

# BIOMECHANICS AND KINESIOLOGY AT THE UNIVERSITY OF NORTHERN COLORADO

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We are all grateful to Professor Jerry Barham for his work in assembling this conference. Those of us at UNC value greatly his professional work and appreciate his effort in bringing this international symposium to Colorado. As a young university, this institution is especially gratified to host such a distinguished event.

This session of the 3rd International Symposium on Biomechanics in Sport allows me to sketch for you a brief history of the kinesiology program--as it is called at the University of Northern Colorado. As you might expect, the preparation for this presentation gave me the opportunity to learn more about the history of the program. I have my suspicions that there are some internal political purposes behind this invitation--to know and better appreciate the program--but that is all well and good. Too seldom do administrators in a university have the opportunity to learn in detail the history of a program and a field. As you know, on most campuses we central administrators are supposedly confined to some tower from which we send edicts--at least that is the mythology. In fact, we are often trapped by demands placed on us by external constituencies such as legislatures and super boards. We come into academia in order to serve our own intellectual interests and ultimately to serve the intellectual interests of our faculty colleagues. And that remains the case for virtually all of us. However, we are often to be found warring over policies imposed and policies to be developed than we are looking at the intellectual aspects of one of the disciplines in the university. For all those reasons, I am pleased to be here and to join you for a little while.

I'd like at this point to digress for a moment to make a few remarks about this University. Although almost a hundred years old, the institution has been a University for only the last 15 years. We have, in addition to the College of Arts and Sciences and the core professional unit, the College of Education, a College of Business Administration, a College of Performing and Visual Arts, a College of Health and Human Services, and the School of Health, Physical Education and Recreation. As I numerate that list of units, I am sure the configuration of the university is one which most of you would find familiar. You will note that we do not have engineering, architecture, forestry, agriculture,

etc. We are a university which has distinct and unusual niche. Although a comprehensive university, our programs cluster around education and other professions of human services. We are, in a sense, a human centered institution, heavily focused on programs that involve training, health and other disciplines that focus upon human needs and services. Surely, the training of coaches, health educators, and the sciences that inform these activities belong in such a university. We believe that a new name for the School of Physical Education and Recreation will not only be appropriate for the disciplines housed in this college, but also reflects appropriately the nature of this university as it differs from our sister institutions in this state. Those as you might suppose focus on the so-called pure sciences, engineering, agriculture, mining, etc.

Let me return to the issue of the history of the program in kinesiology here at UNC. (I am most grateful to Professor Barham for supplying the documents upon which this sketch is based.) Some of you will recall Atwater's history of kinesiology/biomechanics in the Research Quarterly for Exercise in Sport which appeared in 1980. In that article, she describes the growth of kinesiology and biomechanics from 1900 through 1979 and looks at future directions. According to Atwater, the decade of the 1960's "was particularly notable for the organization efforts that occurred in three areas"--the formation of the kinesiology council within AAHPER, international organizations for biomechanists and electromyographic kinesiologists and graduate degree programs in kinesiology and biomechanics with a heavy emphasis on the sciences. At the University of Northern Colorado, a new emphasis occurred about the time Professor Barham arrived in 1964. The basic science committee within the School was reactivated to implement objectives that included "the development of kinesiology as a true science and as a true academic discipline, the development of an ideal program in general and applied kinesiology and the promotion of greater utilization of kinesiological concepts in various areas of professional application." One of the results of these efforts came about in conjunction with the completion of a dissertation by Lincoln Walker entitled, "The Development of a Model Required in General Kinesiology Program for the Professional Preparation of Undergraduate Physical Education Majors." This study was based on current programs in kinesiology and to develop a model for what programs should be. The program faculty was heavily involved in discussions of what the curriculum here should be and Walker's work contributed to that end. A highly productive period of activity continued into the late 60's. There are letters, memoranda and minutes reflecting many hours of work to refine and develop a curriculum in a program which not only supported the more general work in physical education but developed and refined appropriate studies in the various areas of kinesiology. For example, in 1966, there are minutes of a discussion of curricular changes on the MA level in which it is argued that no provision had been made to take care of the graduate MA student who had a weakness in one of the basic science areas. Therefore, a suggestion was made to introduce courses particularly designed to strengthen the background of the MA student in the basic sciences. A similar proposal was made regarding the issue of basic science education and background for students on the doctoral level. One more example--in 1967, Professor Barham wrote a long letter to Professor Van Anne expressing his notions of how the program in kinesiology might be developed over the coming years in order to become a leading program. The letter is full of suggestions on how both teaching and research could be advanced. The spirit behind this letter is most

important to the development of the curriculum and program in kinesiology. From the formation of the kinesiology committee in 1963 until the early 70's, the program developed very successfully. In 1963, there were only two courses dealing with the science of human movement; a decade later, students were offered a range of courses in areas of psychology, maturation, and mechanics as well as anatomical and physiological kinesiology. By the early 70's, this small group of people, commonly called the kinesiology committee, were able to mount a major effort to realize a sophisticated laboratory. This laboratory, the published results of work done in it, and the publications of Professor Barham and others has lead to the outstanding reputation of this group. Many of you know that another member of the group, Professor Sage, was a few months ago recognized as the Alliance Scholar of the Year. Professor Van Anne, Professor Malumphy, and Professor Phillips are also known for their contributions to students in this field. Professor Barham, through his published work, has successfully gained an international reputation for himself and this program. Professor Barham is to be commended for his accomplishments in research, writing and in the creation of an outstanding laboratory.

The kinesiology committee has continued to develop the courses and curriculum. The group sees its work as a complete education activity--that is, its members ceaselessly work on refining the curriculum, the courses, the course objectives, the articulation of courses, the relationship of courses in kinesiology to other courses offered in the School and to the work of the coaches and athletes and athletics here at the University of Northern Colorado and elsewhere. In addition, the group has worked towards the development of new governance structures within the school. One of the major purposes behind this is not only the appropriate political governance of the faculty, but the recognition of kinesiology as a separate unit. The faculty has now brought forward a proposal that kinesiology be recognized as a separate department. As one surveys the development of the disciplines of kinesiology, looking at Atwater's article or at Professor Barham's work in the 1960's attempting to find acceptable definitions of kinesiology, one is struck by the rapid development of a discipline. It is not an unusual phenomena in academia for a discipline to undergo difficult times as it sorts itself out from related areas and attempts to reach a permanent place in academia. The very rapid growth of kinesiology/biomechanics in the last two decades seems to follow that path. All of you know far better than I do the likely future of this discipline. What is one of the most remarkable aspects of this has been the recognition of kinesiology on this campus. Although I cannot speak for its acceptance and recognition 20 years ago, I can speak to its present status. Hardly relegated to the status of a sub-discipline buried under the generic title Physical Education, thanks to the years of work of such people as Professors Barham, Malumphy, Phillips, Sage and Van Anne, kinesiology is a recognized science program on this campus. As the program stands on the threshold of new governance status, it is most appropriate and fitting that this international conference be held on our campus. It is a virtually a recognition of the achievement of this faculty that you are gathered here for the most appropriate of academic discipline activities. Anyone scanning the list of papers cannot fail to be impressed at the depth of knowledge represented here and the rapid achievement of knowledge and discovery that is going on in your

discipline. Few of the millions of people who attend to sports in this country have any idea, of course, of the relationship of your work to what they see every weekend. Yet, that significant contribution is but a small part of what you are involved with. We gather here today as colleagues, as academic faculty members, as people who are passionately interested in the development of human knowledge. It is a celebration as we share discoveries, arguments and disagreements of the best kind. The world at large seldom understands why any of us labors so intensively over our chosen work, why we are willing to sacrifice so much to intellectual passion, why we may pursue lines of inquiry that are so numbingly esoteric even to family and friends--But on occasions such as this the respect, the joy and the excitement can be openly shared. Again, I welcome you to this university and wish you well.

The functions of a University have changed considerably even in the past few decades. In this country and at least some others, notions of easy access, career education, breadth of curriculum and equal opportunity have considerably altered the basic functions of the university--let alone other institutions of higher education. In brief, a wider public is served in a much broader fashion. Some decades ago, one of our leading universities was ridiculed for a program in mobile home design; such criticism is unlikely now. While such changes have occurred--sometimes rapidly--other functions of universities have remained unchanged.

The transmission of culture has continued over centuries. Not only have universities continued to pass from generation to generation, the values of a culture--political values, economic concepts, social mores, and so forth, they--through the faculty--have encouraged the examination of the concepts and values.

The examination of the concepts is related closely to that other familiar function of the Universities--the discovery of knowledge. That tradition remains at the heart of University activities. For hundreds of years Universities have established and transmitted the habit of intellectual inquiry which you are here gathered to practice and promote. It is the essence of a university. Of the many functions and uses of the human qualities, that especially is exercised here in the academy. Intellectual inquiry into the phenomenon of the universe including the study of human movement occurs in the university.

As you participate this quintessential activity of university life, we wish you well and hope that you find this university hospitable to your finest efforts.