Several alternate definitions of "physical education" can be presented to illustrate the fact that changes in name or definition open the way to new opportunities and new ways of thinking of career options. Traditional definitions of physical education have limited it to a profession of teaching in the traditional school system normal children ages six to eighteen. By expanding the concept to the study of "human movement," one opens the way to realizing a much broader field of potentialities: the field of public fitness. This includes movement study in business and education; alternate careers in the military, in sport, and in rehabilitative medicine; preparation for extra-terrestrial, no-gravity environments and their opposite—the treatment of severely brain damaged children who need to cope with gravity. Physical education as human movement also concerns a lifetime learning process. Present programs, mostly encompassing seventh to twelfth grades, are forced to play catch-up in teaching students things they should have learned in the first seven years of life. Adulthood is similarly ignored, as is human movement until death. And movement currently involved in work processes will increasingly become recreationally oriented, another ignored field. Preparations for alternate careers in human movement education involve curricular change, an example of which is the Oregon State University's "Applied Fields Option," a graduate careers program in which individualized curricula in expanded human movement careers are developed by students and their advisors during undergraduate years. (MJB)
The field of physical education is as large or as small as you and I conceive it to be.

Fifteen years ago I saw it as only the teaching of physical education in the public schools.

This seems now to be such tunnel vision that I can't believe I was so naive. The "teaching" part limited the field in practice, the "public schools" limited it in area and in age of participants. In fact, the "education" part of the name "physical education" bound my mind to the profession and to that application of knowledge. A change in name or definition opens up all kinds of new opportunities and new ways of thinking. You have seen the change of names and perhaps laughed at them, all over the country. But try not to laugh for a minute while we explore some of the ways in which different words for our field can open up new career opportunities for our major students and new ways in which we can serve mankind through the expertise which we possess.

For years I accepted the definition of physical education as "the art and science of teaching through the physical." To me that meant the art of teaching and the science of physical education. That limited my thinking pretty thoroughly to teaching sports, dance and exercise to normal children in school from ages 6 - 18. But suppose I accept a new definition, "Physical education is the study of human movement." Suddenly every way in which man moves, for whatever purpose, in whatever environment, at whatever age, is now my concern. It not only involves play skills for school age children but it concerns living skills, work skills, play skills at any age, normal or abnormal, wherever man may be, anywhere on this earth or in space, as a matter of fact. And no other already established discipline has staked out this area of concern. It is our baby, if we want it. It is a terribly important area. Movement is the attribute which distinguishes the animal from
the vegetable world. And human movement should be much more important to people than
the study of insects or cows or horses. A research study by an engineer, entitled, "Postural Stability of the Dog," was presented as a substantial research contribution on
our campus, which is an agricultural university. How much more important and what a
greater achievement is Postural Stability in a Two-Legged Human! The discipline of Human Movement is one of which we can be proud. And it opens up a whole world of job oppor-
tunities for our students.

Let's just take a look at some of the potentials of this field. Human Movement

careers can be related to the schools and colleges, professional athletics and professional
dance, of course. But by expanding it to all ages, we can enter the field of public fitness,
sports and recreation. The whole world of business and industry opens up to us, not only
through commercial teaching and fitness training for executives, but for instance as work

efficiency experts. The Pacific Northwest Bell Telephone Company came to us last year
saying, "We need your help." It seems that they were being sued for $1 million by the
first woman they had employed on a typical man's job. She had been hired to collect the
coins from the money boxes of public telephones; and as the box got heavier, she had injured
her back. As a woman, I think, "Oh, that's too bad!" As a physical educator, I think, "Aha!
Here is another type of job opportunity for a human movement specialist." Northwest Bell
hired one of our people to do three things:

1. Analyze all of the physical tasks of their employees to determine what level of
   strength, endurance, flexibility, balance, coordination and skill each required.

2. Put together a battery of tests to determine whether the potential employee has
   these qualities.

3. Devise an exercise program which would furnish the employee with the necessary
   qualities.

We have a person now working on this for Northwest Bell. Other companies may find
such a program equally necessary and far less expensive than law suits as they attempt to
follow the dictates of Equal Opportunity employment.

Or look at some of the Human Movement careers as related to the military. We have a young man majoring with us who has a career goal of being a physical fitness expert with the Armed Forces in the Russian zone. So we built him a program involving two majors and a minor—a major in physical education, a major in ROTC, and a minor in Russian languages. He neither needs nor wants a teaching certificate. Why should he have to be put through the cookie mold of teacher education?

The relationship of physical education to medicine is growing closer all the time. For instance, the head of our state A.M.A. has asked our department for help for the numerous doctors who are serving as team physicians. He frankly admits that they don’t know what they are supposed to be doing except to treat medically the injuries as they occur. He has asked us, in a meeting in front of the University president, to put on some workshops for those physicians! That doesn’t hurt the image of your department one little bit! The fields of athletic training and sports medicine are already booming and will certainly continue as girls and women get more and more into intensive competition. Or consider the field of cardiac rehabilitation. Following a coronary accident, the physician knows that the patient must have exercise to be rehabilitated; but so often he doesn’t know exercise dosages to prescribe. Medicines he knows, but not exercise. That is our field as physical educators, and we can calculate beneficial work loads, working in conjunction with the doctor, far better than he can alone. With one of our exercise physiologists, our physical therapist, and athletic trainer we have plans to set up a Cardiac Rehabilitation Laboratory. Eighteen medical doctors put their names on the list, requesting to work voluntarily in conjunction with this if we will do it and take their referred patients. This too is physical education.

Consider for a moment Human Movement Careers related to other environments. Fitness in space is a real problem. No doubt you read about the tremendous loss of calcium in the bones of the lower extremities of the astronauts after a couple of days in the anti-gravity environment. A 23 percent loss, wasn’t it? The upper extremity is getting
exercise, pulling the body around the capsule, but not so with the legs. Fortunately they came to a physical educator like Dr. Van Huss of Michigan State to help solve the problem. He is talking about possibly sending up a small treadmill or bicycle ergometer with them next time. That would be fine for two to four astronauts. But what shall we devise when we start sending hundreds of passengers for months or years at a time? They obviously cannot sit strapped down in a seat as our airplanes now require. They would all have osteomiosis, and their bones would break at the slightest movement. How do we exercise people in that environment? And what games do they play to pass the time? We need to invent a lot of new games for this situation. This too is a problem for physical education.

Speaking of anti-gravity situations, we need to invent one on earth for some of those children at the very low end of the mobility scale, the brain-damaged ones who can't even turn over from their backs to their fronts. I visited the Institutes for the Achievement of Human Potential in Philadelphia, which deal with all kinds of brain-injured children, trying through any way possible to teach children to be self-sufficient. Their Mobility Lab was a mind-stretching experience for me, as were their seminars for the parents of these children. In physical education, we have entirely ignored this aspect of human movement, but isn't this, too, our business. If you were the parents of one of these children, you would be desperately searching for someone somewhere who would even try to help. One can "pattern" these children, moving the child yourself so some of the feedback of movement can make its way into the brain. How much faster the child could learn if just once he could get the kinesthetic feeling of voluntarily initiated movement! Yet gravity is grinding him down into the earth with 208 pounds of force. It is as if you were standing there with both feet on top of him and expecting him to move in spite of it. NASA has not been willing to help solve the problem. Can't we, as physical educators? As a matter of fact, if we are movement specialists, isn't it our obligation? Why do we insist on just teaching sports, dance and exercise? We could help solve some of the world's problems. Let's stop griping about the fact that the country can't use all of the physical education teachers we want to
produce. Yes, the students come to us wanting to teach and to coach because they have loved their public school experiences. But many of them could become absolutely intrigued with these other aspects of human movement if we just exposed them to them and had a curriculum which could help them get ready for these alternative careers.

Some of your students might like to work as child development experts with preschool children, the babies. We all know the truth of two basic concepts:

1. Children learn best through play.
2. "Give me a child until he is seven, and he will not depart from my teachings."

Regarding the first, learning through play, we all cut our professional teeth on John Dewey and his concept of "learning by doing." We know it is true; we use it all the time with our students; we are a profession of "doers." And we know that a good definition of a child is "activity with clothes on." Movement is his life. And I am certain that we have all felt a little guilty and a bit chagrined that in most schools we have started teaching physical education in the seventh grade, age 12, rather than at birth, or that formal physical education began only in high school rather than at least in grade one. We know that we spend our lives that way teaching remedial physical education, trying constantly to play "catch up" with the things the child should have learned in the first seven years of his life. Daddy? Mother? Should they not teach the child? So often they don't know what to do. Besides, the family as an institution seems to be rapidly disintegrating. Who is to teach the baby? Child care centers? If so, Human Movement specialists need to be the primary personnel there, for the child will learn through his play almost anything you want to teach him. Whether the jobs are government supported or privately funded, or whether you go out and form your own business as a child development expert, this is one alternative career in physical education which is most certainly in demand in the near future. With working mothers, it is here right now. And it is merely an extension of our profession's goal to "education through the physical," right down to where it should begin: at birth.
What about the middle part of the scale—adulthood? For two hundred years (possibly even two thousand years?) we have known that man will survive longer and with better health if he stays active. In schools we teach him some basic skills and attitudes, kiss him goodbye at age 18 and say, "Have a good life. Remember that physical activity is good preventive medicine." He can go to the "Y" or to athletic clubs or play in industrial leagues or go to health spas; but as a profession, we seem to think it is beneath our dignity to prepare the personnel for these agencies or businesses. Why have we resisted for so long educating people to run health spas? Why have we considered those people unprofessional? Because they are not attached to a school? Because they are self-supporting rather than tax-supported? Because they are making a lot more money than you and I put together? Or is it because they don't know what they are doing as well as we do? If so, that's our fault. Let's start a health spa certification program. do some public relations work, and get them to hire our well-educated major students instead of just anybody. Let's face it. The kids can't stay in our classrooms and gymnasiums forever. They have to go out into the world. Let's put some more of us out there in that adult world to continue the good, sound, challenging, healthful activities where people can get to them.

At the far right of the scale—Human Movement until death? We are constantly increasing man's life span, yet he retires at 65. The senior citizen population has expanded into taking over buildings, resorts, whole towns. The handwriting on the wall about tomorrow's needs from our major students is again very easy to read. Space age needs may be speculative, but not the needs of the retired population. They are here now. And we still insist on teaching our majors only to teach ages 6 - 18 in the public schools? Do you realize what a small portion of a person's life that is? If one lives until 70, that is 25,550 days. He is in public school from ages 6 - 18, 12 years, 9 months per year, 5 days a week, 5 hours a day, which adds up to a total of 450 twenty-four hour days. If he is lucky and has physical education from grades 1 - 12, he averages probably three days per week for 50 minutes per day, including showers and changing clothes. This totals 1,080 hours, or 45
days out of his entire lifetime of over 25,000 days. And for that we give our lives for educating these majors? Human Movement has to be bigger than that. And it is. It really is.

As an ardent believer, I don't say that physical education, a la Human Movement, can solve all of mankind's problems. But I do say we can certainly help. A peek at another of tomorrow's, almost today's, problems is the rapid disappearance of the "work ethic." Three years ago at our National Convention, one of the general session speakers prophesied that 70 percent of our children then in the seventh grade would never do one day's work for pay in their entire lives. There would just not be the work for them to do. Those children are now 10th graders, and maybe he is going to be right. The labor-saving devises, which we all love, do put people out of work. Our unemployment rate is now 8 - 9 percent. Maybe it isn't temporary. And what will we do when it is 70 percent permanent unemployment? What do you do with your life when you never had and never will have a job? Become an unprofessional surf-board rider on the beach? Most people take their identity from their work. "I am a teacher." "I am a brick layer." "I am a welder." Who are you if you have never had a job and you are a full-grown adult? Maybe the day will come when the federal government really does have to provide a minimum income for every citizen, when industry becomes so big that only the government can own it and run it with a few people to punch the buttons. I understand that the federal government does have two trial communities set up somewhere (and I would love to know where) to see whether people can adjust to a life of no-work-to-do. I don't want to be a part of that community. But if it is true, and if it is coming, think of the contributions which our discipline and our profession have to make. So will music and art and literature and some of the other humanities. But sports, play and dance will certainly constitute more of a way of life and less of a recreation. Can we get all of our people ready for that? I don't know. But maybe some of these kids "on the road with food stamps" will be able to adjust better than you and I.
So what kind of a curriculum does it take? It will be as varied as the individual career goal. If the student wants to go into sports broadcasting, a combination of majors in physical education and speech, with great depth of knowledge in two or three spectator-type sports and practicum experiences in the actual radio/television situation, would be essential. Or maybe it is sports photography he wishes, or to become a sports artist.

Combination majors or major/minors can be devised, according to what your campus has to offer. It helps if you have a sister institution close by, which offers some of the courses if your university does not, and transfer in the credit. One department and one campus probably cannot be all things to all people. You may have to stake out the fence around your interpretation or your segment of the discipline of Human Movement and say, "This is the part we are going to develop," both as careers for our students and to further knowledge through research into the discipline.

Perhaps you would be interested in some sample curricula for those alternate career goals. Following are some which we have devised as options at Oregon State University, which by no means intimates that they are perfect. But they are workable and were acceptable to the University Curriculum Committee. Having them spelled out and published in your university's catalogue takes about two years, at least at our institution; but it is worth it because it gives visibility to the program, students know what is possible and will sign up for it. Students want freedom to choose their courses; but some structured program, even as an example, gives them an idea of what they are getting into.

We have a unique advantage in our institution, thanks to the foresight of our dean. When we were granted School status, we were granted the power to graduate students with an individualized program devised for the students' particular career goals. We call it the "Applied Fields Option." As far as I know, we are the only School at our University which can do that. I highly recommend that you attempt to get that right at your own institution. The student and his advisor, by the end of his sophomore year, agree upon
what courses are necessary for accomplishing his career goal and for graduation. This program is then submitted to the department head. If approved, it goes to the School Undergraduate Curriculum Committee. If they approve, it is submitted to the Dean of our School. If he approves, that is the student's contract for graduation. If he changes his mind about one or two of the 60 plus courses in his program, all he needs is his advisor's approval. For any substantial change in the program, he must resubmit his program through the whole curricular process. It really works very well indeed. And it certainly fits the needs of today's students and today's world. There is no "cookie mold" which everyone must go through. And it certainly increases the job opportunities of the students. Most of them have jobs waiting for them when they graduate.

What do some of those job opportunities look like? Expand your view of physical education and you expand your view of job descriptions. For instance, these have come across my desk recently:

- Director of Sports Information
- Facilities Manager
- Athletic Administrator (particularly for women)
- Athletic Nutritionist
- Dance Therapist
- Perceptual-Motor Specialist
- Tennis Pro
- Fitness Consultant
- Child Development Specialist
- Play Therapist
- Safety of Sports Equipment Consultant
- Movement Rehabilitation Specialist

You and I cannot know for sure what needs tomorrow's world will bring. But by reading everything we can get our hands on about projections, predictions, even possi-
ilities. It helps us to open our minds and our curricula to what our majors will need when they get out into that changing world three or four years from now. One guiding principle can help us -- "We are going to be part of the answer, not a part of the problem, of today's and tomorrow's world."