound to increase.

The permanently installed monitors in classrooms are used in a variety of ways. Instructors are able to have specially selected programs transmitted to their classrooms. Such programs, whether videotaped or "live" can be transmitted to any number of classrooms in the building. The film library at Temple University consists of approximately 100 films, tapes, and slide presentations ranging in length from 10 minutes to one and one-half hours. In addition, there is a larger number which has been identified and catalogued in Philadelphia and at Pennsylvania State University (for loan or rent).

In anatomy and physiology laboratories plans are being developed for closeup presentations of disections or bodily functions. Special videotapes are being prepared for lab sections which include instruction and demonstrations. Students will then be able to refer to these tapes any number ot times for supportive guidance.

In the physical education activity areas several National tournaments including karate, handball, weightlifting, as well as gymnastic meets have been put on videotape during the past year for subsequent presentation to classes in the physical education program. Typically eight or ten hours of filming have been edited into one or two hours of programs for most efficient instructional purposes. However, in some cases complete matches, especially finals, are being retained so that students can view the activity from beginning to end not just for instructional purposes but for the competitive impact.

Extensive use of videotape has been used in the dance program. Most master classes with guest instructors are put on videotape. These prove helpful when serious dance students wish to go back and analyze the special techniques of various artists. In addition, all dance productions plus certain special programs such as afro dance performances and folk dances are taped. Videotape is used by students in the process of developing a choreographic work whether individual or group. These works are more thoroughly analyzed by the choreographer as well as by peers and an instructor if a videotape replay is used.

Large segments of several major conventions (including Sports Medicine in Philadelphia Parks and Recreation Society) and workshops have been recorded on videotape. Lectures from these conventions are then either kept in total or edited for most efficient use with classes or other groups. When videotaping is done the lecturer must be notified ahead of time and asked for his permission. Most lecturers have consented to the taping when assured that subsequent use would be limited to the local university level.

Probably our most notable single success has been the regular production of a weekly television series of three hours duration which is presented on four days of each week. This program, entitled Vista 20, has been a regular feature for almost one year. It includes features from the areas of health, physical education, recreation and dance. The Vista 20 program eminates from the control room and goes to all television monitors in the building. The scheduling of this program is staggered from day to day to accommodate students and classes. The availability of monitors in student and faculty lounges, hallways and classrooms enable all university and departmental students to casually or seriously observe particular aspects of the program. Every three-hour segment includes some contribution from each of the areas of Health, Physical Education, Recreation and Dance. Typical programs include from the area of dance—major choreographic works or presentations from prominent dance groups or master classes; from health education—programs in environmental health, sexuality or drug abuse; from physical education—a variety of activities ranging from world series summaries, films of olympic games, handball tournaments, and serious lectures from sports medicine or other areas; and from recreation—films or tapes of innovative programs or facility developments in the field. A weekly schedule of the program of events is distributed on the preceding Friday for the following week.

The program for Vista 20 is arranged by the television producer under the direction of the faculty professional programmer. Priority is given to requests of faculty members who wish to make use of certain films or tapes in relation to their classes. Class use may be either in the form of in-class viewing of the program or assigned "homework" viewing. Material for these programs are from resource films or tapes in our own library, from other identified sources from the Philadelphia area or the country at large, among other sources.

RESEARCH IN THE USE OF TELEVISION

It is clear that the use of television began and is proceeding forth without a great deal of convincing and valid research support. This is perhaps not too bad an idea if the research comes later within a short time. There appears to be enough general logic and even transfer of learning principles to give one some confidence that there is much to be gained from the use of videotape in physical education. It is not entirely certain, however, that learning principles are being transferred or applied most appropriately in the use of television. Consequently, the acceptance of television in education has been based more on the empirical evidence than on scientific findings.

Most research conducted in relation to television and physical education has been concerned with:

1) Instant replay for determining the effect of information feedback.
2) The effectiveness of teaching via television as compared with the traditional teaching technique.
3) Evaluative processes related to micro-teaching.

Gilliam reports that most research with instructional television reveals "no significant difference" between television and traditional techniques. Others have stated this another way by saying that television is at least as effective as instruction without television. Such comments usually include suggestions of values from television usage which were not measured. Hegman[6] reports that the predominance of research indicates that television used in physical education is advantageous over the teacher without television. This is particularly true in research related to specific skill learning, especially those involving feedback.

In a study involving 54 gymnastics students Plese[7] reported that videotape replay was superior to verbalization as a means of providing augmented feedback to the learners. He also reported most effective results when the feedback sessions immediately followed the taping of performances. In the study with seventh grade boys in basketball, Cooper[2] found that videotape replay either used on or used in conjunction with verbal feedback was superior to other methods not involving videotape replay.

Debacy[3] reported that beginning students involved in motor movement patterns tend to "over access" their performances when videotape is not used but that more significant improvements were made by use of videotape replay and the demonstration of model performances than through any other techniques used in the study.

Del Rey[4] in working with college women students in a fencing class, reported that videotape replay significantly improves the quality of movement patterns when compared to more traditional methods. She noted, however, that most effective use of videotape feedback is attained only when the instructor provides guidance to the learner as to **how** to observe the videotape replay. Baker[1] concurs with this generalization when he states that motor skills must be analyzed and broken into smaller units before videotape replay can be most effective for the learner. Hegmann[6] is presently conducting a study to determine the value of instructing learners in the proper ways of analyzing performance via videotape replay. He hypothesizes that the mere provision of visual feedback does not give the learner as much information as if some instruction is provided for the analysis of the performance.

Information feedback is probably the most strategic factor in the learning of motor skills. There is little doubt that efficient use of videotape replay offers the most dramatic and specific type of information feedback. The information we have from experimental psychology and from motor learning research would strangely support this approach in the teaching of skills. It is true, however, that we need to specifically determine the nature and extent of the advantages provided by videotape replay as well as how to use it efficiently.

SOME PROBLEMS

Several problems are apparent that tend to either limit the use of television in physical education or limit its overall effectiveness. Perhaps the most significant of these is the general **hesitancy** on the part of physical education instructors to get involved with this new technique. We have found at Temple University that teaching associates, graduate assistants and young faculty are much more likely to avail themselves of the television equipment and make use of it in classes than are the more experienced faculty. Obviously there is greater confidence and security in the use of more traditional techniques. It is my assumption that when the initial hesitancy to use this equipment is lost most of the remaining problems can be solved satisfactorily over a rather short period of time. An inhibiting factor with many teachers is the fear of competing with a "television teacher" and being shown up in an unfavorable comparison. In addition there are occasional fears that television will render the teacher unnecessary.

The second major problem has to do with the establishment of **copyright regulations**. Thus far this has not been too much of a problem because the use of television has been rather limited and there is little precedence for extensive financial considerations in relation to television productions in physical education. Most taped lectures or performances have been used only at the local level, thus not suggesting significant financial remuneration other than the customary honorariums. At Temple University we use a release form which a lecturer signs (if willing) prior to the lecture. This form indicates the limitations on the use of the tape. Some guidelines are necessary when fairly extensive external use is planned for a tape. This may involve the reproduction of copies, their distribution to other educational or public areas or their transmission over open circuit television. Current regulations regarding the taping of regular commercial television programs for use in school settings are being frequently violated.

Another problem in the use of television in physical education is the failure on the part of some persons to take advantage of the **full potential** of videotape. That is, there is a tendency for teachers to continue to use traditional techniques with television. Persons with technical knowledge in television must work closely with the physical educators in order to maximize the use of information via television. Experience should remedy this problem.

Another problem is the securing of adequate **technical help** in the use of television. Expert program persons are needed to provide ideas for physical educators in addition to a crew with technical skills in operating cameras. The unavailability of this support ensures failure of the program except in cases of most skillful and enthusiastic persons.

A related problem has to do with the **editing** of film in physical education. Very often a great deal more material is put on film than is needed in the final analysis. It is often ineffective until edited down to a more efficient presentation.

A most serious problem, which has been referred to earlier, is the **lack of adequate research** to support television usage and to show us precisely how to use it **most** effectively. There are signs that this matter is beginning to receive some attention.

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Viewing Violent Sports and Aggression

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Recently in the comic strip, The Smith Family[1], little Smithy, writing his letter to Santa, is asking for "a garrote, a 6 gun, a meat axe, a rifle with a telescope, a spear, a bat, a loaded cane, a guillotine, some deadly germs, some cyanide, some strychnine, arsenic, a sword cane, some poison darts, and a blow gun; a machine gun, a cannon, a derringer, a zip gun, a black jack, brass nuckles, a luger, a colt 45, a sawed off shotgun, a rifle with a bayonet on it, a poleaxe, a switch blade, a machete, a bunch of bombs, grenades, TNT, some napalm." In the last caption, Mr. Smith says: "You know, sometimes I think they just MIGHT be influenced by TV."

For many of us, life today may seem to include more violence than it once did. Is this due to increased TV viewing, watching violent sports which are now so **prevalent**, increased crowding in our cities, or is it just a stigma of our imagination? Is man becoming more aggressive? If so, will he eventually destroy himself, as well as all mankind? Apparently, aggression and violence are of such importance in today's society that they require careful diagnosis, thought and research.

The major problem in studying aggression lies in finding an acceptable universal definition for the term. Most psychologists describe aggression in terms of behavior, but, like many psychological terms, it is difficult, if not impossible, to isolate it from other forms of motivated behavior.

The Latin root of the word **aggredi** means to "go forward, to approach." Primarily, this means "to approach someone for counsel or advice." Second, it means "to move against" or "to move with intent to hurt."[2] The opposite of aggression, then, is not reaching out for friendly affirmation or to harm, but isolation—the state of no contact.[3] Webster defines aggression as "aggressing or inclined to aggress, starting fights and quarrels," or "full of enterprise and initiative, bold and active."[4]

These two definitions form the basis for two diverse theories of aggression. One group of psychologists and psychoanalysts believe that aggression is a social psychological phenomenon which is learned. Here, aggression is defined as an attack upon an object, person or individual, where the goal response is to injure or do harm. Another group of biopsychologists, ethnologists and psychoanalysts propose that aggression is instinctive. Here, aggression is defined as drive, a drive related to survival.

The Instinctive Theory of Aggression. Although the Instinctive Theory of Aggression is usually attributed to Freud, it was Adler who first emphasized aggression as a primary urge in the human personality. Freud ignored the problem of aggression in his first writings and, later, after World War I, perhaps influenced by the destruction and killing of war, projected his psychophilosophical theory of the death instinct.[5] In this theory, aggression is turned against one's self (I am the one who must ultimately die), so aggression is turned by the Libido against others and external objects to avoid self-destruction.

Many Freudian advocates rejected the death instinct, but retained the concept that aggression is innate to man. It was thought that sex and aggression were the two most important instinctual impulses influencing man's behavior. They were

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[1]Comic Strip **The Smith Family**, Baltimore Sun, Nov. 26, 1972
[2]Rollo May **Power and Innocence**, (New York: W. W. Norton and Co., Inc., 1972), p. 150
[3]**Ibid.**
[4]**Webster's New World Dictionary of the American Language**. (Cleveland and New York: The World Publishing Co., Inc., 1964)
[5]May **op.**, p. 154

constantly operative, therefore, a release was required. It was believed that if these outlets of aggressive energy were not discharged in "fight", they would become internalized. Menninger, in his book, **The Vital Balance**, stated that aggression and destructiveness was a potent drive, "not to be minimized, but to be dealt with; not to be denied, but to be converted; not to be hated, but to be harnessed."[6] Work, according to Menninger was one of the best methods for absorbing aggressive energies of mankind in a useful direction. He believed that sport could also serve this function.[7]

Although the basis for this theory may have had its origin in Freud's death instinct concept, animal studies by several researchers, particularly Lorenz, has supported the innate drive theorists. Lorenz's work shows that animals will fight to defend their territorial rights, to secure food, to mate and for dominance or to establish their place in the "pecking order." Lorenz believes that man suffers from an inadequate discharge of his aggressive drive. Animals, such as the lion and tiger, which by nature are armed with natural weapons to kill, possess sufficiently reliable inhibitions which prevent self-destruction of the species. Man, however, lacks natural weapons to kill his prey, and therefore is devoid of inhibitions which prevent him from killing fellow members of his species.[8]

The innate theorists suggest that aggression is closely related to motivation. This is implied from Webster's second definition, namely, "full of enterprise and initiative, bold and active." The concept of motivation as being closely related to aggression is substantiated by Anthony Storrs, when he wrote:

> "One difficulty is that there is no clear dividing line between those forms of aggression which we all deplore and those which we must not disown if we are to survive. When a child rebels against authority, he is being aggressive: . . . The desire for power has, in extreme form, disastrous aspects which we all acknowledge; but the drive to conquer difficulties or to gain mastery over the external world underlies the greatest human achievements . . .
>
> "The aggressive part of human nature is not only a necessary safeguard against predatory attack. It is also the basis of intellectual achievement, of the attainment of independence, and even of that proper pride which enables a man to hold his head high amongst his fellows."[9]

The proponents of this theory, then, see an underlying drive as the basis for aggression.

The Learned Theory of Aggression. In 1939, Dollard and a group of Yale Psychologists using Freud's theory as a base, proposed the now famous frustration-aggression hypothesis; that is, that aggression is always the result of frustration. Their work served as a stimulus for hundreds of studies which has contributed to a better understanding of the nature and causes of aggressive behavior. As a result of this research, many psychologists postulate that aggression is learned behavior acquired by means of reinforcement and conditioning.[10] The advocates of the Learned Theory usually define aggression similar to the Yale group; namely, aggression is any "sequence of behavior, the goal response to which is the injury of the person toward whom it is directed."[11]

The proponents of this theory stress the point that, if aggression is as they define it, fighting or attacking an object or person, and this characteristic is instinctive, then mankind is doomed with the advent of the H-bomb, because man's aggressive behavior must constantly seek release, unless this type of behavior can be released in a morally acceptable form. Dollard's **et al** theory has not been without critics. In fact, several researchers, including Berkowitz, have attempted to suggest additional hypotheses to include anger as the motivating force behind the hostile behavior and to refute the concept that all frustration causes aggression.

[6]Karl Menninger, Martin Mayman and Paul Pruyser, **The Vital Balance**, (New York: The Viking Press, 1963), p. 121

[7]**Ibid.**, 189

[8]Conrad Lorenz, **On Aggression**, (New York: Harcourt, Brace and World, Inc., 1960), p. 241

[9]Anthony Storr, **Human Aggression**, (New York: Antheneum, 1968), p. 23

[10]Emma Layman, **Contamporary Psychology of Sport**, (Chicago: The Athletic Institute, 1970), p. 26

[11]J. Dollard, L. Doob, N. Miller, O. Mowrer and R. Sears, **Frustration and Aggression**, (New Haven: Yale University Press, 1939), p. 9

[12]Leonard Beckowitz, **Aggression: A Social Psychological Analysis**, (New York: McGraw Hill Book Co., 1962), p. 24

So, the battle between the two groups of theorists, namely that aggression is instinctive and that aggression is learned, continues with each group venting a great deal of aggression upon each other. For example, Berkowitz clearly states that animal aggression does not stem from a constantly operative, internally based, instinctive drive to hostility. His basis for this statement is from a summary of literature refuting innate aggression in animals written by J. P. Scott, an experimental biologist and an advocate of the learned theory:

> "There is no physiological evidence of any spontaneous stimulation for fighting arising within the body. This means that there is no need for fighting, either aggressive or defensive, apart from what happens in the external environment. We may conclude that a person who is fortunate enough to exist in an environment which is without stimulation to fight will not suffer physiological or nervous damage because he never fights . . . We can also conclude that there is no such thing as a simple 'instinct for fighting' in the sense of an internal drive force which has to be satisfied. There is, however, an internal physiological mechanism which has only to be stimulated to produce fighting."[13]

It appears that many of the learned theorists would even refute the fact that physiologically the limbic system of man is made up in part of the hypothalamus, the amygdala and the septal area which apparently controls in some way the aggressive behavior of man.

Johnson, in a recent book, **Aggression in Man and Animals**, in summarizing studies dealing with elicited aggression of animals concluded as follows:

> "First, the mammalian brain appears to possess some innate organization which gives every individual the potential to engage in destructive attacks no matter what he has previously learned or experienced . . .
>
> "Second, there are qualitatively different kinds of aggressive behavior, how many 'kinds' and just what they should be called is a semantic question, but it is clear that there is no single stereotyped response called 'aggression' . . .
>
> "Finally, physiological studies of aggressive behavior reveal that there is no such thing as an 'aggressive center,' and that destructive attacks and killing can be elicited from a number of widely separated portions of the mammalian brain."[14]

Critics of the Instinctive Theory of Aggression point out that Lorenz is basing his behavior of man on the behavior of lower animals. Gorney, in his book **The Human Agenda** writes:

> "He (Lorenz) knows very well that one cannot even judge the behavior of geese by observing closely related ducks. Yet, employing a method he would reject as unscientific within his own area, without considering studies of man himself in the process, he extrapolates directly from fish and birds to man."[15]

One can certainly conclude that Lorenz and some advocates of the Instinctive Theory of Aggression have not taken into account much of the research done on human aggression. As stated previously, it appears that the two groups are not interested in responding to critiques of their work, but rather resort to attacking each other. For example:

> "For the rest, I must leave it to the reader to decide who in this controversy is motivated by doctrinaire, political ideology, religious fervor, or cherished dogma, and affirm on my own behalf only that any aggression revealed in these paragraphs of mine was not only learned, but taught."[16]

On the basis of the above two theories, two hypothetical constructs concerning aggression have evolved. First, the displacement of innate aggression into socially acceptable channels, such as observing or participating in sports, results in a ca-

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[13] John P. Scott, **Aggression**, (Chicago: University of Chicago Press, 1958) p. 62

[14] Roger N. Johnson, **Aggression in Man and Animals**, (Philadelphia: W. B. Sanders Co., 1972), p. 75

[15] Roderic Gorney, M.D., **The Human Agenda**, (New York: Simon and Schuster, 1972), p. 108.

[16] **Ibid**, p. 114

tharsis or a lowering of the instigation or drive to aggress. This construct has been called the Cathartic Theory of Aggression. Secondly, seeing or experiencing aggression causes guilt, resulting from more frustration and, as a result, an increase in aggression. This construct has been called the Circular Theory of Aggression.[17] Closely allied to this hypothesis may be the fact that if one aggresses and is not punished, or in any way fears retaliation, his behavior may be reinforced and, thus, he may have a tendency to repeat the aggression.

Rather than further hypothesize concerning the Instinctual or Learned Theories of Aggression, we must return to the original problem under discussion; namely, what is the effect of viewing violent sports on aggression. In the past, three major methods have been used to study this problem. These methods are the clinical method, the correlational method, which chiefly employs surveys, and the experimental method, used both in the laboratory and in the field.[18] Most of us realize that the clinical method usually lacks control, and is typically limited to verbal and nonverbal communications from a client, which, for the most part, cannot be verified. The correlational method is used to establish the degree to which two variables tend to vary together, and usually does not lend itself to any casual or functional relationship, while the experimental method is used to verify hypotheses; that is, to establish casual or functional relationships between two or more variables.[19]

The studies to be discussed here, for the most part, are of an experimental nature, either conducted in a laboratory where every effort is made to control outside variables, or in the field where control is more difficult. Even though control is more difficult in the field, research conducted there frequently is more closely related to real life situations. Jeffrey Goldstein, Temple University, in a paper prepared for publication in **The Research Experience** in 1973, has these criticisms of laboratory research:

> "Either the research (research on aggression) was too artificial, making it difficult to generalize beyond the laboratory to the 'real world', or it was theoretically empty, with no hint of the underlying dynamics of aggression.
>
> "I have always felt that the data from an experiment must serve two functions: first, they must test, build or review theory; and, second, they must relate, as closely as possible to real and important human behaviors . . .
>
> "The available research in the journals suffered primarily from the unconnectedness of the behavior studied in the laboratory to real life behaviors, and was also, for the most part, theoretically unimportant as well . . .
>
> "We ought to test aggression theory using real episodes of violence rather than contrived situations . . .
>
> "In most laboratory research on aggression, subjects are exposed to an excerpt from a movie, usually of only a few minutes duration, which is either extremely violent or (for subjects in control groups) totally benign."[20]

One real advantage of conducting psychological research in a sport environment is that sport occurs in a "midst of life" situation.

RESEARCH ON AGGRESSION AND VIEWING VIOLENCE

Before turning to the studies completed on sports **per se**, several studies will be presented where the experimental subjects watched violence in the laboratory or witnessed violence on a film. In these laboratory situations, aggression is usually measured by observing children in a play situation or by measuring the intensity and frequency of an electric shock to the experimenter's confederate.

Most of the research on film-mediated stimulation upon subsequent aggressive behavior has been directed at the drive reduction hypothesis of fantasy aggression. In the past, the catharsis hypothesis has been a widely accepted doctrine, mainly because it was so readily understood. However, the empirical evidence to sub-

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[17] B Husman Sport and Personality Dynamics. 72nd Annual Proceedings, NCPEAM. Jan 1969

[18] Seymour Feshback and Robert D Singer. **Television and Aggression**, (Philadelphia Jossey-Bass, Inc., 1971), p 28

[19] **Ibid.**, p 29

[20] Jeffrey H Goldstein. Conducting Field Research on Aggression Notes on Effects of Observing Athletic Contests in Hostility P Golden Editor **The Research Experience**, (to be published 1973)

stantiate this hypothesis is lacking. Current evidence seems to show that rather than producing a lowered probability of further violence, aggression in the absence of guilt or anxiety is all to likely to stimulate more aggression.[21] When a person becomes angry with another, if something prohibits the individual from aggressing against that person, there is a stronger predisposition to aggress against other available targets which may be related to the original instigator of anger. Berkowitz states: "As long as a person is instigated to aggress he does not obtain completion until he sees that he has injured his target, or that someone else has done so."[22] There may be, then, a heightened predisposition to aggress following inhibited aggression which could cause an increase in tension. Thus, aggressing after inhibited aggression may have an effect of lowering tension. In a carefully controlled laboratory experiment, Berkowitz and his associates tested the tension reduction hypothesis by permitting half of his subjects to administer shocks (except to aggress condition) and prohibiting the other half (except not to aggress condition). He concluded:

> "But while the anger reduction version of the catharsis hypothesis receives little support, there is some evidence for the contention that aggressive behavior may lead to a lessening of experienced tension under some conditions."[23]

Some of the early research conducted by Bandura and his associates at Stanford University has shown that children "readily imitated aggressive behavior exhibited by a model in the presence of the model."[24] A later study indicated that children exposed to aggressive models exhibited aggressive behavior in a new setting, in which the model was absent.[25] To determine if watching the violent behavior displayed by the model on film would have the same effect, Bandura and his associates, using the real life aggression condition and the control group of a previous experiment, added human-film aggression and cartoon-film conditions to the experiment.

The results show that the subjects "who viewed the real life models and the film-mediated models do not differ from each other in total aggressiveness but all three experimental groups expressed significantly more aggressive behavior than the control subjects."[26]

Immediately after the publication of Bandura's studies the television industry issued a statement calling his conclusions into question on the interesting grounds that the children had been studied "in a highly artificial situation," since no parents were present either when the films were shown or when the aggressive behavior was observed. Bandura was criticized for isolating his subjects from society, for using a bobo doll, which is made to be struck, and for not following up on the children after the experiment.[27] Evidence for Bandura's laboratory studies to "real life" is found in two studies. The first by Lotte Bailyn assessed the exposure habits, social background and mass media viewing habits of 600 children in a public school in the suburbs of Boston, Massachusetts. She concludes:

> "If a child has certain psychological characteristics he used the media as an escape and they will have an effect on his thought processes. If he does not have the relevant psychological characteristics— if he does not have many problems, does not have extrapunitive tendencies, is not rebelliously independent—the mass media will not serve as an escape, and will not have these effects . . .
>
> "A boy with problems, extrapunitive leanings, and rebelliously independ-

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[21] Leonard Berkowitz. Experimental Investigations of Hostility Catharsis. **(Journal of Conaulting and Clinical Psychology,** 35 Aug 1970) pp 1 7

[22] Leonard Berkowitz. Aggressive Cues in Aggressive Behavior and Hostility Catharsis. **(Psychological Review,** 71 2 1964) p 112

[23] **Ibid.,** p 119

[24] A Banduran and A Huston. Identification as a Process of Incidental Learning.. **(Journal of Abnormal and Social Psychology,** 63 1961) pp 311-318

[25] A Bandura D Ross and S Ross. Transmission of Aggression Through Imitatinn of Aggressive Models. **(Journal of Abnormal and Social Psychology,** 63 1961) pp 575-582

[26] A Bandura D Ross and S Ross. Imitation of Film Mediated Aggressive Models. **(Journal of Abnormal and Social Psychology,** 66 1963) p 7

[27] Urie Bronfenbrenner. The Split Level American Family. **(Science Review,** Oct 7 1967), p 63

ent tendencies who mainly as a result of his social environment and his IQ, is highly exposed, relies on the media for temporary solutions to difficulties; structures the media . . . around elements of aggression, threat, amoral views of crime . . . "[28]

Likewise, Eron, in a study of 600 third graders, found that the children who watched television programs involving a high degree of violence were rated the most aggressive by their classmates.[29]

TV AND AGGRESSION

The most extensive and carefully controlled study completed on the effects of viewing violence on aggression was a field study completed by Seymour Feshbach and Robert Singer.

The primary purpose of this study was to determine the effects of sustained exposure to predominately aggressive or nonaggressive television content on aggressive values and behaviors.[30] The subjects in this study were pre-adolescent and adolescent boys from seven residential schools and institutions, five located in Southern California and two in the New York area. The California schools consisted of three private schools and two boys homes, while the New York institutions were two Catholic homes for boys. The private schools all had college preparatory programs and drew their clientele from middle class homes. In general, the clientele for the two West Coast and New York institutions were boys who had improper home care. About 35 percent of the children in the boys' homes were black and an additional 10 percent were of Spanish speaking backgrounds.[31]

Although the study originated with 625 subjects, measures, pre and post, were completed on 395 boys—203 control and 192 experimental subjects. The subjects were all required to watch six hours of TV a week for six weeks. Following is an example of some of the programs watched by the experimental group: Bonanza, Colt 45, FBI, Gunsmoke, Have Gun Will Travel, Marshall Dillon, Rifleman, Route 66, Untouchables, Virginian, and Zorro. Examples of programs watched by the control group were: The Amateur Hour, Andy Williams, Bachelor Father, Bell Telephone Hour, Dick Van Dyke Show, Ed Sullivan, Gomer Pyle, Lawrence Welk, Leave it to Beaver, Mister Ed, My Friend Flicka, My Three Sons, Red Skeleton, Smothers Brothers, and To Tell the Truth.[32]

A number of personality tests and attitude scales were administered pre and post to the six week experimental period. In addition, daily behavior rating forms were completed for each child during the experimental period, and, in most instances, during the week before and the week after the six week TV viewing period. The evaluative tools were as follows:

1. A behavior rating scale consisting of twenty-six items, nineteen of which were related to aggressive acts.
2. Seventy-nine items from the MMPI, including the Lie Scale which yielded five trait measures; namely, overt hostility covert hostility scales (based on Buss Durkee Inventory); the neurotic under control scale; the conflict scale; and the aggression anxiety scale.
3. Fantasy aggression was measured by six pictorial stimuli, including three TAT pictures and three from a set specifically designed by Lesser for the age of the subjects used in this study.
4. The aggressive activity preference scale.
5. A situation test consisting of six one-sentence completion descriptions of situations wherein one individual is wronged by another.
6. Subjects rated each show they watched for frequency and for dislike-like on a 1-5 scale.
7. A case history test which gave a brief description of a hypothetical nine-

[28] Lotte Bailyn, "Mass Media and Children A Study of Exposure Habits and Cognitive Effects," **(Psychological Monographs**, 73, 1959), p. 35, 36

[29] Leonard Eron, "Relationship of T V Viewing Habits and Aggressive Behavior in Children," **(Journal of Abnormal and Social Psychology**, 67, 1963), p. 195

[30] Feshback and Singer, **op. cit.**, p. 46

[31] **Ibid.**, p. 51, 52

[32] **Ibid.**, p. 57-59

teen year old boy being arrested for aggravated assault on an elderly man.

8. The Aggressive Value Scale which consisted of nineteen statements of opinions relating to aggression.
9. A sociometric peer rating measure.
10. A program rating form completed after watching each program.[33]

In the interest of time, I will present only what is considered the best measure of aggression; namely, the actual aggressive acts and incidents which were completed on each subject.

Since there were considerable variation in the number of behavior ratings available on each subject, aggression was determined by dividing the total aggression score for each child by the number of aggression ratings for that child. Nonetheless, for both peer and authority aggression, the scores of the control group were reliably higher than those of the aggressive TV group.[34]

To further substantiate the catharsis hypothesis, the authors write as follows:

"There are very sizable differences between the control and aggressive TV groups on physical aggression items, with respect to both the number of instances of such behavior and the proportion of those aggressive behaviors which were unprovoked. More than twice as many fights occurred among the controls as among the aggressive TV group. Moreover, about two-thirds of the fights in which a control child participated were considered unprovoked, whereas less than half the fights in which a boy in the aggressive TV group participated were rated unprovoked.[35]

One other finding has particular significance.

"Exposure to aggressive or nonaggressive television had no significant effect on the general peer aggression scores in the private school population but had a marked effect on the amount of aggression directed toward peers by children in the boys' homes. In the latter case, the aggressive TV group manifested much less aggressive behavior than the controls and also showed a reliable tendency to decline in aggression over the experimental period, which differed significantly from the trend in the control group."[36]

This is in agreement with the findings of Eron and Bailyn previously mentioned. On the basis of this study, the authors conclude that the kind of aggressive television content to which American youth are exposed does not stimulate aggressive behavior in boys. They indicated that all of their measures were sufficiently reliable to yield consistent evidence of aggression control as a result of witnessing violent action on television, and believe that the laboratory situation may be so artificially established that it communicates to the subject that it is permissible to behave aggressively.[37]

RESEARCH ON VIEWING SPORT AND AGGRESSION

One of the first studies on the effect of viewing violent sport on aggression was a small pilot study completed at the University of Maryland, which was never published. Johnson and Hutton[38] administered a projective test, Buck's House-Tree-Person Test, to six subjects pre and post to a boxing match. The protocols of one subject, a young woman, were extremely interesting. Prior to the boxing match, she drew a Florida coast scene, with the bright colors of a setting sun and a palm tree. (Observation of the subject during the match indicated that she was emotionally involved in each fight, frequently leaving her seat, throwing punches, and so forth. It was reported that she personally knew each member of the college boxing team.) Immediately following the boxing match, this subject drew a weeping willow tree using drab and dark colors.

Several thesis and dissertations completed at the University of Maryland have studied the effect of viewing sports on aggression. These studies have all em-

[33] **Ibid.**, p 60-64
[34] **Ibid.**, p 68
[35] **Ibid.** p p 74
[36] **Ibid.**, p 80
[37] **Ibid.**, p 158
[38] Warren Johnson and D. C. Hutton. "Effects of Boxing Upon Spectators as Measured by a Projective Test of Personality." (College Park, Md., unpublished research, 1953).

ployed selected pictures of the Thematic Apperception Test to assess aggression. Although projective tests such as the TAT are questioned as research tools by some researchers, they have been used and are still being used successfully to assess fantasy aggression. "People identify with heroes and villains in the world of aggressive entertainment; that is, in fantasy, they imagine themselves to be both the recipient and the producers of the actions and feelings depicted."[39] On this basis, and since the TAT pictures have been rated by psychologists[40,41] on aggressive pull, and, further, since it has been demonstrated that short forms of the TAT (five cards) correlated .91 with the total test (twenty cards),[42] we believe the TAT cards used in these research studies to be valid and reliable measures of fantasy aggression. These studies have used both the Hafner and Kaplan[43] hostility scale to score the protocols and the frequency of aggressive words expressed in the protocols of the TAT stories.

Turner[44] used forty-four subjects from the University of Maryland, Baltimore County, to determine the effects of viewing college football, basketball and wrestling on the elicited aggressive responses of male spectators. The subjects were divided into three groups, an experimental group, and two control groups. The experimental group viewed a football game, a basketball game and a wrestling match. Control Group I viewed the basketball game and wrestling match, while Control Group II viewed only the wrestling match. Pre and post to each viewing of athletic contests, the subjects were administered a twenty-item Sentence Completion Test and six pictures of the TAT. The tests used after viewing the athletic contests were different than those given prior to the contest. During the post testing session a questionnaire was administered to determine what facets of the spectator situation affected the emotion of the subjects. Scales were established for measuring both the intensity and frequency of aggressive response. Reliability of scoring the protocols for frequency and intensity of aggression between two independent scorers was .82 and .99 respectively.

Frequency of aggressive words expressed to the Sentence Completion Test and that TAT increased significantly from the pre to post test for the spectators of the football and basketball contests. There were no significant differences in the frequency of aggression expressed on these tests pre-post by those observing the wrestling match nor were there any significant differences in the intensity of aggression expressed by the spectators for all athletic contests pre to post. The post contest questionnaires indicated that the running score of the contest, the final score, the outstanding players on the teams, the action of team members, officiating, the size of the crowd and their attitude, as well as the band and cheerleaders, emotionally influenced more than 32 percent of the subjects.

Kingsmore[45] studied the effect of a professional wrestling and professional basketball contest upon the aggressive tendencies of male spectators. The subjects for this study were twenty-six habitual professional wrestling spectators and twenty-eight habitual basketball spectators. Selected pictures of the TAT and a questionnaire were administered pre and post to a professional basketball game (lost by one point in an overtime) and a professional wrestling match. In addition, the same tests were administered to thirty control subjects before and after participating in a neutral activity. The TAT protocols were scored for total aggression using the Hafner and Kaplan technique. In addition, the direction of aggression (extrapunitive

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[39]Feshback and Singer, **op. cit.**, p. 3

[40]Lloyd Silverman, "Ego Disturbance in TAT Stories as a Function of Aggression Arousing Stimulus Properties," **(Journal of Nervous Mental Disease,** 138, March 1963), pp. 248-254

[41]Bernard Murstein, "Six Differences in TAT Ambiguity, Hostility and Projection," **(Journal of Genetic Psychology,** 108, March 1966), pp. 71-80

[42]Richard Dana, "Selection of Abbreviated TAT Sets," **(Journal of Clinical Psychology,** 12, Jan 1956), pp. 36-40

[43]A. Jack Hafner and Arthur Kaplan, "Hostility Contest Analysis of the Rorschach and TAT," **(Journal of Projective Techniques,** 24, June 1960), pp. 138-145

[44]Edward Turner, "The Effect of Viewing College Football, Basketball, and Wrestling on the Elicited Aggressive Responses of Male Spectators," (College Park, University of Maryland, unpublished dissertation, 1968), p. 151

[45]John Mack Kingsmore, "The Effect of Professional Wrestling and Professional Basketball Contests Upon the Aggressive Tendencies of Male Spectators," (College Park, University of Maryland, unpublished dissertation, 1968), p. 206

or intrapunitive) was also scored. Reliability coefficients between two independent scorers ranged from .82 to .93 for the three variables, total aggression, extrapunitive aggression, and intrapunitive aggression.

The wrestling spectators showed a significant decrease in extrapunitive aggression after viewing the match. There were no significant changes in the total aggression or intrapunitive aggression pre-post expressed by the wrestling spectators. Likewise, there were no significant changes in aggression as a result of watching the basketball game. The data obtained on the questionnaire indicated a significant pre to post decrease in self reported aggression of the wrestling spectators. The basketball spectators showed no change in self reported aggression after viewing the game. One additional interesting finding should be mentioned. The spectators attending the professional basketball game had received significantly more formal education than the subjects attending the wrestling match. Even though this difference existed, it should also be noted that there was no significant difference in aggression as expressed pre-contest between these two groups of subjects.

On the basis of Kingsmore's finding, namely, that wrestling spectators, as a result of watching violence, vicariously experienced a catharsis of extrapunitive aggression, and, further armed with the previously mentioned study by Johnson, where one subject, extremely involved emotionally experienced a catharsis, Roberts attempted to determine if the degree of involvement had an effect upon the level of aggression of spectators before and after a university basketball game. The experimental group consisted of eleven members of the "rioteers" the official cheerleading section of the University of Maryland basketball team, while the control group consisted of seventeen students from the required physical education program. In selecting the subjects, a questionnaire was administered to determine the degree of involvement each subject had with the University of Maryland basketball team. Six TAT pictures were administered to the subjects, who then viewed the Maryland-Clemson basketball game. Immediately after the game six new TAT pictures were administered as a post test. The TAT protocols were scored for frequency and intensity of aggression. Reliability of scoring between the author and an independent scorer yielded an r of .98.

Analysis of variance indicated that the degree of involvement had no significant effect on aggression of the basketball spectators. However, when responses were averaged across both the control and esperimental groups a significant decrease in frequency of aggression was found, which indicated that both groups experienced a catharsis of aggression.

Goldstein and Arms[47], at Temple University, studied the effects of observing athletic contests on hostility. Spectators were interviewed pre and post the Army-Navy football game in 1969 and the Army-Temple gymnastics meet (the control) which was held during the same month as the football game. Thirteen undergraduate students served as the interviewers. Each interviewer, several weeks prior to the football game, was given detailed instructions concerning interview procedures. In addition, each interviewer memorized an introductory speech which was presented to subjects as they arrived and as they left the football game and gymnastics meet. A total of 150 subjects completed the interview, 97 pre and 53 post the football game, and a total of 81 subjects, 49 pre and 32 post the gymnastics meet. The initial questions concerning frequency of attendance, preferred team, and so forth, were used to check on the equivalence of the groups interviewed and to engage the subject's involvement in the interview. The subjects were then administered three scales taken from the Buss-Durkee inventory. The scales employed were the direct hostility (9 items), resentment (8 items) and irritability (11 items). Included with the 28 hostility items were eight filler questions, designed to minimize the suspicion about the true nature of the study. Group means for each of the three hostility sub-

[46]John Roberts. The Effects of Degree of Involvement Upon the Level of Aggression of Spectators Before and After a University Basketball Game (College Park, University of Maryland, unpublished thesis 1972) p 93

[47]Jeffrey Goldstein and Robert Arms. Effects of Observing Athletic Contests on Hostility." (**Sociometry**, 54 1971) pp 83-90

scales were highly intercorrelated and, since separate analysis for each subscale led to similar findings, a single score (total possible 28) was used for each subject.

The results indicated that the subjects at the football game had a significant increase in hostility as a result of watching the contest regardless of their favorite team, while the subjects' pre-hostility at the gymnastics meet was not significantly different than their post-hostility.

DISCUSSION

This cursory review of the literature on aggression and the effect of observing violence on aggression certainly does not give us the answer to war, or the continued increase in homicide, suicide and violence. This review, however, has suggested several concepts which should be discussed. Apparently a real "war" is in progress between those theorists who support the Instinctual Theory of Aggression and those who support the Learned Theory. It appears to me that these theorists continuously attempt to design studies to further support their hypothesis and refute the opposite view. Can the question of heredity and environment really be solved? In fact, Berkowitz, in an attempt to refute the Catharsis of Aggression, which is affiliated with the Instinctual Theory of Aggression, has designed and conducted a laboratory research experiment to show that the inability of an individual to complete his instigated aggression leads to tension, which could be reduced if the act of aggression is completed. This, then, could be interpreted to mean that if a reduction in aggression did occur, it could be contributed to something other than catharsis. I fail to see why these theorists cannot accept an eclectic viewpoint, that both these theories are compatible. One of the great contributions of Dollard's, **et al** hypothesis concerning frustration and aggression is that they have shown the various forms instinctive aggression may take as a result of learning. Many psychological concepts seem to support this thesis. The animal, man, has an instinctual drive for survival. Western society is extremely competitive, and one must have a high drive to survive. It appears that man sets a goal, works and overcomes the frustration to attain that goal, goes through a brief period of depression (catharsis) after attaining this goal, then proceeds to establish another goal, starting the cycle anew. Along the way there is much frustration and aggression expressed, which obviously is learned. I am proposing a new theory, the Continuous Cyclic Theory of Aggression which is substantiated by research which has supported both the Circular Theory of Aggression and the Cathartic Theory of Aggression.

As I previously noted, the major conflict between these two factions lies in the definition of aggression. I agree with Roger Johnson that aggression is a multi-dimensional concept. He states, "There is no single kind of behavior which can be called 'aggressive' nor is there any single process which represents 'aggression' ".[48] It is further stated that we not avoid the word "aggression," but simply recognize that is is a casual term, not a technical term. We do, however, need to define it carefully, in research studies, in terms of an operational definition, relating to measurements, such as a score on a test, intensity of shock and so forth.[49] I suggest, therefore, that we discontinue defining the word in terms of attack, anger, drive and so forth, where the definition relates to a theory and use exclusively an operational definition.

A review of research literature on aggression is far from conclusive. Most of the carefully controlled laboratory studies seem to show an increase in aggression as a result of being duped into anger, and then shown a violent film. Since the majority of the field (**media res**) studies show a catharsis of aggression as a result of vicariously participating in violence it has been suggested that perhaps something in the laboratory environment instigates aggression or removes the inhibition to aggress. I am not suggesting that laboratory experiments have not contributed to our knowledge of aggression. On the contrary, I believe much of what we know about aggression has been the result of laboratory research. I just fail to believe that labora-

[48]Roger N. Johnson. Aggression in Man and Animals. (Philadelphia W. B. Saunders Co., 1972). p. 8

tory research has substantiated the learned theory of aggression because subjects become more aggressive as a result of being artifically frustrated.

The weakness of field research was also discussed. It is obviously much more difficult to control than laboratory research. For example, Goldstein and Arms indicated that subject bias in their study may have influenced the results, in that the more hostile subjects were attracted to football rather than gymnastics. Also, it may be that those leaving the football game were in a hurry to avoid the traffic, and were frustrated or angered by the delay in responding to an interviewer's questions or it could be that those who refused to answer the questionnaire were the most aggressive[49] **or most passive.***

Another problem with research on spectator sports is to determine whether the effect of the crowds on the contest is responsible for altering the aggression of the subjects. Even though several researchers have attempted to control their studies by determining the effects of the crowd on aggression, to my knowledge, few facts exist on this topic **per se.** If you will remain for the next presentation, I am sure you will learn, however, that there is considerable information available on collective behavior.

Several interesting concepts seem apparent. First, it becomes apparent that social class not only has an influence on the type and amount of violence participated in vicariously, it also seems to have an impact on behavior. It appears that upper and middle class individuals observing violence do not use it as an escape, and thus do not become so emotionally involved with what they observe. Their viewing of violence, therefore, does not seem to alter their aggressive behavior. Those from the lower class may become more intensely and emotionally involved in the violence they observe. They appear to project and relate more with aggressive individuals or the hero; that is, they see themselves as Larry Brown, the law enforcing officer, or the villian. The concept, then, that the degree of involvement, although not conclusively supported by empirical evidence, certainly needs further exploration.

To my knowledge, no one, to date, has been able to establish a relationship between aggression and an affiliation with a winning or losing team. Common sense seems to dictate that spectators who watch their favorite team go down to defeat would become more hostile, while those who see their favorite team win would be more apt to experience a catharsis. Further research is required to substantiate this hypothesis.

CONCLUSIONS

On the basis of the research viewed, it can be concluded that predictions concerning the effects of viewing violent sports on aggression behavior cannot be made with any degree of confidence.

Certainly, further research controlling the social class and background of the subjects as well as the influence of the crowd is advocated. It is recommended that a multi-variate analysis be used to study the phenomenon of sports and aggression.

The future of mankind may depend upon his ability to control his aggressive behavior. I believe it is essential that we discontinue attempting to establish whether aggression is instinctive or learned, but rather turn our atention to research which will help man in the control of his aggression.

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[49]Ibid.

*added by this writer

The Sport Spectator and Phenomenon of Collective Behavior

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INTRODUCTION

As if to be concordant with general texts on sociology, which noticeably lack indexed references to sport, the indexes of texts on collective behavior are curiously conspicuous for their lack of reference to spectators. The terms "audience" and "crowd" to which we might turn for proximal concepts to enlighten us in understanding spectator behavior are to be found, to be sure, but closer inspection of their proscribed textual meanings, in the eyes of theorists of collective behavior, leaves us with doubts as to whether the spectator phenomenon can be accounted for satisfactorily by recourse to them. The selective use of the word "spectator" as being one who watches what is going on in a crowd that has already formed and has a focus of interest,[1] is both inappropriate and misleading to the sports sociologist. The positive side-effect, of course, is that this misapplication provides him with that lodestone which all scholars seek, a virgin territory for academic pursuit and inquiry.

Collective behavior for social action, in Smelser's (1962) sense, presupposes protracted periods of active behavior not typically associated with the restricted and limited time-boundaries surrounding the normal social structure of the spectatorial crowd attending a sports event. Yet, selectively, his basic components of social action can be seen to adequately describe spectator behavior in particular circumstances. There is no implied contradiction here. Thus, the collective behavior described as "the hostile outburst"—"action mobilized on the basis of a generalized belief assigning responsibility for an undesirable state of affairs to some agent"(42:9)—might be commonplace enough in sport without substantiating the longer-term implication that Smelser ascribes to such action. Putting this into the sports setting as a modus operandum is another matter, as the Stop The Seventy Tour (England, 1970)[2] and the campaign against the Springboks (Australia, 1971)[3] both illustrate.

MODELS OF ANALYSIS

Social Psychological

In **An Introduction to Social Psychology**, Schellenberg defines collective behavior as "a term usually used to represent the general class of social behavior that is relatively unstructured by customs or institutions."(40:312) He suggests that the words "Crowd," "Mob," and "Public" also be consulted. The latter two seem further removed from the general concept of spectator, but "crowd" can be loosely applicable. The crowd is "a temporary group, focused on a common object of attention, in which mutual stimulation among members is a main basis of behavior. This mutual stimulation typically includes a **milling** of persons in close physical

[1]"A fourth category of people who have often been noted in crowds, participating in various ways, is the group of **spectators**. They must be regarded as part of the crowd even though they may be relatively inactive . . . They may be quite unaware of the nature of the occurrence that has created the crowd situation, or they might be quite disinterested in the outcome of the crowd process. Such spectators, motivated initially by curiosity, may be absorbed into the more active core of the crowd by social contagion, however." Ralph H. Turner and Lewis M. Killian, **Collective Behavior**, Eaglewood Cliffs, New Jersey; Prentice-Hall Inc., 1957. (page 105, italics added.)

[2]Peter Hain, **Don't Play With Aparthaid**, Hemel Hempstead, England; George Allen and Unwin, 1971.

[3]Stewart Harris, **Political Football**, Melbourne, Australia; Gold Star Publishers, 1972.

contact, **collective excitement** aroused by an unusual event, and the **social contagion** of mood and action from one member to another." (40:312) Turner and Killian (1957), theorists in the sociological tradition, elaborate the use of the word "milling" in this context to include, besides physical movement of people, anxious glances from side to side and a general mutual search for emotional reaction in other members of a crowd, so that, in this latter interpretation, a seated audience can "mill." Social contagion is dealt with at some length later in this paper.

The origins of the study of collective behavior from the social psychological perspective are rooted in the thinking of nineteenth century French sociologists. In the tradition of Comte, Tarde, and LeBon, the proponents of "group mind theory" took the position that "the crowd" (typifying the unit which promotes or exhibits collective behavior) had a "mind" of its own, and, subsequently, a "psychology." Thus, LeBon characterized the crowd as being marked by an impulsive, uninhibited behavior, indicating an organic unit subject to contagion and suggestibility and pursuasion not unlike an individual of a particular personality structure. Ross, McDougall and Allport followed in this tradition, but with a modification of the "collective consciousness." Important for the understanding of the sports spectator is McDougall's (1920) restatement of the group mind theory in terms of the loss of self-consciousness which the individual member of a crowd experiences in a "collective mental state." Allport's behaviorism guided his redefinition of collective (crowd) behavior to being merely the sum of individual reactions, where the identity of reaction means that each individual is exposed to the same stimulus. Even though this line of thinking has gone out of style since the Park and Burgess, Blumer, and Smelser sociological formulations have come into vogue, it can be justifiably contended that recourse to the social psychological approach to collective behavior can provide fruitful opportunities for accounting for sports spectator behavior where the more recent sociological theories break down or become insufficient in the alternatives that they offer. Still, the fallacy of the "group mind" is to be avoided, of course.

In support of this train of thought, reference must be made to one of the fundamental differences separating the social psychological from the sociological perspective,—the focus on tradition as it applies to the respective theories. Returning to the French writers of the nineteenth century: they were aware of the influence of the group on the individual, as reflected in the persistent, constraining power of tradition, but they also wanted to account for the fact that these group influences could suddenly and radically change. Students of the behavior of sports spectators will immediately recognize that this is the essential problem sometimes witnessed as a hostile outburst, or even riot, at a particularly inflammatory sports event. Contrary to the concept of the constraining power of tradition held by the social psychologists, the sociologist Blumer defined collective behavior as that which arises spontaneously **and is not due to pre-established understandings or tradition.** In the same respect that it is feasible to ask whether the sport crowd satisfies the criteria of social structure for full consideration to be given to sociological inquiry centering on analysis of spectating behavior, so can the criterion of tradition be explored more meaningfully for the satisfaction of social psychological **desiderata**. In each case there is something to offer, and to take any one stance as being more substantive than the other is to run the risk of stereotyping spectator behavior, or of confusing the issue at the very worst.[1]

The "pathological regression" interpretation of crowd behavior centers on the disruption of social structure, and so is inappropriate for the study of the sports crowd, although some observers of the history of Classical Rome might logically use this interpretation in claiming that the behavior of Coliseum crowds reflected the political decline of the State. This is a weakness of the social psychological perspective, since the pathology of the behavior is assumed to stem from an etiology which can hardly have had chance to germinate (except in interpretations of re-

[1]As an indication of the confusion that can arise in trying to separate the social psychological from the sociological perspective, reference is made to the definition of collective behavior given by Horton and Hunt. These authors, sociologists, define collective behavior as a "temporary collection of people reacting together to stimuli." Paul B. Horton and Chester L. Hunt, **Sociology**, New York: McGraw-Hill Book Co., 1964.

ligious identifications, as occurs with respect to spectators attending the annual Celtics-Rangers soccer match in Glasgow, Scotland.)

Before leaving the social psychological model, it is worth taking a tentative, but highly risky, stand for a reappraisal of the group mind concept, but put into hypothetical terms. This might be easier to do if it is recalled that the sports crowd is atypical insofar as it cannot be accounted for by present theories, either sociological or social psychological. Hence, Gus H. Fan (as Reuel Denney aptly refers to the sports spectator) is seen to constitute, in a multiplicity of his own likeness, the typical sports crowd. (This is not precisely true, of course, as later sections of this paper will point out.) He sways to the line of play in unison with his own multiple image; he stands (if first having been seated) upon excited impulse with mechanistic regularity in coincidence with his fellows, and sits again at the precise unspoken and unannounced moment that all do; and he experiences the same shocks and elations in response to the rise and fall of play, that all his fellows experience, thus making his behavior, like theirs, not only systematic and uniform, but predictable. In that line of argument, it becomes easily assimilable to speak of Gus H. Fan as the sports crowd, and herein lies the rationale for the above hypothetical excursion. Or, as Marshall McCluhan might say: **The spectator is the crowd.** The trap can be avoided, of course, but then it is not a trap of dire consequence in consideration of the sports spectator. In other words, it is arguable whether sports spectators are a homogeneous or a heterogeneous group. This question will be explored more fully in relation to social class, ethnic mix, age range factors and sex distributions at particular sports events.

Sociological

Turning to the sociological perspective, Lang and Lang (1961) provide an alternative concept to collective behavior, at least epistemologically, in **collective dynamics.** Collective dynamics is defined as "those patterns of social action that are spontaneous and unstructured inasmuch as they are not organized and are not reducible to social structure."(28:4) Thus, rooted in "social structure", this sociological perspective is clearly differentiated from the social psychological approach to analysis. "Whether the phenomenon to be analyzed consists of a convergence of individual's interests and behavior, as in a crowd, or the disruption of organized patterns, as in a panic, in every case it grows out of an unstructured social interaction."[5] Collective behavior is not institutionalized behavior, Blumer states (1957), but rather behavior "formed or forged to meet undefined or unstructured situations." Smelser (1962) moves laterally away from the structure paradigm towards defining collective behavior as a "mobilization on the basis of a belief which redefines social action." (42:8) But before testing the sports spectator against the Smelser model, it is appropriate to direct a question towards the meaning of social structure, and to ask whether its better understanding is illuminating for conditions applicable to collective sports spectating behavior.

As a unit body, does the sports crowd satisfy the criteria for social structure which are said to be necessary for demonstrations of collective behavior? Primarily, social structure is defined in terms of statuses.[6] Secondarily, it is defined in terms of mutually recognized expectations among people.[7] The sports crowd does not necessarily have either of these, nor can a common identity with a team or player, even as role-formalized as with Members of Fan Clubs, be said to replace these vital social forces. An exception to this might derive from roles associated with particular sports; for example, the "violent" hockey fan,[8] or from roles associated with the "tradition" of the stadium or arena.[9] There is no question, of course, that fantasized role-identifications with players on the part of individual

[5]Barry Svsler. Sport Fan Enthusiasm versus Collective Spectator Behavior" (Mimeographed Temple University, Philadelphia, 1972.)

[6]Social structure "consists of a set of statuses defined by relatively stable relationships that people in various positions have with each other." Kurt Lang and Gladys E. Lang. **Collective Dynamics**, New York. Thomas Y. Crowell, Co., 1961. (page 6)

[7]Social structure "determines social behavior because the concept of role permits one to consider that behavior as oriented towards some objective norm." **Ibid**., page 8.

[8]Chandler L. Sterling. **The Icehouse Gang**. New York. Scribner's Sons, 1972.

[9]The Palaestra, in Philadelphia, in which Big Five basketball tournaments are held, is one such arena.

spectators can trigger off explosive and hostile actions when his "idol" is desecrated by official or opposing player, nor, equally, that this response can occur simultaneously with a number of role-identifiers in the crowd giving the impression of "contagious reaction", but this does not supplant the forces comprising social structure. (Typically, pockets of hostile behavior occur at sports events; the majority of spectators are not involved, nor are they involved except in turning their attention to the new focus of interest.) Yet, again, this is not to say that the effects of such forces have never been witnessed in the sports crowd, because the contrary is true, as events at Latin-American soccer matches have been reported frequently. In this case, the fantasized role-identification takes on a sinister new meaning in the real social context of events, since, as Janet Lever has pointed out (1972), "sports take on a much greater significance in a **traditional**, rigidly stratified society such as Brazil," (italics added) and this injects a status consciousness in the fan, a reflection of his own identity free of any shared or mutually recognized expectancies from his fellow-spectators.

Pursuing sociological theorizing, the proposal of Horton and Hunt (1964 that essentials of crowd behavior can be categorized as anonymity, impersonality, suggestibility and social contagion, provides another model for testing the uniqueness of the sports crowd. In line with Horton and Hunt, the sports crowd satisfies the anonymity principle, since the spectator is shielded as much from his fellows as from himself by the size and temporary nature of the crowd. (Exceptions occur when couples or small groups of people attend sports events for shared social experiences, but the anonymity principle holds between groups.) The individuality of the spectator being removed, there occurs a parallel reduction in the restraints that he perceives as imposed upon him. Such "deindividuation", as Festinger (1952) calls it, allows the spectator to foist onto the group responsibility for his behavior. The spectators who throw trash onto the ice or basketball court do so with clear conscience. The impersonality characteristic serves to reinforce this interpretation. Certainly, the sports crowd is suggestible. The members convene largely expecting to experience some effect on their emotions—usually in a direction of euphoria through the witnessing and sharing of a win, but equally cognizant that they could be upset by the turn of events.[10] With respect to social contagion, (dealt with more fully in this paper in a later section), the sports spectating crowd does not experience this in a reactive sense,[11] rather the essential power of contagion is reduced, since the shared experience of the stimuli is simultaneous. In other words, everyone can see what happens in the sports arena, whereas in the crowd situations postulated by the social scientists not all members of the crowd know what is going on (and wishing to find out initiates the mechanism of milling, of course.) Thus, the spectating crowd can be tested against the Horton and Hunt model somewhat successfully, and in spite of the fact that this particular type of crowd pays cash to congregate.

(A useful cross-check on the characteristic of **suggestibility** as applied to the sports crowd is derived from Lang and Lang (1961) who comment that "the unpredictability of crowds is just another way of saying that crowds are highly suggestible." (28:221-2) The explicitness of this cross-check is made obvious upon reflection that, although the behavior of the sports crowd is fundamentally predictable, the very nature of sport is that it is unpredictable. The hostile flare-up of the sports crowd is now seen in clearer perspective.)

Smelser's (1962) determinants of collective behavior are: i) structural conduciveness, ii) structural strain, iii) growth and spread of a generalized belief, iv) precipitating factors, v) mobilization for action, and vi) operation of social control. (Social control is dealt with as a unit later in this paper.) The element which triggers progression from one determinant to the next in any sequence of collective behavior is what Smelser termed the "value-added process." The sports spectator

[10]This is directly related to the foregoing 'identity' discussion, since identification with a team, especially if favors and other symbolic insignia are worn, primes the self for critical comment through the display of allegiance. Hence the psychological differences experienced in a win or a loss situation.

[11]Neil J. Smelser. **The Theory of Collective Behavior**. New York. The Free Press, 1962

has been tested successfully against this model by White (1970), who states that phenomena of social disturbances "can be classified in terms of the determinants established by Smelser as the necessary conditions for the appearance of an episode of collective behavior." The model also has merit in viewing the spectator in an overall societal setting, temporally removed from the sports stadium. This presupposes that the sports spectator constitutes a crowd, even when he, individually, is uniquely separated from his fellows. Taking this viewpoint is really stepping outside the Smelser paradigm of collective behavior, but remains well within that of collective dynamics proposed by Lang and Lang (1961).[12] Thus the expectancy of people intending to attend a game at the week-end in which they know there will be disruption by demonstrators,[13] sets the tone for "structural strain" even before the crowd convenes on Saturday or Sunday for the game. (The agencies of social control are equally aware, needless to say.) The Smelser model, then has validity for analyzing the sports crowd, since even the combination of conduciveness, strain and generalized belief do not automatically predispose the crowd to precipitative action, but rather there must be the dramatic event to ignite such action. Thus, pursuing the example of expected "demonstration," the demonstrators must **both** show up as anticipated **and** "do their thing" (which could be thwarted by the agents of social control,) for circumstances to be categorized as "collective behavior" by Smelser. Even then a unique instance might not be sufficient to satisfy the Smelser criterion for "social change" to ensue. (However, as Peter Hain describes in **Don't Play With Apartheid**, a continued series of direct action tactics by the demonstrators at matches resulted in effecting social change in racist attitudes and policies in the British and Commonwealth sports domain.)

Turner and Killian (1957) also represent the sociological viewpoint, expressing "Our greatest debt is to Herbert Blumer." For them, collective behavior is "based upon a classification of groups according to the nature of the social norms which govern them." They acknowledge that there are such things as "informal groups", collectivities of people without formal organization, leadership and the like, and they add that "interest is not concentrated upon the collective behavior aspects of informal groups."(48:13) These authors provide a category of diffuse crowd, which is inter-related with **compact crowd** in its theoretical applicability. The inter-relatedness suggests a mode of description for the sports spectating crowd as discussed above. In the day-to-day work week, the sports spectating crowd is diffuse, resolving its loose structure in individual reference to sports page or television coverage, or in small knots of people at lunch-counters or in bars, to be drawn together in common allegiance at the week-end for the compact experience of witnessing the game. (See Goldstein and Arms (1971) below.) It goes without saying that no collective behavior in the strictest sociological sense of **action-for-social-change** occurs in many such compact sports crowd situations, but the mere fact that it **occasionally** can, merits closer analysis of the diffuse-compact crowd model.

Turner and Killian separate collective behavior from social psychology on the grounds that psychology deals with the individual, and collective behavior implies by definition group process, the domain of sociology. This line of argument is counter-argued to some extent in this paper, and fresh ways of viewing the sports spectator allow for an application of theoretical constructs from both social psychology and sociology. Turner and Killian do agree that some reliance must be placed on methods and generalizations of social psychology, however, and this approach proves fruitful for the analysis of sports spectator behavior. The discussion by Turner and Killian of scapegoating and the transfer of hostility has some appeal for students of sports spectator behavior, but their own contention is that,

[12]Interestingly enough, Smelser rejects the Langs paradigm as too loose for purposes of analysis

[13]Peter Hain, **op cit**, and Stewart Harris, **op cit**

[14]Turner and Killian also draw attention to a crowd situation, the parameters of which closely resemble the sports spectator crowd. Members' behavior is parallel and similar, but not cooperative, and they categorize such a collectivity as an **individualistic crowd**. We draw a similar conclusion from a ratiocination stemming from the application of out-dated social psychological explications of collective behavior. The example of categorization serves again to show how narrow is the margin of difference between the social psychological and sociological perspectives at certain points of definition

notwithstanding circumstantial evidence, little basis of support can be demonstrated for such concepts in serious analysis. Their contention is borne out by the findings of Goldstein and Arms (1971).

In reporting a rising incidence in hostility as an effect of observing football games, Goldstein and Arms (1971) provide possible explanations as follows: a) the absolute number and density of the football crowd, b) the norms of expressive behavior sanctioned at football games, and c) the number of players demonstrating behavior of direct physical contact. They sum up their findings by suggesting that watching an aggressive sport leads to an increase in hostility among spectators, adding the rider that perhaps people who are hostility-prone are attracted to football games. They reject any cathartic effect. In considering further whether the fan is hostility-prone, reference can be made to Cohen's (1970) findings. Expressed fan opinions with respect to the expectancy of violent action in the game of their choice showed 75% of hockey fans expecting to see fights, compared with 25% of basketball fans with that expectancy. Approximately two-thirds of hockey fans say they are not annoyed by game-stoppages due to fighting, whereas only 40% of basketball fans make this claim. However, there is agreement between about one-third of both hockey and basketball fans that basketball and hockey are equatable for the amount of violence displayed in each game. The finding by Cohen relating to the acceptance of aggression or hostility in basketball is supported by Harrold, Lowe and Gordon, who noted an overlap in student preferences for basketball and the contact sports of football and hockey. Whether the hostility-prone fan attends games because he believes that his presence can have an effect on game outcome is moot, (see the section Spectator Control over Game Outcome in this paper) but the evidence in support of the specificity of sport-selection by spectators is given added weight by the above findings. The Minnesota study (Harrold, Lowe and Gordon, 1972) revealed females showing a greater preference for basketball and court sports, a fact confirmed by a recent Gallup Poll, and males showing a preference for field/contact sports. Data provided by Cohen (1970) show a greater proportion of females attending hockey than basketball, in contradiction to what might be expected from stated preferences, but Cohen adds that perhaps the hockey game is perceived to be a more appropriate place to take a date or spouse than is a basketball game. This social factor could be seen to reverse the psychological expectancy in reality.

Pursuing the discussion of the application of Smelser's model, the determinant of "social control" can be viewed as the instrument which can interrupt the cycle of the preceding five operations. Broadly, then, social control must be restated as a counter-determinant aimed at inhibiting or interrupting the sequential accumulation of the potential effect of the determinants of collective behavior. (See also Social Control in this paper.) As a concluding note in respect to Smelser's model, it must be recognized, and accorded to him, that he excludes "audience" from his range of analysis. It might be seen by Smelser, as with others, that the crowd of spectators in attendance at a sports event comprise, definitionally, an audience. This limited view is not held by the present authors, and as indicated above, a great deal is owed to Smelser for a broadening of vision to see the sports spectator in a "crowd" sense not restricted to "audience" parameters. This perspective provides a release from the constraints of argument centering on whether the sports spectating crowd is "structured;" a re-analysis allows for the dispersal of weight attaching to the sports audience being an institutionalized form. In the latter case, "structural strain" as Smelser means it, is unlikely to ensue in isolation from the general societal position in which the typical sports fan sees himself. Without stating it explicitly, Taylor (1971) suggests that the structural strain underpinning religious differences between Catholics and Protestants in Glasgow, Scotland, is one of the precipitating determinants to the annual flare-ups of violence in Celtics-Rangers matches. Certainly, parallel factors are in evidence with respect to the expectancies of hockey fans as reported by Cohen and by Vaz.

SOCIAL CONTAGION

(Under the general heading of social contagion, three sub-categories can be studied. Theses are imitation, circular reaction and suggestibility.)

Imitation

Grounded in the learning theory of Miller and Dollard (1941), matched-dependent behaviors categorized as "hooliganism" can be said to be role-dependent reflecting a breakdown in player behavior on the sports field.[15] Denney puts this epigrammatically in his discussion of reasons for bad sportsmanship displayed by spectators when he says: "Audience violence is a response to player violence."(11:131) Describing the decline in sportsmanship and the "manners of the game," Greenbaum asks professional sports club owners: "Why object to a fight in the crowd if (their) own players are so ill-disciplined that they will, upon the slightest provocation, fight on the pitch? and, what right has any professional club to expect a higher standard of good behavior from its paying spectators than from its paid players?"(18:85) Specifically, the concept of "hooliganism", as well as of "eccentricity", brings to attention the question of sub-cultures in the sports spectating crowd, and is considered more fully under the section of this paper entitled Role and Status. (See Identification and Sub-cultures) As a social psychological force in accounting for collective behavior in the sports setting, imitation is less important than "circular reaction."

Circular reaction

The discussion on circular reaction serves the main purpose of separating "symbolic" from "sympathetic" (mythological as opposed to social psychological or sociological) interpretations of the communicative processes operating in the sports setting.[16] "Circular reaction" state Lang and Lang (1961), "refers to the spread of like feelings out of which similar behavior develops."(28:216) The recognition of like feelings among a crowd is dependent on expressive gestures which typically exercise a special claim on the attention of crowd members. Gestures of dirision are recognizably more forceful than booings, catcallings, chantings or other vocal jeerings. The instigators of dirision are as patently aware of this as are those who only witness it and refrain from being caught up in such behavior. The emotional pitch of most of the sports crowd will qualify levels of restraint, of course. The throwing of debris and trash onto the playing area,—the basketball court or hockey rink,—intended to incite wider crowd involvement in disapprobation of athletic performance, only succeeds in officials halting the game, while crowd control personnel scrutinize the banked rows of ticket-holders in vain attempts to single out individual offenders. (The demonstrators used trash throwing—among other things—as a tactic of direct action for game disruption, and to conceal the identity of the actual throwers, their fellows around them simultaneously made the Nazi salute. See Stewart Harris, **Political Football** for fuller accounts.)

Crowd involvement in such scenes (which ultimately qualifies levels of "collective behavior") depends largely upon the self-sustained involvement or identification that each member has with a) the player-personnel, and b) the value of the outcome. Dirisive gestures are charged with feelings and affect, and their impact is significantly "emotional", intended as alternative judgment in a provocative game-situation affecting player or outcome. These levels of emotional judgment clearly overcome the rationale of critical judgment making the latter lesser accessible under the prevailing conditions. Thus, any intensification of excitement arbitrarily takes a "circular form in which individuals reflect one another's states of feeling and in so doing intensify this feeling." (6:170) According to Blumer, such circular reaction tends to make people behave alike (see also pages 2-3 of this paper), and is thus identified as the natural mechanism of contagion in collective behavior.

Suggestibility

As already indicated (see page 4), the sports crowd is suggestible, primarily

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[15] A. Greenbaum defines hooliganism as uncontrolled aggression

[16] For an explicit discussion of this viewpoint see Lang and Lang, **op. cit.**, p. 210ff.

due to the fact that it is self-selected, and without explicit reference to such a factor. To some extent, the study by Goldstein and Arms substantiates this.

Lang and Lang (1961) state: "Not all critical functions are suspended in normal suggestibility."(28:222) This gives us the qualification that we were seeking in behalf of the sports spectator in the above discussion on circular reaction. Suggestibility, as a process of social contagion, implies a followership relationship in respect to one being influenced by others who are in a position to relay information to him. This situation does not prevail in the sports setting, as has already been indicated, because everyone is in a position to see what is taking place.

ROLE AND STATUS

Status

It can be said that spectators have differential statuses, by sex and by age, for example, and both of which are sociologically valid, if superficially so in the sports spectator crowd. More significantly, levels of support given to a team, for instance provide for stratifications of "fan," "team supporter" and "fair-weather" spectators. Except for rooting sections, such categories of spectator are usually randomly distributed among the general attendance of the stadium, and, equally important, they are randomly distributed among the urban population, such that social class barriers are not the same for spectator involvement identifications.

The typical sports crowd can be qualified as status-free in the social psychological and sociological sense. Seat prices and proximity to the "action" are superficial indicators, even though it has been reported that, at World Heavyweight Boxing Championships, those "nearest the ring were five state governors, the Republican National Committee, many millionaires, and a lot of people in show business."(35:116-7) More accurately, from a social class standpoint, the people comprising the typical fight audience, among the majority of blue and white collar workers spectating, are "thugs, politicains, fight managers, society men, plain and fancy whores, gang leaders, bootleggers, actors, newspapermen, bankers and brokers."(16:106) Taking level of education, occupation, and location of residency as indicators of social class, Cohen (1970) found hockey fans to be better educated, to hold better jobs, and to be living in better neighborhoods than basketball fans. ("Fans" used in the generic sense meaning spectators in general.) Attendance at a number or variety of sports events by particular spectators was substantiated, independently, by Cohen (1970) and by Harrold, Lowe and Gordon (1972). Cohen established that approximately 10% of each group of hockey and basketball spectators admitted attendance at the **other** game, whereas Harrold, Lowe and Gordon demonstrated that attendance at two or more sports is a function of level of interest in sports and amount of leisure-time. Lending empirical support to the fact that attendance at other sports varies with interest is data presented in Table 1 (adapted from Cohen, 1970, pp. 35-36)

Table 1

Attendance at Other Sports as Expressed by Spectators of Hockey and Basketball (in percent)

Sport	Hockey			Basketball		
	None	Some	Much	None	Some	Much
Boxing	68.4	23.4	8.1	59.8	28.5	11.6
Football	9.4	41.9	49.6	10.2	51.2	38.5
Tennis	13.2	60.3	27.4	18.3	57.9	23.7
Wrestling	70.2	24.8	4.7	49.9	34.9	15.1
Baseball	28.6	20.2	51.1	14.2	23.8	61.8
Horseracing	21.2	53.4	32.3	26.1	33.7	37.9

Categories of spectator status can be tested against the roles that one subgroup might expect of other sub-groups, as for example, the casual spectator ex-

pecting the "fan" to exhibit eccentric displays of behavior manifesting overt support closely approximating actual play on the field or court. However, sociologically speaking, there are no recognizably valid obligations and claims attached to these statuses since they fill no social position, and are relative except in unique instances.[17] Indeed, we must focus on specific cases to a greater extent than usual in accounting for **spectator behavior** as opposed to collective behavior. Greenfield (1971) provides a well-reasoned argument for a cultural "mythology" of spectators, applying the role concept to the presence of eccentrics. He calls such eccentrics "communicants," since these are the vocal and expressive individuals at matches, the ones who know all the statistics of the team and players, the players' private lives, and sundry other identification—relevant material which they feel obligated to transmit to the crowd at large or a neighboring spectator in particular. Greenfield also adds: "At its most intense, the fervor of the communicant transcends normal codes of communication." (19:22)

Identification.

Mutual identification among followers, contend Lang and Lang (1961), constitutes a kind of influence that binds a group together. In this kind of identification (which could be appropriately attributed to a spectator collectivity in a stadium) they contend that there is the sharing of the mood of another person, a desire to act like him, and, in adapting his critical attitudes as standards, there is an actual appropriation of some characteristic or trait. Placing this concept in the broader context of the spectator collectivity, a wider perspective of shared interaction shows the mass of people commonly reacting with self-satisfaction (or, in the negative prospect, with disgust) to the individual accomplishments of that few of their skilled citizenry, the athletic team. The process, in its most positivistic sense, is one of pride in those others with whom they identify (the Team) bringing pride to themselves. There seems to be no question but that the "home crowd" is a group which comprises a plurality of persons sharing an ideal or standard that each has internalized, and who, through this internalization, identify with one another.[18] The individual observations of each member of the "home crowd" or "supporters club" are validated because, for the period of sports involvement at least, they tend to see the world in the same way. Beisser (1967) presents a good account of the identification syndrome as it pertains to the sports spectator, while Heinila (1966) expounds upon nationalism as a force of identification for athlete and spectator alike. In a more particularized context, spectator identification with a player is illustrated by the following:

> (Franco) Harris' most vocal supporters are "Franco's Italian Army," an exhuberant ethnic group bedecked with khaki-colored helmet lines who wave Italian flags as they imbibe their wine and cheese . . .
>
> . . . Kicker Roy Gerela is idolized by "Gerela's Gorillas" who have shown a penchant for psyching other place kickers into the kind of wide shot that the Browns' Don Cockroft suffered last Sunday. There is also a loose-knit group

[17] A striking example would be seen in the membership of the 100 Club, an exclusive, businessmen's supporting group associated with the Leeds United Association Football (soccer) team. To become a member, one must pay a subscription fee of one hundred pounds sterling (about $250).

[18] "As a spectator at the Garden, for better or worse, the crowd shares the burden of empathy. The team is no longer solely your responsibility. Knick fans this past season, grateful for the team's brilliant play after long drought, gave standing ovations to individual plays as if they were arias or pas de deux. We were all lovers (and winners) together, cheering the team that represents us, the manifest object of our self-pleasure.

Spectating, as I have indicated, is not an unmixed pleasure. . . A call against the Knicks in a close game brings out the worst snakes of my paranoia. I rage at the refs, conspiring through blindness and secret hostility to take rightful victory from my team (from me, in fact.) . . . What other power do we have? . . . I remind myself of the pleasure of (spectating) basketball, its style and seriousness. I remember how we, meaning the Knicks, blew tough Philadelphia off the court, beating them by over thirty points after a double overtime loss, and what can I do, hooked by the metaphor of the game, but believe in sympathetic magic and my own unrealized possibilities." Jonathon Baumbach, "The Aesthetics of Basketball." **Esquire**, LXXIII, No. 1., 140-146, January, 1970

and

"Rooting for the Rangers has afflicted all of us—for I am one of them—with a nearly incurable schizophrenic rage that removes Ranger hockey from the realm of sport. Ranger fans, for example, do not stand by their heroes, they are the ultimate summer soldiers of winter sports. . . Indeed, there are those who make insult an obsession."
Jeff Greenfield, "Hockey Fanatics." **Harpers Magazine**, January, 1972, pp. 16-22

of Slovaks yelling "**Dobra Shunka**" for a linebacker Jack Ham. **Dobra Shunka:** the Great Ham.[19]

Subcultures

"A subculture consists of the cultural values and behavioral patterns distinctive of a particular group in a society." (23:2) According to Taylor (1971), the origins of the spectating crowd as a subculture are rooted inworking-class membership. With the passage of time and the process of industrial progress, this subculture has become "Bourgeoisified," a process which, in turn, was insured by the increasing financial status of athletes. It is this process of "Bourgeoisification" which, Taylor reasons, is behind "hooliganism." As characterized, hooligans present a further subculture within the overall sports spectating subculture as defined by Taylor. This phenomenon, while being reported currently in the English press, is not new, nor culturally isolated to Great Britain.[20] Leibling states in **The Sweet Science** (first published in 1951):

> As is usual at big outdoor fights nowadays, platoons of young hooligans from the bleachers stormed down on the field in successive waves, to take over better seats than they had paid for. Legitimate ticketholders . . . with the aid of ushers and special cops expropriated the squatters.(31:123)

Hooligans are characterized as gang-members who seek to establish territorial rights in a stadium, even travelling to away matches, not in support of the travelling home team, but to establish their reputations in stadia other than their "own."[21] Knives and other weapons are not uncommon among the accoutrements that the hooligan carries with him to the game, and, as photographically reported in the London **Sunday Times**, November 5, 1972, a knife thrown in Pittrodie Stadium, Aberdeen, Scotland, pierced the skull of a girl spectator, aged sixteen, almost killing her.

Contrary to the argument presented by Greenbaum (1970—see under Social Contagion in this paper), Taylor (1971) suggests that "control is produced by the subculture's social situation and assertive of its values" (47:361), and hooliganism occurs as a "response to the loss of control exercised by a football subculture over its public representatives."(47:372)

Social Sanction: Deviancy

The subculture model is useful for other interpretations of forms of stadium disruption. The cultural norms for stadium behavior, while sanctioning a broader means of expression than commonly permitted in society, demand that disruption of the spectators' enjoyment of the game by anything other than sports action be challenged by the spectators themselves. This is largely a reflection of the conservative nature of the typical sports crowd, as occasional challenges have shown,[22] and the reciprocating spectators now take on the role of "vigilantes."[23]

Thus, the sports crowd does not fit into the "agents for social change" schema (6, 28, 42); rather it is an agent of tradition, of maintenance of the **status quo.** Yet, it is equally prone to hostile action. This action can be aimed at the players or officials,[24] or it can be aimed at a disruptive minority in their midst whose aim is to destroy the sequence of the game or stop it altogether.[25] Indeed, in the case of

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[19] **Sports Illustrated** December 11, 1972

[20] Chris Lightgown. The Bovver Spots. A Skinhead Guide to Safely." London **Sunday Times**, October 1, 1972. (The authors wish to thank Mr. Peter Hill, graduate student in the Department of H P E R D. at Temple University, for bringing this reference to their attention.)

[21] Most football hooligans . . . are youngsters who have little interest in the game itself and know little about it . . . they don't enjoy a football match unless there is a punch-up . . . and go to a (soccer) ground where trouble is most likely to occur." J. A. Greenbaum. Soccer Hooliganism. Ethics and Education." **British Journal of Physical Education**, 1(4) 85,86, 1970.

[22] The Springboks ran onto the field at the beginning of the game to a storm of cheering from a majority of the crowd, and a fusillade of fire crackers, ships flares, and smoke bombs. Whistles blew, and up went placards with slogans like 'Racists Go Home.' Black and white balloons were waved, and there were great roars of 'Sharpville, Sharpville, 69 Dead.' In a strong glare of arc lights, a haze of smoke drifted across the ground. About 500 policemen were on duty, many in plain clothes and many from the motor cycle squad in white crash helmets and leather coats and boots." Stewart Harris, **op cit**, p. 73.

[23] **St. Paul Pioneer Press**, Sunday, June 27th, 1970.

[24] **Time**, November 27th, 1972, p. 97 and **Evening Bulletin** (Philadelphia), Saturday, December 30, 1972, p. 11.

[25] Peter Hain, **op cit**., and Stewart Harris, **loc cit**.

demonstrators entering sports stadia with the objective of disrupting or stopping play, it can be said that this group more typically constitutes the classical categorization of the "crowd" simply by virtue of the main threat of its being, namely **to effect social change.** This is so, of course, because the latter has a degree of structure, a feature lacking in the former.

Crowd-sanctioned behavior, as we have seen, can be tested by those whose primary purpose for attendance has little or nothing to do with watching the game. Falling within the range of sanctioned behaviors (from the crowd's point of view, if not from that of the stadium authority) are "booing," chanting, verbal abuse of officials and players, and drinking alcohol. Such behaviors would be categorized either as precipitating factors or as mobilizing action (among Smelser's determinants for collective behavior) according to the stage of events in the overall temporal spectrum of the game. Drinking alcohol at the game would most particularly be categorized as a "precipitating factor."[26]

Social Sanctions: Violence

Whether violence in the stands among the spectators themselves is sanctioned is arguable, and, if so, perhaps location-specific (as with a "tradition" attaching to a stadium.) Denney calls wrestling a "spectacle performance of fictional violence," and suggests that, according to the level of competency with which diverse members of the audience assess the contest and so reveal their contacts with reality, spectator response can manifest itself potentially in "actual" or "mock" violence. The majority of wrestling audiences (usually numbering approximately 5,000) is aware of the "fix" or the overt drama, and in this realization, it is not surprising that very few cases of violent behavior are ever witnessed at such sports events. Leastways, there is not the same amount of reportage of spectator violence for wrestling as there is for hockey, for example. Much the same holds true for spectators at the Roller Derby, although a differing explanation is sometimes afforded by reference to the theory of "mesmeric consciousness."[27]

Employing criteria of rates of attendance, age and education, proneness to violent behavior, and finally, satisfaction with fan role expectations by the players, Aron and Lief (1971) tested the hypothesis that Roller Derby fans form a subculture. Their data substantiate the fact that the spectators are a subculture, but they caution that "the data do not reveal whether the characteristics involved, especially the aspect of violence, is simply a trait of this group or a trait of other groups to which fans might belong." (2:11)

Reporting the World Championship fight between Monzon and Benvenuti, held on November 7, 1970, the **Minneapolis Tribune** (Sunday, Nov. 8, 1970) stated "spectators jumped into the ring as Benvenuti hit the canvas and tried to attack the referee, Rudolf Durst of West Germany. The uproar continued for 10 minutes as police fought with fans in the ring." When the New York Giants finished the 1966 season 1-12-1, Astor (1971) reports that, at the final game, "several thousand stormed the field in a futile attempt to assault the coach (Allie Sherman)." Similarly, the **Philadelphia Inquirer** report of the Ohio-Minnesota intercollegiate basketball game, January 26, 1972, stated: "Police swarmed onto the floor as the fight broke out, pulling players apart and stopping some fans who stormed onto the court." (**Philadelphia Inquirer.** Thursday, January 27, 1972) Such reports, taken across three major spec-

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[26]Photographs on the front page of the Philadelphia **Evening Bulletin**, Tuesday, December 12, 1972, and Thursday December 14 showed respectively a workman sweeping trash, including beer cans, and an empty wine jug in the bleachers in the bleachers. Chandler W. Sterling in **The Icehouse Gang**, graphically relates the incident when beer was poured over the head of St. Louis Blues Hockey Coach, Al Arbour, in December, 1971, at the Spectrum, in Philadelphia. The Philadelphia **Daily News** reported (Tuesday, November 7, 1972) an incident in which an empty champagne bottle was thrown onto the football field by a spectator at the New England Patriots-Baltimore Colts game of November 6, 1972. The **Minnesota Daily**, (campus newspaper of the University of Minnesota) Tuesday, October 10, 1972, shows a photograph of student spectators (attending the Minnesota-Kansas intercollegiate football game) holding up beer cans for display to the photographer. The spectators are quoted as saying: "The Gopher backs sure look a lot faster after you have had a couple of beers and you wouldn't believe the moves that they can put on when you're a little ways gone. I drink around eight beers before and during the game, just enough to psych me up and get me feeling pleasant but not enough to get violent."

[27] The circular action of the Roller Derby is said to have a hypnotizing effect on the spectators, which dulls their overt responses stemming from perceived violence on the circuit.

[28] The Dick Cullum column, **Minneapolis Tribune**, Tuesday, December 29, 1970.

tator sports and distributed across the last few years, serve, by their apparent randomness, to indicate the basis for the difficulty in researching the area of spectator violence. The predictability of such events for study is remote (less so with hockey, perhaps, and it is worth speculating that there are myriads of social scientists attending hockey games today with the object of attempting to explain the pheneomenon in at least that one specific sport), and the methodology of research still lacking. Content analysis of newspaper reports is arduous, and need not necessarily provide the researcher with incisive detail upon which he can formulate reasoned theory.

SOCIAL CONTROL

Clearly related to perceived social sanctions within the spectator setting are a) spectator control over game outcome, b) winning, and c) the social control of the spectator.

Spectator Control over Game Outcome

Spectator control over game outcome, while permitting of a social facilitation interpretation, should be seen as distinct from the experimental literature on audience reinforcement and social facilitation (even though the larger social context of a spectating crowd is often given as a rationale for conducting social facilitation research.)

The social psychological literature pertaining to audience reinforcement and social facilitation provides a mixture of positive effects, negative effects and no effects. A recent study by Shockley (1972) on the effects of incentive presented by an audience on the learning of complex motor skill carries an admirable review of the literature. It is suggested alternatively, that a different methodological approach be taken for investigation of spectator control over game outcome. Clearly, spectator control over game outcome is closely related to socially sanctioned behaviors in the sports stadium. Taylor (1971) speaks of "techniques adapted by the spectators in willing their team to victory," (47:353) suggesting that "vociferous support and intervention" (running onto the playing area) are mechanisms of **control** in the overall sports setting. He states that "there have always been people of high emotional instability going to football matches, in conditions of overcrowding and in situations of potential mass hysteria."(47:355) Corbin (1971) reported intercolletiate basketball fan responses to two statements: a) Fans should be quiet while players, both home team and visitors, are shooting free throws; and b) Booing is never justified. While these comments do not identify specific factors of spectator opinion on their effect on game outcome, nevertheless they indicate sentiment in a direction. Corbin reported 57.2% of spectators agreeing with the first, and 21.7% agreeing with the second statement. Norms for stadium behavior appear to be implicit here.

Indicative of the necessity for a different methodology for evaluating spectator control over game outcome is the report that the home, or the major supporting crowd, has effectively disrupted the calls or signals of key plays (by the quarterback, for example) by shouting in unison: "DEE-fense, DEE-fense, DEE-fense."[28] The noise serves both effects of drowning out the calls, and of lending some evidence of support of the home side. Similar situations are reported by Mandell (1971)[29] and by McDermott (1972), who comments on the use of battery-operated bullhorns in basketball courts. Reporting a case study of the effect that a spectating crowd can have on the psychological well-being of a transferred soccer player, da Silva (1970) presents the viewpoint that the spectator exerts "a strong influence on the psychological dynamics of the soccer player," and that the spectator "is his strength and his distruction." (10:308) The case is similarly presented from the player by Hain (1971) in his report of the effect that demonstrators had on the

[29] Describing the World Heavyweight Boxing Championship bout between Joe Louis and Max Schmelling, held on June 18, 1936, Richard R. Mandell, in **The Nazi Olympics**, states:" . . . to the hysterical thousands, the impression was that the two men struggled totally without restraint. The din was terrific, a continuous blast, and thereafter prevented the fighters from hearing the bells that ended the rounds . . . In the meantime, the mobs of yelling fans (at the stadium) shifted their allegiance to the German and were lusting for the kill of the balck American." (35:119)

playing effectiveness of the South African rugby touring team visiting England in the 1969-1970 season.[30]

Winning

Winning, which essentially generates increases in attendance and therefore crowd size, is a problem of social control. Harrold, Lowe and Gordon show that in the ten-year period 1962-71, the only year that football ticket sales increased over the previous year was in 1967, the year immediately following the University of Minnesota's most successful intercollegiate football season, 1966.

A point to relate to spectator-player identifications with a winning player can be seen in the popular reportage of the drawing power of Vida Blue, pitcher for the Oakland Athletics, during the 1971 season. In 1972, the pitcher occupying this magical position was Steve Carlton, pitcher for the Philadelphia Phillies, of whom it is claimed: "There were at least three occasions last season when more than 50,000 spectators jammed Veterans Stadium to watch him pitch."[31] Bill Musselman, University of Minnesota basketball coach, effectively boosted attendance from an average of 7,000 to an average of over 14,000 in his first year at Minnesota by producing a conference-winning team. At the time the crowd was at its largest, and a crucial game being played, one of the worst scenes in the history of Intercollegiate Basketball erupted, resulting in national news coverage and social commentary. According to Taylor (1971), attendance is a function of the "central focal concern" of the spectating classes, which manifests itself in the highest value being placed on victory,—and not necessarily **how** victory is achieved.[32] Thus the end proscribes the means as far as the spectator is concerned, and when the end is accomplished to the satisfaction of the majority of supporters, a disinhibition of social sanctions prevailing within the stadium can spill out into society at large. Hence, riots of jubilation are reported from time to time.[33]

If it can be postulated that winning is related to the enjoyment of (and therefore, excitement generated by) high-scoring rather than low-scoring games, then professional team sports need closer scrutiny for their effects on spectators. Hoch (1972) makes the point that professional basketball was rule-adapted conspicuously to create "a faster moving, more attractive package to sell to the fans." (25:30) The data collected by Cohen (1970), and which is not quoted by Hoch, bears out this hypothesis. Cohen showed that approximately 75% of hockey and basketball spectators agreed with the statement that high-scoring games were more exciting than low-scoring. Cohen also points out that when baseball adjusted the pitcher's mound and strike zone in a successful attempt to aid hitters and increase scoring, attendance figures increased substantially. Finally, it would follow that if winning is positively related to high-scoring (as opposed to low-scoring) games for spectator enjoyment, then spectators at high-scoring games (basketball, football) would place a greater emphasis on winning as socially desirable than would spectators at low-scoring games. Cohen found this to be true for basketball fans over hocky fans.

The Social Control of the Spectator

Speaking of the Spectrum, in Philadelphia, Frank Dolson wrote: "Whether its

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[30] Peter Hain writes, in **Don't Play with Apartheid:** "Throughout the campaign there was speculation about the effect of the demonstrations on the Springboks. All rugby reporters were united in their view that the team's miserable performances were, at least in part and at most directly, attributable to the demonstrations. The team had the worst record of any South African side, failing to win an international and losing an unprecedented number of matches. . . . Springbok hooker, Don Walton said: 'I believe the demonstrators were worth between five and ten points to the opposition in each game.'"

Glen Thomas, writing in **The Observer** on 9 November (had) said: "After watching the South Africans in two games, it is evident to me that they are not themselves, and one gets the impression that they are playing as though stepping through a minefield. Thus, as rugby footballers the dice is loaded against them, and this will have a profound effect on their performance." (20 157-159)

[31] "Steve Agrees to $150,000." Philadelphia **Evening Bulletin**, Friday, December 15, 1972.

[32] See also the section on Social Sanctions in this paper.

[33] Writing in the **Philadelphia Inquirer**, Wednesday, February 16, 1972, Jerry Izenberg says: "Anyone who was there at Shea Stadium on the day the Mets made the sun stand still to win the World Series surely will never forget the incredible violence that followed under the guise of good fellowship, celebration and harmless folkdance meant to celebrate the harvest of Tom Seaver's pitching arm."

a rock concert or a prize fight or a hockey game, crowd control has become a major problem, here and elsewhere. Too often, the crowd becomes a raging, unruly mob." **(Philadelphia Inquirer**, September 1, 1972)

Turner and Killian (1957) propose five methods of controlling and terminating a potentially riotous crowd. These are enumerated as follows:

1. Removal or isolation of the individuals involved in the precipitating incident before the crowd has begun to achieve substantial unity.
2. Interruption of communication during the milling process by dividing the crowd into small units.
3. Removal of the crowd leaders, if it can be done without use of force.
4. Distracting the attention of the crowd from its focal point by creating diversions at other points.
5. Preventing the spread and reinforcement of the crowd by isolating it. (48:144)[34]

Greenbaum (1970) would add the preventive measure of educating people specifically for spectating (placing the above in the sports context), while the proposal of Clarence Campbell (President of the National Hockey League), as reported by Frank Dolson,[35] is that "seat cancellation is by far the most effective control, the single most important deterrant of all." Dolson's own evidence supporting this recommendation, indicates that "it worked in Chicago, where the lunatic minority had been destroying the enjoyment of hockey games, much as it is doing here. Black Hawk fans know if they are spotted throwing objects on the ice, their season tickets will be cancelled."[36]

The argument is often levelled that it is the role of the social scientist to observe, measure and evaluate. Others, it is claimed, may do what they will with the findings--social reformers may reform, educators may educate for a "better" society—, but the point has already been made earlier in this paper, that before predictable trends can be established, a new approach to the methodology of analysis and assessment of spectator behavior is required. As pointed out in the first paragraphs on page one of this paper, it is a virgin area for inquiry.

SUMMARY

The fitness of the spectating phenomenon for analysis by the traditional and more recent theories of social psychology and sociology, respectively, has been questioned. The spectator cannot be studied from a temporarily restricted (or restrictive) perspective of game-time, in accounting for his actions by collective behavior. The limitations of the theories of collective behavior were considered, and alternative uses or options were investigated. The results of this initial exercise led to reconsidering the sports spectator in the light of social structure, and thence, social system. The mechanism of social contagion was viewed in reflection of social structure, and role, status, and social control served to assess facets of the social system of the sports spectator. Phenomenologically, collective behavior (as opposed to collective dynamics) reflects a breakdown or disruption of social system. Sports spectating crowds can convene and disperse without any such effect, but on the occasions that collective behavior transpires with disruptive effect in the sports setting, agents and mechanisms of social system need to be closely analyzed. A new methodology for such analysis must be found.

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[34] **Philadelphia Inquirer**, Friday, September 1, 1972

[35] **Ibid.**

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The Migration of British and Australian Physical Educators to American Universities

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Between 1960 and 1970 approximately one hundred and twenty British and Australian physical education specialists pursued advanced degrees in physical education at American universities. The University of Oregon had the largest attendance with forty seven students, followed by Wisconsin and Illinois with seventeen and ten students, respectively.

This presentation will focus upon the American experience and how it affected the British and Australian students from both a professional and personal point of view.

Each person was asked by questionnaire and or taped interview if his American degree:

1) created contacts that have assisted him in his professional advancement;
2) was necessary to secure his present position;
3) assisted him in procuring his present position;
4) has contributed to the satisfactory performance of his present position.

105 members of the sample responded.

In answer to the first question 73 replied "yes" and 23 "no"; to the second 67 replied "yes" and 38 replied "no"; to the third 78 replied "yes" and 27 "no"; and to the fourth 82 replied "yes" and 23 "no".

It could be generally concluded that the American degrees had value in terms of professional advancement for members of the sample.

The contacts created that have assisted in professional advancement are probably of both an indirect and a direct nature. These contacts probably have developed and will continue to develop due to continued exposure to different physical education personnel. They have the potential to influence the British and Australian students throughout their professional careers.

While the majority of the members of the sample felt that their degree assisted them in securing their present position, not as many persons felt that their degree was necessary to secure their present position in Britain or Australia. Those who have remained in North America and are teaching at the university level found that their advanced degree was necessary. Those returning to Britain and Australia found it assisted but was not necessary to teach in a College of Education or university.

From a pragmatic standpoint, the value of the American university program is shown by the majority indicating that the experience had assisted them in the satisfactory performance of their present job. Many may well consider this to be the major factor when evaluating the American degree.

Since the completion of their degrees, of the seventy-five who comprised the British sample, forty have returned to Britain while thirty have remained in North

America. In the Australian sample of thirty, eleven have remained in North America and nineteen have returned to Australia.

As just less than half the sample under study have remained in North America rather than returning to Britain or Australia, they comprise the "Brain Drain" group.

Britain is one of the countries that has been hit hardest by the Brain Drain. In 1966 alone, Britain lost to the United States approximately 2,000 engineers and technologists and over 1,000 top level scientists, representing 40 per cent and 23 per cent, respectively, of the university production of these individuals.[1] At the time, Prime Minister Harold Wilson claimed that a highly trained individual who leaves Britain represents a loss of national investment and accruable wealth of about $84,000, and a potential gain to the American economy of as much as $210,000.[2] A further problem for Britain is:"Many of these immigrants enter the United States industry and are therefore helping a competitor country to improve its performance, so Britain's loss in a sense, may count double."[3] It may also be said that America's gain is Britain or Australia's loss when highly qualified physical education specialists elect to remain in the United States rather than return home. It is little wonder that writers referred to the sixties as the time of the "brain drain" from Britain to the United States.

Higher salaries and improved facilities in North America have probably been major considerations for those deciding not to return home. Because numerous positions in higher education are not now available in North America, one would expect to observe less numbers of Britishers and Australians remaining in the United States upon completing their academic studies.

In an attempt to determine the long range effects which the American experience may have had, each person was asked if the degree work and the experience of living in the United States affected his:

1) philosophy toward physical education;
2) philosophy toward sport;
3) career goals;
4) general outlook on life outside physical education.

Both the questionnaire and the taped interview provided for a "yes" or "no" response and space or time to add comments. In answer to the first question 81 responded "yes" and 24 responded "no". Examples of the general responses from both the questionnaire and interview were:

"In Great Britain, physical education gives a person a wide base and prepares you to teach. I went to America to learn the technical side of physical education."

"In my area of specialization, I could not get specialized training in Britain. In the United States, I was able to get academic training and the opportunity to put this training into practice."

"Reinforced my conviction that much of the American program is misdirected in its basic philosophy."

"I leaned towards the philosophy of physical education in the United States, and this led to problems. On returning to teach at a British college, I wanted to apply the methods and philosophy learned in the United States, forgetting that college work here is not a graduate program but is designed to train teachers."

Many felt that they would like to see certain aspects of the American system applied to Britain and Australia. One of these areas was the diversity of subjects covered in the United States. The most repeated area for transplant was the academic status of physical education and the academic approach to the subject. The sample generally felt that America could learn from Britain or Australia in the area of teacher training. Others felt, after having been exposed to physical education in

[1]Alfred Friendly. U.S. Laws Plug British Brain Drain. "**Washington Post**, Wednesday, December 6, 1967, p. 22.

[2]Leonard Reiffel. British Campaigns to Spur Return of Scientists Who Left for Jobs in the U.S." **Hartford Times**, January 3, 1968, p. 8.

[3]**The Brain Drain**, Her Majesty's Stationery Office, London, October, 1967, p. 4.

the United States, that they now know what the British or Australian philosophy would be in a few years.

The status of and the academic approach to physical education in America has had a significant influence on the sample. Ironically there are two areas where one would probably find great suspicion toward American degrees on the part of the British or Australian education authorities. This irony would indicate the presence of a possible lack of understanding on the part of the British or Australian authorities toward American programs in physical education. While the study focused on programs at most of the leading physical education schools in America, perhaps the image held by British and Australian physical educators has been affected by the extreme range and quality of programs that are available in the United States.

What one may call the British pragmatic approach to physical education is witnessed by concern for what is made of the research and concern for the quality of teacher training programs in America.

The problems encountered in attempting to transfer the American philosophies toward physical education to the British or Australian programs is further evidence of how difficult and complicated any cross cultural transplants can be. There is a need to examine whether or not they are possible and or desirable.

When asked if the American experience had affected their philosophy toward sport, 65 of the sample replied "yes" and 40 replied "no." The responses were mostly general comments which reflected positive or negative aspects of the American, Australian or British sport philosophy which they would like to see transplanted or removed. The general feeling as observed in the sample is probably best represented by the following comment:

> "If we introduced coaches and other aspects of the American professional, collegiate, and interscholastic sporting scene, our standards would improve, but I would not want this. It would take away individual and student responsibility for the running of sports, and this we view as a vital part of the British sporting philosophy."

As the British and American philosophies toward sport are in many respects at different ends of the spectrum, the general lack of acceptance of the American approach to sport by the majority of the sample is not surprising. The Australian sample favored the American approach to sport more than did the British sample.

The researcher noted that those who identified with the American "win at all costs" philosophy and sport for the top performers approach were predominantly ex-Olympic athletes or athletes who had been leading sportsmen in their own country.

In collegiate sport, the major concerns were lack of student control in sport organization coupled with the dominance of the administration and the coach.

The major philosophical differences were found in the lack of opportunity for mass participation in sports at the school or community level in America compared with Australia and Britain.

If the sporting club system of the two latter countries was introduced into the American structure at some level, the American philosophy toward sport would probably be more acceptable to the sample as a whole.

When asked if the American experience affected their career goals, 75 of the sample answered "yes" and 30 answered "no." The comments indicated that career goals were elevated by the American experience. For example:

> "The experience of a year's study in America widened my horizons and opened up for me a corresponding wider field."
>
> "The stimulus I received in America has motivated me to return and get a Ph.D.

Because the members of the sample came to America to study, their motivational level must have been fairly high from the beginning. The responses indicate that the American experience has given many members additional drive and awareness of the possibilities for advancement in the field of physical education. It has led many to realize their own capabilities, and has generally uplifted the career goals for most of the sample.

This desire to advance in their chosen field may end in frustration for many, if the current restrictions on opportunities in higher education in North America, Great Britain and Australia continue. Having pursued graduate study, many people will not be content to return to teaching physical education in the schools, and this may well be the only opportunity available within physical education.

While in America, many members of the sample experienced parts of the American culture which were outside of sport and physical education. These were experiences which may, in turn, have affected their life style to such an extent that they decided to remain in America. When asked if the American experience had affected their outlook on life 74 of the sample replied "yes" and 31 replied "no." The comments were varied and indicated a real impact had been made on the life style of those who had been in America. For example:

"Because it was an intense experience and being away from home gave me a far more broader outlook towards things. It broadened my outlook on life and made me realize that physical education and sport were not everything."

"Matured me and altered my outlook on life. It is impossible to divorce yourself from another culture as I had planned to do before going."

"Now very determined to do as much as I can in my life."

One of the most interesting conclusions reached from the study was that the experience had a positive effect on the outlook of the members of the sample. The majority were influenced by the American zest and drive and, in turn, became competitive which likewise, would result in an upward mobility trend in relation to career goals

No one mentioned experiencing any great "cultural shock" which is surprising when one considers the many differences in life style between Britain, and the United States. It is probable that one would observe some instances of "cultural shock" in reverse on returning to Britain. The differences in life style between the United States and Australia are not as diverse as between Britain and the United States.

An appreciation for America was found to be in evidence and many stereotype opinions were changed. It is necessary to take into consideration the fact that many of the sample were probably only exposed to certain sections of the country and, for the most part, were socially involved with an academic community.

One of the main purposes in conducting this study was to provide information for British and Australian physical educators who plan to undertake graduate study in the United States.

Each member of the sample was asked what advice he would give teachers or students in Britain or Australia who are contemplating graduate study in physical education in the United States.

The advice given fell into six different categories. These were: general advice, amount of work to expect, selecting the university, and course selection, financial support, acceptance of the degree in Britain and Australia, and what to expect upon returning to Britain or Australia. Some examples of the advice given were:

"Go to America with an open mind as life is very rich compared to Britain."

"Take what America offers that Australia does not offer."

"Research the institution beforehand."

"Be prepared to work, continual high pressure work, whereas in Australia low pressure for most of the year and then increased pressure for final exams."

"Try to secure as much financial aid as possible."

"Go for the experience, treat it as an experience and do not expect the world when you get back."

The need for literature on specialized programs and the expertise of individual faculty members at American universities appears to be in evidence. British and Australian students need access to this material before making a decision on which university to attend and which courses to take.

Improved communications between American and British or Australian authorities would facilitate the authorities' understanding of the American programs.

The results indicate that the sample as a whole has been influenced by their American experience in relation to physical education and sport and other aspects of life.

The need for improved communications between British, Australian and American physical education authorities is apparent. This could perhaps be achieved by exchange programs between faculty and an improved status of comparative studies in the three countries.

Unfortunately, college calendars are often outdated and the information pertaining to courses and faculty is not in enough detail to give the student the information he needs for university and course selection. Additional information could well be compiled which states each university's physical education department's specialized area of study, and the specialized interests and qualifications of its faculty. With this information available in Britain and Australia, both the student and the American university would benefit. In many instances, the British and Australian student contributes to, as well as benefits from, his studies.

Because of the cultural differences in such areas as physical education and sports, faculty members at the American institutions could take the time to learn of what is happening in their field in other countries. Both faculty and students at American universities could benefit from this exposure.

The time spent in America was considered by many to be a worthwhile experience in itself. The value of the experience as a worthy objective should then perhaps receive equal consideration with courses and faculty. In the long run, the experiences outside the university may well prove to be most profitable and professionally rewarding.

Graduate degrees from American universities will in many instances in the future have to be considered as additional qualifications for teaching physical education in schools as well as in colleges and universities. This is due to an oversupply of graduates and the decrease in positions in higher education. If this is the case, many students may only be interested in graduate programs with a professional orientation rather than the discipline approach to graduate study.

British and Australian students may well be advised to gain some practical experience in Britain and Australia and, at the same time, set up some economic security prior to studying in America. As a result of such experiences, they will probably be in a better position to decide the program of study which they may desire to follow at an American university.

Judging by the numbers that have remained up to this time, North American universities have proved a haven for British and Australian graduates. This may be misleading to future students who are not aware of the current financial situation resulting in restricted faculty hiring practices on the North American continent.

International Exchange–We Swap Students

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From the hills of Appalachia in Western Maryland to the London suburban area of Twickenham, Middlesex, Frostburg State College students journey each fall as participants in an exchange program with St. Mary's College, University of London.

At approximately the same time an equal number of St. Mary's College students leave their homes in England and Ireland to come to America to their adopted campus for one semester. This direct student-for-student swap is one approach, possibly a unique one at present, to the greatly expanding area of international study.

Worldwide the field of physical education and sport is being influenced by a variety of opportunities for exchange of knowledges and skills. The U.S. State Department sponsors sports team trips to a number of foreign countries. Some foundations and international fraternal groups offer student study grants abroad. There are both government and independent organization faculty research and lecture grants available.

Sports team exchanges may be arranged through direct institutional contacts with colleges, universities, and sports clubs. There are sports specialists provided by the U.S. State Department to many countries around the world to serve as consultants or clinicians. Peace Corps participants work in underdeveloped countries as school or community HPER specialists. The National Junior College Athletic Association regularly makes arrangements to send selected teams on tour of particular countries. People-to-People Sports Committee, Inc. assists with team exchange arrangements and provision of equipment to many communities around the world. A number of American colleges and universities make direct study arrangements with foreign institutions for individuals or groups.

I should like to tell you briefly about our Frostburg experience. For our exchange students, becoming totally immersed in a new and different collegiate program is not easy; but we have without exception agreed that it is exceedingly worthwhile. Indeed, and I emphasize this, it may well be the most valuable aspect of an undergraduate student's education.

We have completed our second year in a physical education major program student exchange with St. Mary's College, University of London. Our plan for this began during the 1969-70 academic year while Dr. John E. Kane of St. Mary's College was here as Visiting Professor of Physical Education. He taught in the undergraduate and graduate programs and conducted a special symposium on the Psychological Aspects of Physical Activity as a culminating project.

In the fall of 1970 I visited the St. Mary's campus for one week and observed classes as well as the testing of majors in skills by external examiners. Again in the spring of 1971 I returned to St. Mary's for eight weeks to observe and participate in the department programs. Thus Dr. Kane and I became well-acquainted with the programs of each other's institution. This first-hand knowledge seems imperative to the relaying of accurate information and the providing of necessary academic counseling and orientation to participating students.

Frostburg State third-year and St. Mary's second-year students are the primary candidates for exchange. To obtain the full academic values of the exchange program, we try to insure that their course work is acceptable to the home institution within a highly flexible framework. Students take two-thirds of their study in the major field, one course in education, and another in general studies. St. Mary's students elect one course in their second main subject as typically required at their college.

Selection procedures begin in early December for the following September exchange. Initial discussion with interested students includes program background, purposes, academic requirements, financial arrangements, insurance, travel, housing and meals. Frostburg students are selected on the basis of the following criteria: grade point average, versatility in physical education skills, and quality in personality and adaptability.

In January all applicants complete an information form and a written statement describing the fundamental values they anticipate in the exchange experience. Academic transcripts are then secured and the department faculty advisors review records of the applicants. Other faculty members evaluate the applications at a staff meeting before final selections are made in April.

Travel arrangements are then made for September departure through the Coun-

cil on International Educational Exchange in New York. The students obtain membership in the American Center for Students and Artists to keep round-trip travel costs nominal.

As this Major Student Exchange Program is actually a "swap", close contact is maintained with the Department at St. Mary's as we must have equal numbers to exchange, i.e. five-for-five or six-for-six. Thus far our exchanges have involved six. Each student pays all tuition, fees, room and board at his **home** institution. He then travels to his "adopted campus" and finds the room and meal reservations of his counterpart. The total cost to a Frostburg State College student for transportation and spending money during the semester is $400-$500.

Due to a small difference in term length, the Frostburg State College students enroll in a Special Problems Course at Frostburg State College and complete it on some comparative education or physical education topic during their time in England. These project topics are selected and approved by the Department Head in the spring before the exchange.

Inasmuch as the physical education exchange program at Frostburg State College requires all undergraduate participants to plan and develop a descriptive or comparative physical education project during their semester abroad, they are initially acquainted with the outline proposed by Earle Ziegler (6) in his NCPEAM paper of 1970. We hope that the experience of this project may stimulate some of these exchange students to continue their interest in their topic as they go on to graduate study.

Arrangements made for the English students who come to Frostburg State College include:

1) Sending appropriate forms to facilitate their obtaining visas. (Granted with institutional approval for exchange by U.S. Immigration and Naturalization Service)
2) Introductions to President, Dean of the College and Dean of Students.
3) Their extra money deposited at College Business Office.
4) Introduction to a local banker.
5) Regular conference time set weekly with program coordinator.
6) Assignment of a major department adviser.
7) Acquaintance with several faculty members outside physical education and local townspeople in order to provide opportunity to visit homes.
8) Choosing a faculty family to provide a home-away-from-home for each student.
9) Invitations to a special reception given by the department so that the students could meet with faculty from many other disciplines on the campus.
10) Attendance at physical education staff picnic before college opens—an opportunity to meet all the staff.

Similar plans are completed for Frostburg State College students at St. Mary's. Faculty members assist in planning travel on the continent. Extra travel opportunities need to be explained and planned before leaving the home campuses.

While at Frostburg State College, St. Mary's students have traveled to New York, Washington, D.C., Baltimore, Md., Niagara Falls, Florida, South Carolina. They have attended the State Association for Health, Physical Education and Recreation convention and visited AAHPER Headquarters in Washington, D.C.

While in England, the Frostburg State College students have traveled to West Germany, France, Belgium, Scotland and Ireland.

Arrangements made early will enable the students to plan around the school calendar and plan expenses. In some cases, faculty may make some contacts for them in order to realize full value of their trips.

At this point in our exchange program, faculty and student participants concur that this type experience enhances the personal development of students significantly from academic, social and emotional dimensions. Although it may be true that we share a common language, we understand each other much better after a direct experience. More opportunities like this seem imperative between colleges of all nations if we are to realize the international understanding and peace that we all seek.

Comments made by the Frostburg State student participants in 1971 included:

"One of the most pleasing and informative experiences of my life."

"It's hard to put in a few words 'being a part of an educational structure not like that of the United States'." "Living in a country under a different political environment."

"Having the opportunity to be a part of the past."

"Talking and socializing with English students, I learned more about their education, history and society in three months than the rest of my life."

"I learned different teaching and learning techniques from the classes."

"Learned greatly from a training weekend with the Olympic team."

"The best features of this experience were the people I met, the travel experience, and the over-all education related to the people and travel experiences."

"Living within another culture and getting to meet people of different customs and traditions."

"Experiencing a different type educational system—no exams and little or no pressure—no constant reminders of work due."

Another suggests best features being that of "meeting people and sharing experiences both socially and educationally to widen one's total educational base"

"Being able to live with a family and seeing England from a point of view other than what a mere tourist would see."

"Being able to participate in new activities and having a chance to compare programs with hopes of using this knowledge to improve programs that I might plan as a teacher."

Comments made by the St. Mary's students after the 1972 experience included:

"Being part of the exchange has allowed me to experience the differences between the two countries—culture, history and beauty." "I have seen physical education in another country as well as the glamour of America itself—bright lights and its vastness."

"More emphasis is placed on individual skill development in major skills courses at Frostburg, whereas at St. Mary's the stress is on the methods of teaching the skill. Furthermore, a wider range of skills are provided the major student at Frostburg, and this I prefer."

"Studies in education and my second main subject—history—have not been as detailed or difficult as expected."

"In the future, I would suggest that education and second-subject course work be outlined by St. Mary's lecturers—then developed under lecturers at Frostburg."

"Intramural sports participation proved an excellent and enjoyable means of meeting many people."

"Varsity sports for women are engaged in with a much more competitive and aggressive attitude at Frostburg State College than at St. Mary's in England. A compulsory pre-season fitness program for women's basketball and practice sessions five days each week are different from home!"

"One of the best features of my experience has been extra travel during breaks or week-ends; e.g. Washington, D.C., Williamsburg, New York City, Baltimore, Florida's Disneyworld, Army-Navy football game and several college campuses." "It has been a thrill to visit interesting places and it has helped me **see how other people live.**"

"As a result of my multiple experiences here, my views of several aspects of America have changed from ones based solely upon the opinions of broadcasts via the mass media."

"A dominant and memorable aspect of my stay at Frostburg State College is the wonderful friends that I have made."

"Eight o'clock classes came as quite a shock to us."

"I prefer our 'continual assessment' procedure for evaluating student performance rather than basing a mark on one exam given at the end of a unit or term."

"I very much enjoyed American football and will go home a fan of the Redskins!"

"Observing classes in area secondary schools and participating in some special elementary school programs has enhanced my understanding of the American public school system."

I feel that the full value of the experience is not realized in terms of the (1) participating student at the time, (2) his follow-up experiences as they may bear upon re-designing these programs, or (3) his ultimate contribution to the profession through later writing or studying in international physical education or comparative physical education.

Although we have been aware of the need to provide substantial orientation and advisement, we do not feel that we have fully provided the constant counseling so necessary. R. B. Frost (2) in 1971 makes this point very well as he refers to counseling as an effective antidote aginst culture shock. What is needed, he says, is "an understanding, sympathetic, and competent person who can and will assist them in the early weeks of their adjustment."

It is not the intent of our program to be limited to only physical education students in exchange between our colleges. After completion of the first three years of the program, a comprehensive evaluation will be made. Based upon this review, we expect other departments to become involved. Needless to say, we have had inquiry from several other departments and we all agree that this can only serve to fully enhance a total institutional exchange program.

For maximum benefits to be derived from international student and faculty exchange programs. I recommend the following steps be carefully considered in the plan:

1) Visitation of each exchanging institution by the involved faculty members for the purpose of becoming well acquainted with the programs, facilities, and faculty.
2) Development of a focus, a worthy project which both institutions agree could enhance the growth of both programs (as Frostburg State and St. Mary's study of secondary school physical education curricula).
3) Careful interpretation of the program to prospective exchange students, some foreign study opportunities do not involve the responsibilities of being a part of a carefully designed program.
4) Receiving applications from interested students.
5) Selection of exchange student participants.
6) Thorough orientation of selected students, including giving advance preparation for their independent study problem and developing extra travel plans where appropriate.
7) Provide additional orientation for guest students, including social, educational, professional and travel opportunities.
8) Schedule regular group and individual meetings and/or counseling sessions with visiting students.
9) Ask for immediate comprehensive, evaluation of the program from all the participants at the end of the term of study.
10 Get follow-up evaluation from all students during their senior year and at specified intervals after graduation.

As a department we are vitally interested in various international physical education opportunities and have extended our program to include the following during the past five years:

1) Guest lecturers from Europe during the regular academic year.
2) Visiting professor from England for a full academic year.
3) Attending a professional conference in Germany.
4) Special seminars during summer school on topics of "Movement Education" and "Physical Education Curriculum" conducted by faculty from Germany and England.
5) Our faculty as guest lecturers at St. Mary's College.
6) Student exchange of physical education majors between Frostburg State College and St. Mary's College.

7) Direct faculty swap with St. Mary's College, position for position, with exchanged accommodations.

I appreciate the thoughts of Donald Vinge (5) in his writing about "pooling resources" a few years ago. Whereas he discussed the sharing of professional information between nations as mutually beneficial, I feel that student exchange is a "pooling of resources" at the "grass roots" level. Provided a substantial experience at this level of professional development, exchange students may very possibly take with them some fundamental ideas which could make a great impact on physical education programs in their homeland.

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Three Dimensions Of The 1972 Summer Olympics, An Examination

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INTRODUCTION

We shall attempt a limited examination and report of three important factors affecting the Munich Olympics, namely—Munich as a site; the cultural events accompanying the Olympics; and, the application of technological advances to the Games.

MUNICH AS A SITE

There is no way to compare Munich and Mexico as sites for an Olympics in truly objective fashion but we shall make some observations. The facilities of Munich were in large measure more centralized, transportation was easier, and faster than in Mexico. Technical developments had moved forward at a rapid pace

and the games were back near sea level; and, altitude, which had played such a big role in Mexico City (1) was not a disturbing factor. In Munich we had moved from a developing country of approximately 50 million to one of the most highly industrialized countries of the world of somewhat less population.

Munich had been 80 percent destroyed in War II, but an artificial hill made of city rubble became a feature near the Olympic site. Of interest to historians is that the Munich site was that of a now too small airfield on which Englishman Chamberlain had landed when he visited Hitler in the 1930's.

It was the expressed hope of the Germans that: Munich was to open a door into an enhanced Olympic future; to rouse joyous emotions; and, the main motif of the Olympic design for Munich was to express the ease and elegance of play. (2)

Munich, a city of one million was one-tenth the size of Tokyo, one-fifth the size of Mexico City and found it necessary to plan for more visitors than it had people. As a leading industrial site in a country with a manpower shortage each eighth resident in Munich was said to be a foreigner in 1972.

The Germans knew that great organizational things were expected from an organized people; it also sought to eradicate the memory of the 1936 "Natzi" olympics and to make this a "peace Olympics." It is the opinion of authorities such as Jokl (3) and others that they succeeded in the first desire to the point there will never be a duplicate of the 1972 Olympics in terms of planning and organization. The measure of success in the hope for a peaceful Olympics was sadly tarnished but there are few who do not think that the Germans deserved a greater measure of success than the turn of events dictated and the media evaluated.

CULTURAL EVENTS ACCOMPANYING THE OLYMPICS

Cultural, other than sports events which had been strongly revived by the Mexicans in 1968 were very much a part of the Olympics in Munich. For visitors it was much a question of what you chose from a wide array of events and features.

Munich hoped to have cultural events for every taste, every age and they did. There is simply no way to convey the conviviality engendered at the Hofbrauhaus and other places of like nature. And, if one could find the time there were the myriad attractions of Garmish-Partenkirchen or of nearby Salzburg within a short train ride.

Twenty-three museums along with private art galleries were available and many had special features.

When the Games opened on August 26, both the host country, West Germany and the 1968 hosts were present. Both groups appeared again that night to begin an International Folk Festival. Later groups from France, Martinique, Portugal, Italy, Ghana, Kenya, Romania, Korea, Chile, Japan and Poland, each appeared good, (4,5) The Folk Festival, as one of numerous cultural events, was for many a high point of the Olympics in Munich and continued an emphasis which until Munich the Mexicans had done best.

Participation in the festival presented opportunities for extending information on one's culture and one's country. As an example—the Koreans' only English and Japanese trade, culture and travel magazine (6) was available at the performances. It was beautifully done and included a wide range of topics such as the national flag, sports Korea, why Korea, books about Korea, the new national museum, et cetera.

After a beautifully costumed, choreographed and executed performance by the Korean group, it took time to appreciate the Chilean performance which followed. An effort to show their diffuse cultural background was achieved but only after a passively receptive audience was informed that the group was there under the sponsorship of their great communist Presidente Allende. To the Western oriented visitor, this seemed sheer propaganda which surely did not have the effect intended.

One must conclude however, that in spite of occasional judgments, the other than sports aspects of the Olympics are tremendously important to better understanding.

Munich's state theaters (7) offered first performances and world famous theater companies were invited to participate in the cultural programs of the Olympics. Seventeen private theaters were also active.

Concerts by leading world symphonies vied with a jazz festival and another event "Vita Bavaria" (5, op. cit.) depicting important aspects of Bavarian life, was presented in seven parts on seven nights by amateur groups.

Participants in the Scientific Congress were feted at a "Bavarian Night" featuring Bavarian cuisine, beer, music and dancing and were special guests at the Bayerische Staatsoper National Theater, München, for an opera and a dance performance.(8)

There was an exhibition "Technology in the Olympics" and of "One Hundred Years of German Excavation at Olympia" under sponsorship of the Organizing Committee in the Deutches Museum. In the latter exhibition were finds through excavations beginning in 1875 which included sporting equipment of the ancient Olympics, for example, a bronze discus used at the 255th ancient Olympiad held in 241 B.C. (5, op. cit.)

Among other cultural offerings were an exhibit of coins and medals associated with the Olympics and of philately. A little known fact was brought out that official sponsorship of the 1896 Olympics in Greece cost 186,000 drachmas but proceeds from a special set of stamps issued on that occasion brought in nearly three times this amount of revenue. (5 Ibid.)

SCIENTIFIC CONGRESS

The problems of organizing Olympics sports competitions are tremendous, but are only a part of the total scene of an Olympics. There are delays and permission for sponsorship of the Scientific Congress which preceded the Olympics was given just four months before the deadline. Authorities reportedly looked skeptically on the Congress. With interdisciplinary aims representatives from anthropology, social psychology, psychology, philosophy, theology, sociology, medicine, physical education were included.

The organizing committee sought to have the Congress without political orientation, in a relaxed atmosphere, et cetera, et cetera. Problems faced included how to organize the Congress outside current organizations and how to so select speakers as to avoid political accusations. Four hundred short papers were presented, "not all were acceptable but had to be accepted." The committee is now faced with twelve hundred pages of script which must be screened and a decision made "apolitically" on what to publish. (9)

TECHNOLOGICAL DEVELOPMENTS

John Richard Betts in his "Technological Revolution and the Rise of Sport, 1855-1900" as reported in **Sport in the Socio-Cultural Process** (10) traced the influence of such things as railroads, the telegram, the Atlantic cable, printing processes, newspapers, the sewing machine and the electric light concluding that while the influence was great, it could be either good or bad depending upon the use to which they were put.

The Germans, recognizing that athletes do not break records by muscle and nerve alone and that engineering lends a hand, sought to preserve the human aspects of sport as affected by technology. Some advanced technical developments employed in the 1972 Summer Olympics will be outlined here.

Presently used timing devices have eliminated human reaction time and error as a factor and have taken two-tenths of a second off of the elapsed time of events so timed. (3, op. cit.) The Germans felt they imporved upon the synthetic "Tartan" track employed in Mexico. Technology also helps judges make decisions and allows the press and "TV" journalists to give complete and accurate reports around the world to a degree hitherto impossible. Since there was no longer need for a crowd of timekeepers blocking the view, spectators have also benefited.

COMPUTER BANK

A computer bank or lexicon capable of storing 500 million items in French,

English and German from 4 million punch cards was established and information collection begun months in advance of the Olympics. (11)

Information on each Olympics, beginning in 1896, was fed into the bank for immediate retrieval. In addition to information on participants and records there was also available information on the rules of the events and the organization and re-organization of participants as the competition developed. Several times a day current results were fed into another pool. Three other collections were designed to record information on modern coaching methods, on the number of tickets still available; and on the cultural events. Altogether 72 information centers were set up in the press areas at Munich's main railway station and competition sites. The information centers were equipped with information panels and in most cases with data printers which, at the press of a button, write out what is seen on the screen.

This was not a technical toy, rather it made available in seconds to those who needed it, information which could not possibly have been otherwise supplied. Personal information on the 12,000 participants from 124 countries, their coaches, records and other personnel was available but only selectively called for. Such information would have filled a volume six feet thick and weighed 200 pounds. Many thousands of copies would have been needed for daily use if this method of supplying information had to be relied on.

As all know, only such information as is fed into the computer bank can be retrieved. The writer sought information on the U.S.A. 1948 Olympic basketball team, (half were from Kentucky), on its coaches, and on Kenny Davis, a Kentucky college 1972 Olympian. The names, ages, height and weight of the 1948 team was immediately printed out, but unfortunately for some reason the coaches names, including famous Adolph Rupp, and the Phillips Oiler Coach, were not available. And, full information on Davis had not been supplied to the bank, hence was unavailable.

RESULTS TELEPRINTERS

A total of 48 teleprinters served as dialog stations. Located at the various competition sites, they fed data to the computers where in seconds the incoming information was compared to stored information and supplemented as needed. Errors were ruled out by the use of code numbers. Results, for example, in the womens' 100 meter swim could not be confused with results in the same event for men. And, significantly, an 8.9 seconds time for the 100 meter run would have been immediately protested—by the computer. (11, op. cit.)

TELEVISION CONTROL CENTER

Some sixty television companies (Ibid) representing ninety-eight countries televised the Olympics. But since not all countries were interested in the same events, choices could be made—on one screen the U.S.A. might wish a swimming telecast; the Russians, weight-lifting, as examples.

Pictures from 130 television cameras and reports from 380 commentators in 45 languages were fed to the central switch room to make up thirteen simultaneous color transmissions. Flash backs were available. Events unsuitable for live "TV" as for example, sailing and shooting, were filmed on 16mm color film.

A journalist covering track could also watch what a fellow countryman was doing in swimming or another event at another site. Each "TV" reporter's place, at one of each two press reporter's places, and the main and sub-press centers,were equipped with "TV" sets. So by pressing a button the operator could select from 12 programs or from the international program just broadcast or from results of the two preceding events.

"Eighty-four video tape units recorded every jump, race and swimming stroke." So was described by Siemens (Ibid) the recording of the Olympic events for immediate use as forming the first complete permanent pictoral archive of an Olympics.

REAL TIME COMPETITION RESULTS

A German company developed an actual or so called "real time" results system

able to record distances and times in events, eliminating the "anticipation" of time by timers. In track events, for example, time was accurately measured to 0.001 second. In the swimming events a pressure of one-twentieth pound, or less than an ounce against the finish wall stopped the clock.

Tim McKee, of the United States, lost the 400 meter swim event by just 0.002 seconds. This timing is made more real through estimating a second by counting—one thousand one, one thousand two, one thousand three and then dividing the time elapsed by 500, thus representing 0.002 and the difference between a gold and a silver medal for McKee.

Refracting lenses, triangulation and computers were used in measuring distance events such as the shot put. The field judge placed the lens at the spot the shot, for example, landed and from this point on the exact measurement was computed, recorded, compared, and made a matter of record in seconds. Three hundred pound George Wood lost the shot by one centimeter or a distance of approximately the width of the index finger, and there was no question of the accuracy of the measurement. The champion set a new Olympic record.

DIAGNOSTIC CENTER

Proper medical attention and supervision has long been a part of the concern of Olympic authourities and of participants. At the Munich games an elaborate, modern diagnostic center occupied five floors of the Olympic Village and was supplemented by radiotelephone equipped mini buses for emergency use. Diagnostic equipment was available to assist the athlete "in achieving maximum form without overexertion and in avoiding reaching peak form too early along with other highly sophisticated systems used in physical diagnosis.

OTHER

Detailed written information could be sent by pressure tubes between important points within the Olympics Site. Vehicles of the Organizing Committee for sport, for technology, the press traffic, ambulance and steward services were continually on the move and could be reached at any time over the radio telephone network.

In Munich, newly designed mercury-halide lamps assumed the role of the sun in the evening or in bad weather so well that cameramen were reported (10) to be able to continue their work without adjustments for the transmission from daylight to artificial light. This lighting was of particular significance to the safety of the riders in the cycling arena. More than forty underwater lights made it possible to photograph every movement in the swim events.

Permanent radio exchanges were set up within a 30 mile radius of Munich and were connected with the 900 mobile and 1800 hand radio telephones for short distance communication.

The telephone extension network utilized 4000 lines, 20 switchboards and 50 operators including an information service. Callers with complicated questions were connected with the so-called Olympic Information Service manned by girls "who knew most everything" and who had a direct line with the information bank previously described and popularly known as "GOLYM". Through use of processes described here and of current printing, a complete Munich report was available before the closing ceremony. Official reports will be available within six months and were begun 18 months before the Games began.

Support for the games themselves involved tremendous outlays of funds. Electrical supply required in support of the technical developments outlined were also substantial. Primary financial support came from the German Federal Government, the Free State of Bavaria, and the City of Munich. Each was represented on the Olympic Organizing Committee. Supplementary support came from authorized gifts, Olympic coin and stamp sales; and, the football (soccer) pool and lotto organizations organized an Olympic Lottery for 1972.

Electric requirements for the Olympics was thirty-four million watts or equivalent to those for a city of 150,000 inhabitants. There was an original and a back-up

supply. And, the most important installations—the competition computer centers and the telecommunications center could draw their supply from diesel generating plants. (Siemens, op cit 5)

CONCLUSION

On examination of available information and on the basis of observation at the site we suggest that: (1) Munich was eminently well qualified to host the Olympics and with full support of the West German Government did so in a most organized and exciting way; (2) that the feeling of the 1972 Summer Games was much superior to that too commonly reported by the American media and that the Germans deserved much better than they received from this area; (3) that in terms of Olympic patterns and standards there was something to interest every taste and every age in the cultural programs; and, (4) that technical developments were used to an unprecedented degree and met the objective that "the human aspects" were preserved as affected by technology.

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Reflections on the 1972 Olympic Games

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INTRODUCTORY OBSERVATIONS

Technical aspects of the Munich Olympic Games nearly reached the zenith of perfection when compared to previous games. The computerized timing and scoring arrangements were so highly sophisticated that the absence of the huge number of pickers and timers, so prominent in other games, were scarcely missed at Munich.

It was in the human aspects of officiating, however, that a major deficiency appeared to still exist. Judging of such events as boxing, diving, gymnastics, and the decisions made during the final seconds of the basketball championship game created a major problem at the Munich Olympics, second only to the tragic events relating to the terrorist's murders of Israli athletes.

The above observations are based on attendance at four Olympic Games (Helsinki, Melbourne, Mexico City, and Munich). Participation in four Pre-Olympic Scientific Congresses was an added incentive for being at the Games, which are without a doubt the greatest spectacle in sport.

STUDY OF VIEWS OF THE GAMES

Graduate students in the writer's current International-Comparative Physical Education and Sport class at the University of Illinois conducted a study of views expressed relative to the Olympic Games in general and to the United States' participation in the games. Information was gleaned from a wide variety of sources including periodicals, newspaper articles, editorials and speeches of both the general public and from those with considerable expertise on the subject. Selections were made of varied views relative to the problems of the Olympic Games from those of the incoming President of the International Olympic Committee, politicians, members of the media, participants, and even from a Lou Harris Poll of the general public. Opinions included in this paper were chosen from those offering constructive suggestions for improvement of the games—a stress on positive influences and how the games can continue on a higher note:

Lord Killanin, the new President of the International Olympic Committee, is quoted in the Chicago Sun-Times as saying, "The games should be reformed —we have to remove some of the pressures of the games."[1]

Senator Mansfield, Senate Democratic leader, thinks that the Olympic Games should be abolished. He suggests that the games have become "too political, too radical, too anarchic, too murderous."[2]

Editor **Lloyd Shearer** of the Chicago Sun-Times questions whether the Olympic Games have become too competitive, too commercial, too nationalistic?[3]

Coach **Nell Jackson**, Women's Olympic track and field coach, claims that much of the nationalism and politics which plagued this year's Olympic Games was either out-of-proportion reporting by the news media or the result of outside influences not directly related to the Olympics. "From athlete to athlete, from coach to coach, you're not aware of the political ramifications of the Games," she said.[4]

Comments from athletes varied from those of **Kevin Joyce**, U.S. basketball star, "They've been trying to rook the Americans in the Olympics, and

[1]Editorial. Chicago Sun-Times. October 22, 1972
[2]Sportscripts. Chicago Daily News. September 14, 1972, p 21
[3]Chicago Sun-Times. **op cit**.
[4]Feminine Viewpoint. Champaign News-Gazette. September 19, 1972, p 6

they've finally done it," after the final basketball game,[5] to those of Ben Peterson quoted below.

Ben Peterson, light-heavyweight Gold Medal winner, commenting on the future of the Olympics, "Overall there were a few things that marred it, but they were probably played up too much. There were a few places where there was human error, but overall, it wasn't a big problem. There's always going to be something bad in the world, and we've got to take what's there. A lot of good things come out of it. I think the feeling among the athletes is what we'll remember most about the Olympics."[6]

The **Louis Harris Poll** revealed that by a decisive 87-6 per cent margin, American sports fans felt that "despite all the problems at the games this year, the Olympics should be held in 1976." Seven in 10 Americans who watched the 1972 Olympics felt that the games were rewarding and that they belong primarily to the competing athletes, while the management ought to stay invisible in the background.[7]

A very pertinent summary statement, for positive improvement of the games as a whole, may be found in an Editorial statement in the November-December, 1972, Journal of the American Association for Health, Physical Education, and Recreation:

> The problems of organizing and administering sports events on the scale of the present-day Olympics call for people of considerable managerial expertise—not figureheads and politicians. The public is aware of the political undertones which inevitably surround Olympic sports competition; there is also great concern about the quality of officiating; there are questions not only of corruption and unethical practices but of competence and experience. An evaluation system for officials may be the way to avoid the cries of "incompetent and biased" refereeing in future worldwide competition.[8]

THE UNITED STATES IN OLYMPIC COMPETITION

One of the most perceptive articles written on "The Future of the Olympics" was offered by Allan J. Ryan, M.D., of the University of Wisconsin. He clearly discusses the true objectives of our participation in the Olympics as:

> **Some see** it as a demonstration of peoples of the world on behalf of fellowship, goodwill, and peace—an expectation which was certainly shattered by the events of the Munich Games. **Others view** it as an affirmation of the importance of amateur sport and a stimulus to its development on an international scale. **Still others** see it as a showcase in which the United States can demonstrate its superiority to other nations of the world—and a struggle with the USSR for international prestige in the political arena. **Finally** there are those who think of the games solely as a forum in which athletically talented individuals struggle to win the prize of world supremacy in their sports for the purposes of self-realization, self-gratification, or ultimate financial gain.[9]

For a number of years there has been considerable controversy over the control of sports in the United States, primarily between the NCAA representing colleges and universities in opposition to the Amateur Athletic Union (AAU) and the United States Olympic Committee. Since the Munich Games, the National Collegiate Athletic Association (NCAA) has pulled out of the U.S. Olympic Committee—"the recent Mess in Munich provided the impetus to the NCAA to take this positive step" according to Cooper Rollow, Sports Editor of the Chicago Tribune.[10] A number of the NCAA affiliates such as the Big Ten Conference, The Pacific Eight and others are following the lead of the parent organization in withdrawing from the U.S. Olympic Committee.

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[5]Chicago Daily News, September 11, 1972, p. 14
[6]Chicago Sun-Times, December 3, 1972, p. 10
[7]Chicago Tribune, October 5, 1972
[8]Editorial on "The Future of the Olympics," **Journal of the American Association for Health, Physical Education and Recreation**, November-December, 1972, p. 20
[9]**Ibid**., p. 19
[10]Editorial, Chicago Tribune, Sunday, October 29, 1972, p. 4

The National Association of College Directors of Athletics (NACDA), with Cecil Coleman, University of Illinois Athletic Director and NACDA President, recently requested President Nixon to resolve a growing controversy over the United States' role in international competition. He cited the need for a ' new superstructure to coordinate all international competition, including our Olympic problem. Coleman said his group deemed it mandatory that all bodies involved in amateur sports "sit down together and discuss mutual areas of concern—we firmly believe that only through a White House Conference on Amateur Athletics, where there is free and open dialogue between the heads of all sports bodies having international competition, can the differences which have existed for so many years be settled."[11]

Many informed persons feel that a considerable change in the preparation of international athletes is a primary concern to be resolved before the Montreal Olympics. Professor Guenther Lueschen, Sport Sociologist at the University of Illinois and formerly from Germany strongly believes that other nations have borrowed from us and are now surpassing our training efforts by setting up sophisticated "coaching schools" patterned after those found in the USSR.

SUMMARY

A consensus of informed opinion identifies the major problems to be resolved for improvement of future Olympic Games as Politics, Ever Increasing Size (too many athletes and too much expense), and the critical area of Judging and Officiating (where the Human element is still involved). Several perceptive suggestions have been offered to help reform the Games:

1) Diminish the Nationalistic Fervor by eliminating the playing of the National Anthems and hoisting of flags.
2) Revise the Opening Ceremony to feature the athlete rather than the Nation as is presently the case.
3) Awards to be presented at a final ceremony with only the Olympic Flag featured.
4) Eliminate scoring systems and place the emphasis on the individual athlete.
5) Discourage the over-emphasized sports coverage which provides a platform for political protests such as the Israli murders.
6) Cut down the number of athletes by having only two entries from each country or have eliminations before the games.
7) Some have suggested that the winners of the Pan American, the Commonwealth, the European, the African, the Asian and other Games become the competitors in the Olympic Games.
8) Expenses could be cut down by having more than one city in a country be the site of a part of the competition. For instance, the water sports could be held in one city, etc.
9) Many of the non-competitors (managers) could be eliminated as well as many of the officials who have figure-head positions.
10) Careful selection and training of officials in diving, boxing, gymnastics, and other such events is a critical area of concern.

[11] Editorial Chicago Sun-Times, November 9, 1972 p 116

Reflections on the 1972 Olympic Games

WILLIAM D. LOOCKERMAN
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There are many avenues of approach I could take in attempting to describe my reflections of the 1972 Olympic Summer Games. I have chosen to make some general impressions obtained at the games and since upon returning to the U.S.

Our news media often asked the question "Will there be, or more to the point, "Should there be another Olympics?" Many issues have been brought to light. To name just a few: The political implications coupled with extreme nationalism, the racism, the judging, the definition of amateurism, the commercialism, and the terrorist massacre. When I visited the Olympic Village, a good friend of mine with the Polish Team described the village as a concrete jungle. No matter how the press or the T.V. personnel tried to glamorize these slabs of concrete, the village, in my opinion, was monsterous. One only had to travel to the youth village and see the accomodations of barrack type huts to be admonished by its sterility. To stand in the Olympic Stadium built for 80,000 with only 47,000 seats was enough to dampen the spirits of the most stouthearted.

Upon my return to the United States, I read many accounts of the games and several sources offered their recommendations for making the 1976 Summer Olympics better than these past games. Their recommendations have included, but were not limited to: (1) making the competition open to all athletes (both amateur and professional alike); (2) decrease the nationalism by not playing the national anthems during the awards presentations; (3) allow athletes from all countries to participate, and for the International Olympic Committee not to be intimidated by countries who threat to boycott the games; (4) reform the judging and have the judges be selected by the international governing body of the sport rather than be appointed by political affiliation.

In fact, it appeared that almost every comment, with the exception of the acclaim heaped on Mark Spitz, was derogatory towards these games. On innumerable occasions I have been asked, "Were the games really that bad"? My immediate answer to this question is an emphatic NO! They were great. Certainly there were many sour notes that accompanied these XX Olympiad Games but there were many magnificent events that made this possibly the greatest Olympics ever. Twelve thousand athletes from 124 countries competed in 195 events setting new world records and demonstrating a high degree of excellence. Friendships were formed between athletes and spectators from all nations. The people of Western Germany in general and Bavaria in particular were tremendous hosts. Their warmth and hospitality will probably not be forgotten by the majority of us who attended these games.

The Olympic Games have expanded greatly since their introduction to the modern world by Pierre de Coubertin in 1896 and apparently have lost much of the idealistic virtues upon which they were founded. However, today athletes from every corner of the world and from all classes of society gather together to display their excellence in that which we call sport. The key word here is the athlete, rather than the nation or race from which he comes. This should be the important thing.

Possibly there are too many athletes and events. With contests running from early morning to late at night and the lack of interest by many spectators in the preliminaries it may be better to have more discriminating selection of athletes and do away with the numerous heats. It has been suggested by some reformers that only two rather than the present three athletes for any one event be allowed to compete from any country. This would cut down on the number of participants; however, it certainly would not ensure that the best athletes had an opportunity to

compete. Perhaps the international governing board for each sport could hold open qualification rounds prior to the games and those who participated in the Olympics would truly represent the best rather than a quota from each country. In addition, it may be possible to give athletes more than one chance to make the team. Often, at least in the U.S., some of the greatest athletes fail to make the team due to one bad day in the final selections for their nations Olympic team.

I personally feel that we must recapture some of the ideals that the Olympic games were founded upon. The most important is for the athlete to have an opportunity to participate and do his best. This international language of sport has an opportunity to unite, no matter what the athlete's race, color, creed or government. However, this will never be accomplished if the world continues to allow the Olympics to be subverted by politics and nationalism.

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LUCKE, EDWARD J., Ed.D. (1973)
Morehead State University
Morehead, Kentucky
LUEFT, ROBERT J., P.E.D. (1965)
Wayne State University
Detroit, Michigan
LUNDER, CHARLES A., M.Ed. (1965)
St. Olaf College
Northfield, Minnesota
LYNDE, ROBERT E., Ed.D. (1971)
Sonoma State College
Rohnert Park, California
LYON, JOHN S., M.A. (1969)
Stevens Tech
Hoboken, New Jersey

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Illinois State University
Normal, Illinois
MC CALL, ROBERT A., Ph.D. (1954)
Ball State University
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MC CLELLAN, LINCOLN H., Ed.D. (1962)
Utah State University
Logan, Utah
*MC COLLUM, ROBERT H., Ed.D. (1973)
University of Pennsylvania
Philadelphia, Pennsylvania
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California State University
Long Beach, California
MC CRAW, LYNN W., Ed.D. (1954)
University of Texas
Austin, Texas
MC CRISTAL, KING J., Ed.D. (1948)
University of Illinois
Champaign, Illinois
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Towson State College
Baltimore, Maryland
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Lakehead University
Thunderbay, Ontario
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MC PHERSON, WALTER J M A (1962)
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University of New Haven
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MACHOLTZ, JAMES D P E D (1970)
Anderson College
Anderson, Indiana
(2) MACKENZIE, MARLIN M Ed D (1952)
Columbia University Teacher s College
New York, New York
MACKEY, RICHARD T Ed D (1950)
Miami University
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Brooklyn College
Brooklyn, New York
MAETOZO JR , MATTHEW G P E D (1963)
Lock Haven State College
Lock Haven, Pennsylvania
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Pamona College
Claremont, California
*MALUKE, ANDREW W , M A (1967)
University of Akron
Adron, Ohio
MANCINI, VICTOR H M S (1970)
Springfield College
Springfield, Massachusetts
*MAND, CHARLES L Ph D (1970)
Ohio State University
Columbus, Ohio
MAPES, DONALD F Ph D (1962)
Western Illinois University
Macomb, Illinois
MARGOLIS, JOSEPH A , M A (1966)
Brooklyn College
Brooklyn, New York
MARLEY, WILLIAM P Ph D (1965)
North Carolina State University
Raleigh, North Carolina
MARSHALL, STANLEY J , D P E (1961)
South Dakota State University
Brookings, South Dakota
MARSHALL, WILLIAM A , Ph D (1972)
Franklin and Marshall College
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University of Victoria
Victoria, B C , Canada
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University of North Dakota
Grand Forks, North Dakota
MARTIN, PETER, M A (1968)
Bergen Community College
Paramus, New Jersey
MARTIN, STEPHEN L , Ph D (1967)
University of Hawaii
Honolulu, Hawaii
MARTIN, THOMAS P., Ph D (1972)
State University of New York
Brockport, New York
MARTINELLI, FRED M , Ph D (1966)
Ashland College
Ashland, Ohio
MARTINEZ, RAYMOND H , Ph D (1960)
East Carolina University
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Eastern Washington State College
Cheney, Washington
MATHENEY, JAMES R , B S (1971)
Ithaca College
Ithaca, New York
MAXEY, JACK A., Ed D (1967)
East Tennessee State University
Johnson City, Tennessee
MEINHARDT, THOMAS O , Ph D (1971)
Towson State College
Towson, Maryland
MELNICK, MERRILL J , Ph D (1967)
New York State College
Brockport, New York
MELOGRANO, VINCENT Ed D (1972)
Cleveland State University
Cleveland, Ohio
MENDELL, EDWARD R M A (1972)
Cumberland College
Williamsburg, Kentucky
MENDELSOHN, ELLIS J , P E D (1956)
University of Louisville
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Edmonton, Alberta, Canada
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Southern Oregon College
Ashland, Oregon
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West Virginia University
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Windsor, Ontario, Canada
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MEYER, ANTHONY J, M A (1968)
College of Charleston
Charleston, South Carolina
MEYER, FRANK A, Ed D (1966)
Catawba College
Salisbury, North Carolina
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Flushing, New York
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Ball State University
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Marion College
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Brigham Young University
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Bemidji State College
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University of New Mexico
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MOORE, ASBURY C, Ph D (1961)
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MOORE, GEORGE C., Ph D (1955)
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MOORE, JR., ROBERT J, Ph D (1967)
San Diego State University
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MOORE, ROY B., Ph D. (1957)
Mankato State College
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North Carolina Ag and Tech State University
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Madison, Wisconsin
MORRIS, HAROLD H, P E D. (1963)
Northern Illinois University
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Lee College
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California State Polytechnic University
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Akron, Ohio
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NELSON, RICHARD C., Ph D (1972)
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Springfield College
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NICOLAU, ANTHERO, P E D (1965)
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Harford Community College
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Biola College
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NORRED, ROBERT G, Ed D (1965)
Charleston County Schools
Charleston, South Carolina
NOWAK, THADDEUS S, D P E (1956)
Benedictine College
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OFFENBURGER, DAN, M Ed (1970)
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Vancouver City College
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California University
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East Stroudsburg State College
East Stroudsburg, Pennsylvania
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Texas Wesleyan College
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Denver, Colorado
O'NEAL, JR., OBIE W., M S (1972)
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State University College
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Bradley University
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California State University
Hayward, California
OSTERHOUDT, ROBERT G., Ph D (1968)
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OTT, CHARLES H., M S (1965)
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Jackson State College
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Fresno State College
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University of California
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PARGMAN, DAVID, Ph.D. (1971)
Boston University
Boston, Massachusetts

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Ohio State University
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Springfield College
Springfield, Massachusetts

PARSONS, DAVID R., Ed.D. (1968)
Wollongong Teachers College
Wollongong, Australia

PARSONS, TERRY W., Ph.D. (1968)
Bowling Green State University
Bowling Green, Ohio

PARTIN, W. CLYDE, Ed.D. (1957)
Emory University
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Buffalo State College
Buffalo, New York

PATE, DONALD W., Ph.D. (1971)
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Wayne, Nebraska

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University of Western Ontario
London, Ontario, Canada

PATTON, ROBERT W., Ph.D. (1971)
Northwestern State University
Natchitoches, Louisiana

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University of Houston
Houston, Texas

PEARSON, DONALD C., Ed.D. (1960)
Evangel College
Springfield, Missouri

PEARSON, JOHN M., Ed.D. (1969)
Central Washington State College
Ellensburg, Washington

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Berea College
Berea, Kentucky

*PEASE, DEAN A., Ph.D. (1964)
Memphis State University
Memphis, Tennessee

PEASE, JOSEPH M., Ed.D. (1954)
Fort Lewis College
Durango, Colorado

PECHINSKI, JOSEPH M., Ph.D. (1973)
University of Maine
Orono, Maine

*PELTON, BERRY C., Ed.D., 1964
University of Houston
Houston, Texas

PENMAN, KENNETH A., Ph.D. (1964)
Route 2
Pullman, Washington

PENNINGTON, RAYMOND B., Ed.D. (1972)
Pembroke State University
Pembroke, North Carolina

PENNY, WILLIAM J., Ph.D. (1963)
Rural Route 1
Stroudsburg, Pennsylvania

PERRELLI, DONALD W., M.S. (1973)
Southern Connecticut State College
New Haven, Connecticut

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California State College
Long Beach, California

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Akron University
Akron, Ohio

PETERSEN, JR., ALEXANDER, Ed.D. (1957)
Southern Oregon College
Ashland, Oregon

PETERSEN, KAY H., Ph.D. (1962)
University of Wisconsin
Madison, Wisconsin

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University of Pittsburgh
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United States Military Academy
West Point, New York

PETTINE, ALVIN M., Ed.D. (1967)
Colorado State University
Fort Collins, Colorado

PHILLIPS, JR., EVERETT J., Ed.D. (1964)
New York State University College
Fredonia, New York

PHILLIPS, ODELL, Ph.D. (1973)
Eastern Kentucky University
Richmond, Kentucky

PHILLIPS, W. ROY, B.S. (1963)
Franklin & Marshall College
Lancaster, Pennsylvania

PHILLIPS, WILLIAM P., M.A. (1966)
Central Virginia Community College
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PILCH, ARTHUR H., Ed.D. (1972)
Western Carolina University
Cullowhee, North Carolina

PINK, RALPH J., Ed.D. (1962)
Northeast Missouri State University
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PIPER, JOHN D., Ph.D. (1971)
Bowling Green State University
Bowling Green, Ohio

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State University of New York
Buffalo, New York

PLAGENHOEF, STANLEY, Ph D (1960)
University of Massachusetts
Amherst, Massachusetts
PLEASANTS, FRANK, Ed D (1969)
University of North Carolina
Greensboro, North Carolina
PLESE, ELLIOTT, Ph D (1964)
Colorado State University
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Capital University
Columbus, Ohio
POHNDORF, R H Ph D (1956)
University of Illinois
Champaign, Illinois
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University of Rhode Island
Kingston, Rhode Island
POLING, DOW P , Ph D (1968)
Oregon State University
Corvallis, Oregon
POLLACK, BERNARD, Ed D (1961)
Brooklyn College
Brooklyn, New York
POLLOCK, MICHAEL L , Ph D (1965)
Wake Forest University
Winston-Salem, North Carolina
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University of Guelph
Guelph, Ontario, Canada
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Baylor University
Waco, Texas
PREO, LAWRENCE S , Ph D (1972)
Kent State University
Kent, Ohio
PRICE, REGINALD L M A (1967)
MacMurray College
Jacksonville, Illinois
PUCKETT, JOHN R Ed D (1962)
Auburn University
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Drake University
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Trenton State College
Trenton, New Jersey
RADUCHA, JOHN P , Ed D (1971)
University of Nebraska
Omaha, Nebraska
RAFELD, JACKSON W , M A (1956)
Mount Union College
Alliance, Ohio
RAGSDALE, LEE, Ed D (1969)
Portland State University
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Colgate University
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RANGAZAS, ERNEST P , Ed D (1957)
State University College
Plattsburg, New York
RARICK, G LAWRENCE, Ph D (1952)
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Berkeley, California
RASMUSSEN, STANLEY A , Ph D (1972)
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University of Southern California
Los Angeles, California
RAY, HAROLD L , Ph D (1957)
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REARDON, PAUL L , Ed D (1964)
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REECE, ALFRED M , P E D (1949)
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Lexington, Kentucky
REESER, JOHN G , M S (1970)
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REGNA, JOSEPH L , M A (1972)
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University of Houston
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Kent, Ohio
REUSCHLEIN, PHILIP L , Ph D (1965)
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RICKERT, LEWIS J., Ed D (1957)
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Duluth, Minnesota
RINGER, LEWIS B., D P E (1963)
Youngstown State University
Youngstown, Ohio
RITCHIE PAUL C., Ed D (1962)
University of Missouri
Columbia, Missouri
RIVERO, MANUEL, M A (1948)
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Lincoln, Pennsylvania
RIZZE, JOSEPH M., B A (1971)
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ROSENTSWIEG JOEL Ed D (1965)
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Denton Texas
ROSS SAUL M A (1973)
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ROWEN, VICTOR Ed D (1953)
San Francisco State College
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RUNNER, THEODORE C., M A (1958)
University of the Redlands
Redlands, California
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SANTA MARIA, D LAINE, Ed D (1966)
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SCHLOSS, PETER, M S (1967)
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3) Dues entitle members to voting privileges in the Association and to the following publications: ANNUAL PROCEEDINGS, QUEST (published twice yearly), and the NEWSLETTERS.