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ORIGINAL

STRUGGLES AND PACIFICATION IN THE HISTORY OF AMERICAN KINESIOLOGY

LUCHAS Y PACIFICACIÓN EN LA HISTORIA DE LA KINESIOLOGIA AMERICANA

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ABSTRACT

In this article we review the epistemological and pedagogical debate on Kinesiology and Physical Education that has been going on in the universities of the US from 1990 to the present. We have compiled the opinions of a wide sample of authors, with the intention of getting the most complete picture of a process that, according to Morrow (2006), seeks to answer the questions "where we come from, who we are, and where we are going". After comparing and analysing the most relevant documents, we conclude that the period 1990-2013, characterized by a bitter struggle between paradigms fought by humanists, positivists, cross-disciplinarians, and sub-disciplinarians, has revealed

the eventual predominance of the integrative paradigm of Kretchmar (2007, 2008).

KEY WORDS: Physical Education, Physical Activity and Sport Sciences, Kinesiology, Higher Education, Epistemology, University Departments, Pedagogy.

RESUMEN

En este artículo estudiamos la disputa epistemológica y pedagógica sobre la kinesiólogía/educación física que ha tenido lugar en las universidades de Estados Unidos desde 1990 hasta la actualidad. Hemos recogido el pensamiento de una muestra amplia de autores involucrados, con el propósito de obtener una visión de conjunto de un proceso que, de acuerdo con Morrow (2006), trata de esclarecer ¿de dónde venimos?, ¿qué somos?, ¿a dónde vamos? Tras el cotejo y análisis de la documentación más relevante concluimos que el periodo 1990-2013, caracterizado por una enconada pugna de paradigmas –en la que han estado implicados humanistas, positivistas, crosdisciplinaristas y subdisciplinaristas–, ha dado como resultado el dominio del paradigma integrador de Kretchmar (2007, 2008).

PALABRAS CLAVE: Educación física, Ciencias de la actividad física y del deporte, kinesiólogía, educación universitaria, epistemología, departamentos universitarios, pedagogía.

1 INTRODUCTION

In this article we offer an interpretation of the history and current situation of American (i.e. US) Kinesiology (a discipline equivalent to what in Europe is called Physical Activity and Sports Sciences), focusing on the epistemological and pedagogic debates that have occurred since the 1990s. To reach this aim, we have studied a wide sample of the authors involved, whose work offers a complete image of the epistemology of Kinesiology in the last decades. It could be said that 1964 was a key year in the history of American Kinesiology, since it was then that Henry called for the scientific-academic development of the disciplines related to Physical Activity and Physical Education (Henry, 1964).

That concern for scientism and academicism was nothing new in the history of American Kinesiology, because when the Boston Normal School of Gymnastics was created in the late 19th century (with the immediate aim of improving the health of women), the search for scientific and pedagogical excellence inspired the project since its very beginning (McMacullick y Lomax, 2000).

Although the American Academy of Kinesiology and Physical Education was founded in 1930, Kinesiology was already thousands of years old, and even in the US there had been "vigorous physical culture efforts in the Ante-Bellum period 1830-1860" (Lucas, 2006, 2).

The consolidation of Kinesiology as a recognized science is attested by the great number of PhD dissertations on Kinesiology that are read in American Universities (Thomas and Reeve, 2006), as well as in the fact that the National Research Council has included Kinesiology within the 'Sciences of Life' category.

Kinesiology –as an academic discipline– has developed in the five continents, not only in the US (Bardy, 2008). However, the epistemological debate about Kinesiology and its organization in university departments has always been specially heated in the US, with many authors involved, who have expressed their different points of view. In Europe, the subdisciplines of Kinesiology also appeared in the 1960s (Bailey, 1996; Schmitz, 1965), but their creation and development was financed by international bodies (ICSSPE of UNESCO, IOC, and the national administrations of Germany, France, UK and Finland). In the US, subdisciplines were not financed in that way (by bodies who monitored the process), so that ideas and attitudes were expressed more freely, which explains why a rich and fruitful debate sprang up there.

The formation of the professionals of Kinesiology has been one of the key issues that has always been behind the debates that have affected that science. For example, back in the 1930s, Arthur H. Steinhaus –one of the members of the Academy of Kinesiology and a brilliant scientist of the George Williams College of Chicago– already said that Kinesiology needed "teachers and practitioners who have their head in a science and their hearts and hands in physical education" (Lucas, 2006, 4). Those were just a few words, but they contained the essence of his thought about what should be the formation of the professionals of the 1930s; they should be scientists and technicians at the same time.

In 2006 Morrow opened the meeting of the American Academy of Kinesiology encouraging participants to reflect on the questions "where we come from, who we are, and where we are going as an Academy, as a profession, and as individuals". Then he asked each speaker to prepare comments from whatever perspective they believed to be most effective and, thus, some chose to use a biographical perspective, others a historical one, yet others a thematic or a research trail, etc. (Morrow, 2006, 1).

Jable (2006, 20) drafts the history of Kinesiology in the US by pointing out that the 1970s saw the emergence of subdisciplines, and that in the next decade the Academy "made a valiant, though unsuccessful, attempt to unify subdisciplines". In fact, those unsuccessful attempts at unification (the struggle between very different conceptions of the discipline) have gone beyond the year 2000, and only very recently has an integrative paradigm been proposed that has been able to satisfy –and even to inspire hope in– the majority of people involved in the debate.

The aims we seek in this article are:

1) to review and analyse the debate that has been taking place since 1990, paying special attention to the hard struggles that occurred (to try to impose one model of a paradigm over the others), and that have lasted until (approximately) the years 2005-2007.

2) to expound that in 2007-2008 an integrative paradigm was proposed by Kretchmar, a paradigm more powerful and attractive than those that have previously tried to unify the field.

3) to show that, today, there are two important paradigms that outweigh the rest: the above-mentioned integrative (and idealistic) paradigm of Kretchmar (2007, 2008) and (opposed to it) the sub-disciplinary paradigm (realistic and pragmatic) proposed by Reeve (2007).

2 CHALLENGE AND VICTORY OF THE SUBDISCIPLINARY PARADIGM

2.1 Development of the subdisciplines

According to Jable (2006), subdisciplines appeared in the 1960s, almost all of them at the same time. A typical case is that of Sport Psychology, which established itself as an independent subdiscipline rather early and which between 1965 and 1979 had already produced a sufficient body of scientific publications (Vealey, 2006).

The reason for the appearance of subdisciplines was, among others, that many considered that the formation and knowledge of the professionals of Kinesiology was obsolete (Kelley y Lindsay, 1976). Thus, the creation of subdisciplines was seen as the solution to that problem.

Yet, not all subdisciplines developed in the 1960s. For example, Exercise Physiology had already reached a certain prestige as a science in the 19th century (though later it has continued developing, establishing several sub-areas (Ivy, 2007)). On the contrary, by the mid-1980s Sport Sociology had not yet attained scientific rigor in American or European universities, or as a fundamental of Sport Management (Heinemann, 1987). For Heinemann, Sport Sociology should consolidate scientifically and, from being an isolated subdiscipline, should turn into an open, innovative, and planned one, oriented towards solving the real problems of society (Heinemann, 1987, 8).

The appearance of subdisciplines in the 1960s also affected Kinesiology, which saw the creation of several subdisciplines related to it (e.g. Sport Pedagogy, Sport Sociology, Sport Psychology, Sport History, etc.). This had a positive effect, in the sense that it increased the number of scientific publications (articles), to the point that "it is not even remotely possible today" to read or at least "be familiar with" all of the published studies within a physical education subdiscipline (Rovegno 2008, 98, about Sport Pedagogy).

According to some authors, in Kinesiology, the development of subdisciplines has been a phenomenon that has mainly occurred in sciences, whereas

humanities have not created so many subdisciplines. This seems to be confirmed by Woods (2003), who studied the posts offered in the departments of Kinesiology of the US from 1998 to 2002: only 15.5 % of posts were for humanities (10.3 for Sport Pedagogy, 3.4% for Sport Sociology and 1.8% for Sport History).

Summing up, from the 1960s to the first half of the 2000s the subdisciplinary paradigm exerted its predominance in Kinesiology, without any important criticism appearing against it.

2.2 Crisis of the subdisciplinary-scientific paradigm and appearance of alternative paradigms

Yet not everybody agreed with the predominance of the subdisciplinary paradigm, and by the early 1990s the debate was ignited, fired by the criticisms published by Newell (1990a, 1990b). Most of those criticisms focused on a series of points:

- the subdisciplinary paradigm had little utility for the preparation of professionals.
- it was strongly biased in favour of positivism.
- it shattered the field of Kinesiology into several separate disciplines, isolating the teachers who worked on one subdiscipline from those who worked on the others.
- it was unable to adequately understand the reality of physical activity.

Such criticisms were made from several sectors. First, by professionals, mainly those working in education and sport training (School and High School teachers, coaches, etc.). Second, by university lecturers and professors, who were more connected to humanities. Lastly, by those supporting interdisciplinary methodology. All of them would end up creating alternative paradigms that defied the essentially positivist subdisciplinary-scientific paradigm.

The ensuing debate ended in the mid 2000s, but not with the victory of any of the paradigms in dispute, but with the integration of all of them... it could be labelled as the victory of balance, or as the synthesis of the best of each paradigm. The person responsible for reaching such a consensus was Kretchmar (2005, 2007, 2008), who developed the best design of an integrative paradigm (from the 1980s several authors had tried to develop similar paradigms, but none of them had been well acclaimed).

Let us now see in detail how that debate evolved from 1990 to 2005, when Kretchmar's theories entered the scene.

3 CRITICISMS AND THREATS AGAINST THE SUBDISCIPLINARY PARADIGM

3.1 The cross-disciplinary proposal of reform and reactions against it

In 1990, the subdisciplinary paradigm received a series of attacks launched by Newell (1990a, 1990b), who not only showed his discontent with the division and isolation of professionals caused by the subdisciplinary paradigm, but also claimed that the knowledge resulting from subdisciplines did not solve the important problems of Kinesiology and society. According to him, that paradigm only solved theoretical problems of the mother-discipline of each subdiscipline, which the professor-researcher felt more attracted to than towards Kinesiology itself (i.e. Sport Psychology did not meet the problems of sport, but mainly those of Psychology).

In order to solve that problem, Newell proposed a radical reform of the organization of the university departments of Kinesiology, consisting of a cross-disciplinary (or inter-disciplinary, synonymous for him) perspective; departments should carry out their researching or teaching work focusing on the study of the real problems of Kinesiology, and to solve them they should use several scientific methodologies at the same time.

Newell said that a few professors had supported the idea of creating academic subdomains inspired in this cross-disciplinary perspective for studying important questions. For example, the program of Exercise Science of the University of Massachusetts had a cross-disciplinary project that could be seen as an attempt to connect Physiology, Biomechanics and Motor Control. Newell concluded that the cross-disciplinary orientation offered the greatest potential for the field of Kinesiology (Newell, 1990a).

In short, the kind of knowledge proposed by Newell would be useful for Kinesiology and society and, at the same time, would prevent the appearance of distinctions between theory and practice, as well as the separation among subdisciplines.

Newell's strong criticism against subdisciplines and the organization of Kinesiology in the universities, together with his status as a specialist of a scientific discipline (Motor Control), caused heated reactions. For example, Siedentop (1990), who could be labelled as a representative of educators, expressed his disagreement with Newell's proposal, since he considered that the proposal of a specialist in a scientific discipline alien to teaching and humanities could not adequately meet all the needs of Kinesiology. In the same way, Nancy Struna (1991), professor of Sport History, also reacted strongly, supporting subdisciplines, stating and that they should enjoy absolute freedom of research, without any conditions (cross-disciplinary or of any other type).

As we can see, this 'critical period' that extended from 1990 to 2005 did not consist merely in the struggle between two sides, those in favour of the

subdisciplinary paradigm versus those against that paradigm, but among many other sides, since those two sides were –in turn– divided into different factions, each proposing a different paradigm or holding distinctive ideas.

3.2 Authors in favour of the subdisciplinary paradigm:

Among the authors in favour of the subdisciplinary paradigm were those (a minority) who deemed positive the subdisciplines-professions interdependence, those who liked the huge number of publications that resulted from that paradigm, and those who thought that subdisciplinary research showed the importance of Kinesiology and, therefore, of the professions related to it.

One of those who saw as positive, and necessary, the interdependence between subdisciplines and professions was Bouchard (1992), who offered a highly flattering view of the evolution Kinesiology had undergone since the 1960s. According to him, there existed a unity and useful interdependence between those sciences devoted to understanding all aspects (biological, physical, behavioural, and social) of human physical activity and the application of those sciences for meeting the needs of the whole population (men, women, children, the elderly, people with special needs). He stressed the connection of all professions with theoretical knowledge, and of all professions among themselves, warning at the same time that professions were gradually becoming less connected with teaching in schools.

For his part, Freeman (1992) revealed himself to be an enthusiastic defender of subdisciplines, even though they may be useless for the formation of professionals. His perspective is similar to the one expressed by Reeve (2007), who considered as very valuable the boom in studies and scientific publications that had occurred in the previous decades, stressing that the development of Kinesiology did not have to be synchronic to that of the profession, but collateral to it.

Roberta Park (1998) was the one who more vehemently called for unity among the academics of the field of Kinesiology, a posture that was later adopted –with modifications– by Susan Kovar (2004) and Kretchmar (2005, 2007, 2008). Park used a biblical phrase employed by Lincoln, "A house divided against itself cannot stand", to call for the overcoming of differences and for the mutual appreciation of the several subdisciplines and professions (Park, 1998, 213). Park centered all her efforts (in the scientific field as well as in the professional field) in teaching and health, insisting –at the same time– on the fact that the greatest contribution of Kinesiology had been to show the practical importance of exercise.

Nancy Struna (1991) expressed her defence of the subdisciplinary paradigm by saying that, after two decades of subdisciplinary paradigm, the situation of Kinesiology research was not chaotic –as Newell (1990a) had said– but the best possible one. She stated that she would declare herself "kinesiologist" in public, and that she would explain to the people (every time she had the chance to do so) that Kinesiology meant "human movement", and that the formation

she had received at her university (Wisconsin) had prepared her exactly for that (for studying human movement). She also defended that the term Kinesiology covered a wide range of our interests as professionals, from her own work on labour and leisure in the early history of America to that of a colleague who researched on intestinal transit. Moreover, she offered to explain to everybody that history and the past (Sport History) was as important for Kinesiology as Physiology and Pedagogy.

Finally, among the defenders of the subdisciplinary paradigm, we have to mention Thomas (1998), who tacitly defended it by praising the high number of publications and the scientific level achieved by the department of Kinesiology of the University of Arizona in the previous decades.

3.3 Authors against the subdisciplinary paradigm: educators, humanists, cross-disciplinarians and critics against the university

The authors who were against the subdisciplinary paradigm could be divided into educators, humanists, cross-disciplinarians, and those who criticized the university system.

Among educators, Sidentop (1990) expressly stated that Kinesiology was not the discipline that prepared one for the professional practice of Physical Education, and that if a preparation program prior to the practice of that profession were necessary, it should be adequate to the work those professionals did in that profession, that is, it should come from the nature itself of that professional practice.

Another educator, Corbin (2002), after having systematically analyzed the needs of Physical Education in schools and becoming aware of the disorientation that reigned in the list of objectives of university departments of Kinesiology, proposed a more solid scientific preparation for those students who wished to be educators, different from the preparation that those who wished to be scientists should receive.

Among the humanists, Lawson (1990) said that, at that time, the curriculum of Kinesiology in the universities was based on the interests of researchers and on the parameters of their research activity, but that in the future it should be conducted by the needs of the practice, in response to the aspirations of the students and their need to be informed about the production of knowledge. For the formation of professionals, he proposed a new curriculum that abandoned positivism and the subdisciplinary paradigm. Eventually, his proposal was a criticism of the university: with the subdisciplinary paradigm (with that strategy and methodology) the knowledge produced by the university was of little utility and lacked acceptable standards of teaching.

Besides, Lawson questioned scientific positivism and considered that at the heart of positivism and its dogmas lay the belief in the uniformity of social laws and nature, the determinism of chance. Henceforth, the requirements imposed

by positivism about direct observation, measurability, quantification, and the separation of facts and values should be disregarded.

Lawson also said that those who did research in Physical Education had accepted (expressly or tacitly) that confidence in science (and its support, technology) as the conducting impulse of their work. Nevertheless, professionals did not exclusively solve their problems with scientific or technological means, they also had to deal with difficulties that could only be solved with values (both personal and professional values). Lawson stated that professionals met problems that were unstable and varying, the solution of which could not come from a preparation exclusively based on positivist criteria. Finally, Lawson concluded that researchers and professionals worked in different epistemological communities.

Another humanist, Pringle (2000), questioned the validity and scope of positivism, because the knowledge that resulted from it was too generalized through time and space, and offered a simplistic vision of human and social conduct.

For his part, Anderson (2002) thought that the recuperation of the prestige of Kinesiology in the university should come through two channels; practical knowledge and the study of humanities. Thus, a rigorous organization of physical activity and of the experience each individual had of sport was necessary. Such an organization of practice appeared a difficult task, since it had never been achieved in any department of Kinesiology (Anderson, 2002, 94).

Passing to the cross-disciplinary sector, Newell (1990a, 1990b) was more inclined to the sciences (as we have already seen).

Among those who focused their criticisms on the university, Metzler (1994) criticized the university system and the work of university lecturers and professors, whose main occupation was almost exclusively the production of articles –with few readers and questionable quality–, instead of the instruction of their students in the best possible way and the solution of the real problems of society.

In the same line, Christina (2000) criticized the university –and its Kinesiology departments– for its lack of social commitment, its inefficient activity and, therefore, the useless expense it involved. Instead, he proposed a reform aimed at increasing teaching standards, economic responsibility and social orientation. For her part, Susan Kovar (2004) showed herself critical of the orientation of Kinesiology departments, lamenting the lack of unity present in their academic programs and the absence of an idea of social commitment. She considered that both things were essential in the mentality of the pioneers of Kinesiology, in their schools and programs, but that they had been lost (Kovar 2004, 270).

Kovar was right. Unity of program and social commitment were essential for the first pioneer women of Kinesiology, the educator Amy Morris Homans, co-

founder in the late 19th century of the Boston Normal School of Gymnastics (one of the first training academies --for men and women-- for the formation of Physical Education teachers), and Mabel Lee, the first woman to become, in 1942, president of the American Academy of Physical Education. Yet, by 2004, those principles seemed completely forgotten.

4 RECENT DEVELOPMENT AND CURRENT PARADIGM

4.1 Recent development: diversity of proposals, less aggressiveness in the debate

In the last decade (2005-2013) the struggle among paradigms seems to have almost disappeared, the episodes when the different conceptions about Kinesiology clash openly being gradually more rare. Nevertheless, it cannot be said that the debate has disappeared; it maintains an extraordinary activity, but in a less aggressive way, and the opening positions interact with the dogmatic ones, humanists with positivists, educators with biologist educators, subdisciplinaries with cross-disciplinaries, non-Kretchmarian integrators with Kretchmarian integrators, and all of them with positions critical of the university, for its (alleged or real) didactic and social irresponsibility.

Among the non-Kretchmarian integrators, Rikli (2006) thought that Kinesiology was fragmented due to subdisciplines. Thus, it was necessary to reconnect subdisciplines and to encourage cross-disciplinary research through a new relationship between academics and professionals (which would become a reality soon after). For his part, Lucas (2006) showed that that idea of integration of science and practice did already exist in the pioneers of Kinesiology. Lawson (2007), for his part, saw as positive the existence of a common nucleus of knowledge, values, and attitudes that identify Kinesiology departments. Gill (2007), in turn, also expressed his wish for integration and, in order to achieve it, proposed looking back to the origin of Kinesiology for inspiration.

Among humanists, Johns and Tinning (2006) criticized the biomedical model of Physical Education, and suggested going back to the Social Sciences and listening to the students, as bases for an efficient Kinesiology. Hughson and Tapsell (2006), on the base of "the two cultures model" of Snow (1959), thought that it was necessary to create in Kinesiology a common front that integrated humanities and Kinesiology.

Among the open-minded, Charles (2005) encouraged everybody to be creative, to accept diversity in Kinesiology and in the university preparation of professionals, because "our future is many futures and our profession is many professions" (Charles, 2005, 285). In the same way, Morrow (2006) called for diversity and creativity in the 2005 meeting of the American Academy of Kinesiology and Physical Education, and Metzler (2007) defended being open to new ideas in Kinesiology.

Among radical cross-disciplinarians, Overdorf (2005) defended a cross-disciplinarity centered on health, whereas Newell (2007) was against the 'multiple agendas', that is, the activity of subdisciplines working separately. Among the defenders of subdisciplines, Reeve (2007) stated that, thanks to them, Kinesiology had acquired a high level of research.

Summing up, it could be said that the development of the debate in the decade 2005-2013 has been characterized by:

- a) less aggressiveness,
- b) diversity and creativity in the theories about the organization of sciences within Kinesiology,
- c) the appearance of the integrative paradigm of Kretchmar.

It should be mentioned that comparative analysis does not allow us to say that there existed a period 'prior to' the theories proposed by Kretchmar in 2007 and 2008, and another different period 'subsequent to' them.

4.2 Appearance of the integrative paradigm of Kretchmar: necessary interdependence and cross-disciplinarity

In 2005, Kretchmar offered an integrative view of Kinesiology through the metaphor of a river (Kinesiology) with many workers (subdisciplines) positioned along its banks. All of them were located in different positions, but all of them were also working with the same river (Kretchmar, 2005, 173). It was another integrative image, similar –for example– to that of the house with many rooms that had already been given by Park (1998).

Later, in his publications of 2007 and 2008, Kretchmar created an effective integrative theory, developed from integrative theories proposed by others in the preceding years.

For him, the meaning of each subdiscipline could be found, largely, in the other subdisciplines and professions. For that reason, he deemed it necessary to look at analytic scientific disciplines ("upstream" in his metaphor) and also at humanities, social sciences, professions, and real forms of physical activity in society ("downstream").

So no matter where we set up our laboratories along the banks of the river, you and I will always need to look upstream and downstream to see what is going on in those places. We might need to build mobile laboratories so we can venture down to the bay or get up to the headwaters with an eye toward how we might better use our own tools of investigation and better frame our work that tends in physiological, biomechanical, philosophical, medical, or pedagogical directions. The fact that water is ambiguous does not bother us. That is the way water has always been. It is just that we have not always been able to see it –

that is, not until we moved out of our silos and down to the banks of the river. (Kretchmar, 2007, 381).

Any researcher, he said, needed to understand the conjunct in order to give meaning to her/his parcel of knowledge and to her/his research. Thus, for example, he said, "Genetic expression related to movement cannot be fully understood without acknowledging what happens (and happened) in human history and culture" (Kretchmar, 2007, 381).

Hence, humanities, social sciences, scientific subdisciplines, and professions are thus integrated in a conjunct, according to a clearly cross-disciplinary view of knowledge and research (Kretchmar, 2007).

Kretchmar (2008) also understood the need for and value of the stage of subdisciplinary research (started in the 1960s), making a splendid interpretation of the contribution made by subdisciplines, which had raised the level of research and the prestige of the academic world in the previous decades. It was a productive and beneficial stage characterized by what Kretchmar calls "silos" and "bunkers". Bunkers were refuges for defending oneself against certain attacks of the academic world. As Kretchmar (2008) said, Kinesiologists thought that their traditional focus –exercise, sport, dance, leisure– limited their influence, so that the accusation from part of the academic world of a supposed triviality of play had as a consequence the creation of a bunker consisting of focusing their research on health themes treated through the frame of physical activity, and on researching not only into recreational physical activity (their traditional object of study), but also into utilitarian physical activity:

Bunkers too have been criticized. They make us look defensive, apologetic, even paranoid. The bunker of utility, some have said, has promoted an overemphasis on the duty of movement at the expense of joy and serendipity. The bunker of redefinition has won breadth at the cost of specificity –that is, it has stimulated an expensive redirection of attention from the activities that really matter to people to movement in the abstract. (Kretchmar, 2008, 4).

In any case, according to Kretchmar, by 2008, "the silos age" was already over in research, the paradigm of analytic research was being attacked in most fields in general, not only in that of Kinesiology:

Silos present practical problems related to fractionation, poor communication, and a lack of mutual respect. They also are grounded in a research paradigm that features subdisciplinary independence, a paradigm that is increasingly coming under attack. The bunker of utility might cause us to mistake one part of the value of movement for the whole and thereby produce a profile that is unduly health fixated, sober, and serious. Our tendency to abstract movement from the cultural forms of activity in which we find it drains life and vitality from skilful performances. I conclude by recommending that silos and bunkers will continue to be useful in the years ahead, albeit less so. I recommend a

brand of kinesiology whose silo walls are lower and more permeable, whose spirit is more playful, and whose researchers and practitioners interact more democratically, with increasing levels of interdependence and humility and with a higher degree of mutual respect. (Kretchmar 2008, 4).

He added that research in the present and in the future should be essentially cross-disciplinary, because that is the kind of research that allows a better study of the real complex questions. Subdisciplinary research will continue to be necessary, he said, but in a second place. For that reason, all those departments where subdisciplines have a greater weight will have to reorganize themselves, since "expertise at only a few points along the research spectrum will severely limit one's ability to answer complex questions" (Kretchmar, 2007, 380).

4.3 Kretchmar's influence

In the years immediately preceding the publication of Kretchmar's works in 2007 and 2008, some authors proposed theories similar to those of the 1990s, though less aggressive. Two of them were the positivists Overdorf (2005) and McKenzie (2007), in favor of focusing on health as the sole aim of Kinesiology. Besides, Reeve (2007) agreed with the idea of unity of the subdisciplines. Tannehill (2005), an educator, was against subdisciplines, and thought that Kinesiology should center on developing a Physical Education attractive and useful for children and youngsters. From a humanist perspective, Johns and Tinning (2006) tried to give more importance to Social Sciences.

After the publication of Kretchmar's work (in 2007 and 2008), there was a general change in the ideas of authors, as they came to give more importance to integration, interdependence, and respect. For example, Clark (2008) emphasised the need for mutual interdependence among the several disciplines and professions of Kinesiology. Hatfield (2008), for his part, declared himself a great adept of Kretchmar's ideas, using the expression "e pluribus unum", because the understanding of Kinesiology requires an integrative view of disciplines and professions, "from DNA to Social Systems" (Hatfield, 2008, 154).

Thus, after Kretchmar, humanists seem to dare to expound their claims more intensely. It is as if the victory –or hope of victory– of Kretchmar's paradigm had opened the road. Hence, for example, Tinning (2008) emphasized the importance of pedagogy within Kinesiology, for its capacity for integrating different basic disciplines (such as human biology and social anthropology). Hooper (2008) called for the introduction of non-positivist qualitative methods in the social sciences of Kinesiology (a claim that has also been made in Social Sciences in general). Andrew (2008) was more radical in his statements, denouncing that in the harder times of the predominance of the subdisciplinary paradigm everything was dominated by predictive, quantitative, and positivist methodology. Now, he proposed interpretative, qualitative, and post-positivist methodologies. In a similar line, Chunlei Lu (2009) suggested the union of Western positivist epistemology to Eastern qualitative epistemology. For his

part, Wilde (2010) acknowledged the importance of history and its methodology (narration, case study) for the formation of the managers of Kinesiology, since the first managers of American sport were formed in the Boston Business School with methods designed by professors of History.

Larsson and Quennerstedt (2012) were in favour of including the sociocultural and phenomenological perspectives, together with the biomedical, biomechanical, and psychological ones. Lund (2010) adopted the aims of the pioneer Amy Morris Homans and spoke of aspiring to "touch the mind, body, and spirit of those that we teach or interact with and instil in them a passion for moving and being active" (Lund, 2010, 320).

Twietmeyer (2012) said, with words rather similar to those already used by Anderson (2002), that Kinesiologists should get involved in humanities, because humanities will help Kinesiology to reach a more complete understanding of the human being. Moreover, he added that Kinesiologists should acknowledge the importance of the experience of physical activity.

Abraham (2011) has even proposed the use of Social Sciences (such as Cognitive Psychology and Pedagogy) for the study and practice of Sport Coaching (Abraham, 2011, 367).

Kühn (1962, 158) had stated that a paradigm imposes itself by its capacity for winning over the scientific community, not by having proved its efficiency, and Cunningham (2002) said that the start of change in an organization depended on the level of satisfaction-dissatisfaction of the several groups or tendencies that existed within it; change would occur if dissatisfaction was predominant, and the direction of change would be marked by a paradigm that was able to create hope in the scientific community.

During the subdisciplinary paradigm period, dissatisfaction has been noteworthy in Kinesiology, as shown by the debate studied in this article. The influence and capacity of Kretchmar's paradigm to win over the Kinesiology community seem to be considerable.

5 CONCLUSION

In the recent history of American Kinesiology three stages are observable: the stage of development of the subdisciplinary paradigm (1964-1990), the critical stage (1990-2005), and the pacification stage (2005-2014).

In general, the first stage saw the appearance of all subdisciplines (with some exceptions such as Exercise Physiology –that had already been developed– or Sport Sociology –that was not consolidated until much later–). Yet, not all of them followed the same model of development.

In any case, it was perceived by many that the subdisciplinary paradigm was biased in favour of scientific subdisciplines, the appearance of humanistic subdisciplines being rather scarce.

The debate was unleashed in 1990, when many thought that the deficiencies of the subdisciplinary paradigm could not be allowed any longer. That paradigm was denounced as inadequate for the preparation of professionals and for the very understanding of physical activity. The positions at that time were two:

those who were in favour of the subdisciplinary paradigm and those against it.

Those in favour held that position either because they believed in the interdependence between subdisciplines and professions or because they liked the idea of an academic development independent of its efficiency for preparing professionals. Those against grouped in their ranks educators, humanists, cross-disciplinarians, critics of the university, etc.

The debate lasted from 1990 to 2005. Immediately before the publication of Kretchmar's works (in 2005, 2007 and 2008) there still existed (and continued to appear) theories similar to those of the 1990s, though less aggressive. The debate showed the differences between transigents and dogmatics, positivists and humanists, general educators and biologist educators, cross-disciplinarians and subdisciplinarians, non-Kretchmarian integrators and Kretchmarian integrators, critics of the university and those who agreed with the university.

Kretchmar offered the most satisfactory integrative theory of all those proposed since the 1980s, unveiling and valuing the positive aspects of each paradigm, declaring the necessity of all of them (and of their methodologies). In Kretchmar's theory the following participants are essential:

a) humanists, because they give Kinesiology the capacity for getting a more complete understanding of the human being, society, and physical activity.

b) educators and professionals, because professionals know the real image of physical activity in society, and their knowledge helps educators to choose the research issues that really matter to society.

c) positivist-subdisciplinarians, because the subdisciplinarian model of scientific production (the huge number of articles produced) has allowed Kinesiology to reach prestige.

d) cross-disciplinarians, because the cross-disciplinarian research model has become the dominant one, and because it will become still more important in the future, since it is the most adequate for solving the real problems of society.

After Kretchmar, authors give more importance to integration, interdependence, and respect, and humanist-content theories have a greater presence.

Together with Kretchmar's integrative paradigm, the other important alternative paradigm today is the non-positivist subdisciplinary one, as formulated by Reeve (2007). Reeve did not speak of a change of paradigm, he simply observed that the predominance of the subdisciplinary paradigm since 1964

was a fact, and expressed his satisfaction in the high level of research achieved by the subdisciplines, the humanist ones included, and drastically separated subdisciplines from professions (he said that Kinesiology was "science-based" oriented, "with professional applications" (Reeve, 2007, 1)).

Kretchmar gives a response to reality, but at the same time interprets and orientates that reality. Reeve, on the contrary, does not interpret reality, he does not have the capacity to integrate the different subdisciplines, methods, and professions. They are two opposed models; Kretchmar is interpretative and idealistic whereas Reeve is pragmatic and realistic.

The victory of Kretchmar's paradigm would mean a shift towards the desired unity, that of the non-positivist subdisciplinary paradigm would mean conformity with the traditional situation.

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