

# The disciplinary movement in North American physical education: contributions and limits to the structuring of the scientific field\*

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## Abstract

This article summarizes aspects of the process of disciplining physical education (PE) in the United States, to provide elements for thinking about relationships between science and education in markedly reflexive parameters. In this way, we seek to restore some of the founding elements of the disciplinary movement of North American PE, as well as to identify its contributions and limits to the structuring of the area as a scientific field. In methodological terms, the study was configured as theoretical-bibliographic and exploratory. Based on this design, articles and book chapters from national and international literature concerning the epistemological debate on PE were initially mobilized and, later, the information was analyzed based on Pierre Bourdieu's theoretical framework. In conclusion, it is emphasized that the disciplinary movement in North American PE has brought significant advances and contributions to place PE in the hierarchy of science and, at the same time, justify its existence in higher education. However, despite these productive aspects, the PE disciplinary movement could not contain the side effects of the proposed organizational dynamics, especially concerning the fragmentation of PE in different subareas that not only communicate little but also compete for the definition in the field. In any case, the disciplinary movement, recognizing in human movement the common connector of the different research fronts in the area, not only induced but made credible the process of organizing PE as an autonomous science.

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\* The author take full responsibility for the translation of the text, including titles of books/articles and the quotations originally published in Portuguese.

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## Introduction

It is well known that physical education (PE) has long occupied a marginal position in the academic-scientific scenario. Along this path, in different parts of the world, efforts focused on demarcating and justifying PE in the university hierarchy have stood out in the academic scene, *challengers* who have dedicated most of their careers to elevating the role of PE, not only in the academic context but also in society at large. Among these *challengers* who tried to propose models to better scientifically demarcate PE, one can mention the efforts of researchers such as José María Cagigal in Spain, Manuel Sérgio Vieira e Cunha in Portugal, Jean Le Boulch and Pierre Parlebas in France, and Go Tani in Brazil with the defense of kinesiology (SOUZA, 2021).

In the United States, the situation was no different and, at a given moment, researchers needed to rethink the scope of PE to enable better insertion of the area in the scope of higher education. In the wake of this movement, a series of agents, among them Franklin M. Henry (1964), acted to defend and emphasize the need for PE to be configured as an academic discipline, assuming a specific body of knowledge that would legitimize it as a scientific area. In general terms, this initiative, carried out especially by Henry, would become known worldwide as the “disciplinary movement”. Among the objectives of this movement was the axiomatic attempt to address the contents and themes concerning PE through scientifically validated methods and precepts, which would result in academic-disciplinary restructuring of the area within university institutions. Therefore, through this proposal, it was hoped that PE could justify its relevance in university and knowledge production spaces, raising its status not only in the scientific field but in society in a broader way.

It is worth recognizing that in the 1960s, the disciplinary movement in North American PE brought significant changes in the trajectory of the area, especially by raising the discussions of an epistemological nature in the field to a new level, insisting on the organization of an academic discipline that would dialogue with different segments of science – including the natural and human sciences. Despite, however, the advances achieved by the PE disciplinary movement in the United States in this period, it is not pertinent to deny the occurrences preceding this episode, nor those that came later, since both aid in the understanding of the foundations that led to the constitution of the dynamics raised, as well as the unveiling of the consequences triggered *a posteriori*.

Thus, aware of the importance of revisiting the process of disciplining PE in other parts of the world (SOUZA, 2019, 2021) – in particular, because this exercise provides comparative elements to think about the relations between science and education in markedly reflective parameters – in the current work we aim to restore some of the founding aspects of the disciplinary movement of North American PE, identifying its contributions

and limits to the structuring of the area as a scientific field. In addition, throughout the article, we will seek to identify side effects triggered by the organization of PE as an academic discipline, as well as point out some of the internal disputes between researchers in the area resulting from the scientificization process. In this way, the research hypothesis is that this process started in 1960, with the organization of the academic discipline of PE, which contributed significantly to the advancement of the area, even if the dilemmas of the constitution of this specific field of knowledge were not equalized.

## **Theoretical-methodological aspects**

In methodological terms, this article is characterized as a qualitative, theoretical-bibliographic, and exploratory study, with relational activation proposed to broaden understanding of the phenomenon in question. The support material used to carry out our analyses consisted of the resumption of articles and book chapters that corresponded to the delimited object and, in a central way, provided the bases for our effort of theoretical reinterpretation of the facts.

With this horizon in mind, we organized and developed the theoretical analysis proposed here in three moments, to reveal some of the historical occurrences manifested in the field of North American PE, aiming to reach a more structured and advanced level of scientificization. To carry out this analysis, we use Bourdieu's theoretical framework (2003, 2004, 2007), providing the potential to identify some of the stages and ruptures instituted in the field of North American PE, as well as to highlight the decisive functional weight exercised by some agents to scientifically organize the area of kinesiology.

Having demarcated this agenda, we seek in the first section of the text to make a brief digression about events that marked the embryonic period of North American PE between the 1880s and 1960s. Here, more precisely, we will discuss aspects of the genesis of the area and its relations maintained with different social institutions. In the following section, attention will be focused on occurrences referring to the period from 1960 to 1980, to point out the contributions of Franklin Henry and the specialization processes to compose the body of knowledge of PE as an academic discipline. Finally, in the third section of the article, we intend to address some of the side effects triggered in the field of PE due to its scientificization. In this last moment, our focus will be on the post-1980 period, highlighting some of the current aspects.

## **The embryonic period**

According to Paul (1996), it was in the 1880s that PE began to acquire the contours of a specific field of knowledge, when modern North American higher education itself began to be organized more systemically in the social structure (RIBEIRO, 2016). This materialized when gymnastics became central to other bodily activities performed in the North American context (MCCULLICK; LOMAX, 2000; VLČEK, 2011) so that the practice of regimented exercises to develop physical fitness (THOMAS *et al.*, 2017) became the subject of a more systematic debate. However, this field of knowledge, that was beginning to

delineate its trajectory more intensely, did not have an organization or coherence around its objectives, referring to multiple philosophies and training systems that reflected the absence of a common theoretical structure.

In this sense, the formalization of PE became a necessary undertaking, since the social fabric awaited prerogatives of the area beyond the educational dimension in the broadest sense. The political, economic, social, and cultural conjuncture of the time contributed to the existence of objective conditions for this proposition. According to Schultz (2016), some external or macrostructural factors corroborated in the urgency of formulating a cohesive PE discipline around explicit foundations, among which it is possible to mention the processes of modernization and industrialization, which led to a decrease in the number of daily exercises mobilized in society. In the period before the First World War, America, in addition to the militarization process, demanded the development of soldiers' physical aptitude. Another related aspect was the high rate of immigration faced by the United States, so that physical and sports activities became a kind of antidote to foster nationalist values in immigrants who entered North American society (AZZARITO; MUNRO; SOLMON, 2004; MCCULLICK; LOMAX, 2000; SCHULTZ, 2016).

It is also worth noting that in this period, most professionals prepared to work with PE came from private colleges (SCHULTZ, 2016) since in this context public higher education was still quite rare (DOUGLASS, 2010). Not only were those responsible for teaching these courses predominantly physicians, but the curriculum of the courses contemplated, to a large extent, the knowledge arising from this field, such as anatomy, physiology, anthropometry, etc. In the wake of this medical influence in the area, the first steps to institutionalize and legitimize PE took place in 1885 with the creation of the Association for the Advancement of Physical Education, and its membership was composed of doctors (GUEDES, 2007; PARK, 2007). In 1886, the newly created association launched the *American Physical Education Review* intending to disseminate professional knowledge in the PE field (PARK, 2007; SCHULTZ, 2016).

In 1890, in one of the conferences of the aforementioned association, the physician Luther Halsey Gulick<sup>2</sup> declared PE as a new profession that involved deep knowledge of man through physiology, anatomy, psychology, history, and philosophy (PARK, 1989). Thus, it can be said that from Gulick's systematic actions, the disciplinary organization movement of North American PE has a prehistory from before the 1960s, and it is, therefore, necessary to nuance this analysis in the light of the long-term historical context. Furthermore, between 1880 and 1900, the development of PE as an area of knowledge/professional practice was associated with the idea of satisfying the physical needs of North American society, which began to increase its population contingent in quantitative terms (MCCULLICK; LOMAX, 2000; PFISTER, 2009), suggesting a link between the area and the contribution of the natural sciences.

At the beginning of the 20th century, this scenario changed in some ways, and PE, with relative notoriety in North American society, took on new contours. This assertion is corroborated when analyzing both the decline and the emergence of new trends in

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**2-** Luther Halsey Gulick (1865-1918) was a writer specializing in physical education, with an emphasis on teaching folk dance and recreational activities.

movement or bodily practices. According to Schultz (2016), it is possible to assess that while gymnastics, in a way, lost its characteristic of hegemonic corporal and educational practice, recreational and sports games began to stand out as emerging activities, including the insertion and participation of women, something unusual in the context of the time. For Sefton (1941), the “playful attitude” would promote the ideal of universal opportunity to participate in sports activities, countering a previous trend in which such practices were reduced only to male participation. Due to this new sports panorama, PE programs extended their training to prepare coaches, a scenario that remained until the 1950s, when a new professional and scientific paradigm began to be envisioned in the area itself (SCHULTZ, 2016).

In any case, to understand the paradigmatic changes in PE, it is necessary, in addition to locating the macrostructural determinations already mentioned, to analyze those dynamics triggered within the sphere of knowledge production (SOUZA, 2019, 2021) or, in other words, to expand the investigation of the determinations of science on the horizons of the area, a perspective that reached an inflection point in the post-World War II period, largely due to the circulation of Kuhn’s work, that produced effects in various fields of knowledge (MENDONÇA, 2012; SHAN, 2018). For Escada and Pereira (2012, p. 35), “[...] the work of Thomas Kuhn became a reference to the critique of the impacts of Science and Technology (S&T) on post-World War II society, also stimulating the production of new lines of thought and theoretical formulations to analyze the dynamics between knowledge and society”.

Therefore, this thesis that reveals and extols the importance of science in shaping a given historical context is also present in Stokes (2005), when he points out the relevance of the document *Science, the endless frontier*<sup>3</sup> prepared in 1945 by the director of the Office of Scientific Research and Development, Vannevar Bush, at the request of the president at the time, Franklin Roosevelt, which contained proposals for the continuity of scientific investment also in periods of peace or post-war, instituting a vision of basic science and technological innovation that would become the foundation of American science policy for decades to come.

In this sense, the document’s proposition affirming the continuity of the promotion of basic research illustrates, as well defined by Bourdieu (2003), the influence of an external logic in the configuration of a scientific field that, when acting as a system of objective relationships between historically acquired positions, would be a place of a competitive struggle for the search for the monopoly of scientific competence. In this sense, it could be said that the scientific organization of North American PE, like other fields, also benefited from these external dynamics that regulate scientific policy in that country.

It is not by chance that the scientific field of North American PE, once configured in dissimilar goals, began to review its organizational and structural form with the need to produce knowledge of the basic type, resulting, in the words of Calciolari Júnior and Soriano (2015), in a reorganization based on the belief that only basic research, carried out without practical and utilitarian ends, would generate desirable and equivalent technological

**3-** Also known as the Bush Report, this document brought with it an impact that is still felt on the organization of scientific activity in the United States and other countries, including Brazil.

progress, thus triggering a new scientific paradigm that categorically opposed basic science to applied science, in a dependence logic of the second typology about the first.

In turn, these changes in the scientific field, supported by the growing investment in basic science, caused the educational field itself to undergo decisive changes. During this period, the US State passed the *National Defense Education Act of 1958* – NDEA (CALCIOLARI JÚNIOR; SORIANO, 2015), fundamental for creating the draft legal instrument for the strengthening of basic research in universities, as recommended by James Bryant Conant. The same Conant (1968), by the way, defended the thesis that public education was extremely important for the new reality of the country, it being necessary to link scientific advances with teacher training courses, and to include in these courses and the basic education curricula more scientific and less pedagogical aspects. In short, the NDEA, due to its impact, can be considered the first institutional advance in the relationship between State, science, and university guided by the scientific paradigm of Vannevar Bush (CALCIOLARI JÚNIOR; SORIANO, 2015).

This succession of events, that led to greater endorsement of “scientific doing”, resonated in the North American PE with considerable intensity in the state of California, having representation in a movement that opened wide defense in the 1960s and the following decades on the validity of PE as a science, even justifying its permanence and participation in the higher education process in the United States, as we will examine below.

## **The scientificization of physical education**

It is risky to say that the 1960s and 1970s distinctly marked the historical trajectory of North American PE. Coincidentally or not, it is worth considering that this post-war period, between 1945 and 1970, is considered to be of optimism and relevance for higher education (BAUM; KUROSE; MCPHERSON, 2013), and also marks the moment of reformulation and massification of the North American educational system (MORAES, 2015), which focused on other social realities such as the Brazilian one, that influenced several areas of knowledge (PAULA, 2009). In the meantime, the decisive figure of Franklin M. Henry emerged, whose work was directed towards the broad defense of PE as an academic discipline, in an initiative that would become known in the literature in the area as the “disciplinary movement”. Among the actions that endowed visibility and popularity to Henry’s work in the North American context, was the publication of the famous text entitled “Physical education: an academic discipline” in 1964, which broadened the discussions about the scientification process of PE in the academic field. In other words, from this undertaking, it was possible to inaugurate the actions of a disciplinary movement that would be supported and complemented by the participation of a series of researchers (LAWSON; MORFORD, 1979; NIXON, 1967; RARICK, 1967; ZEIGLER; MCCRYSTAL, 1967).

In general terms, this disciplinary movement aimed, among other things, to affirm PE as a science, seeking to distance itself from the idea that the discipline had only the characteristics of a technical or professional course. In other words, although the North American educational field did not fail to respond to the pressing demands of the consumer society (PAULA, 2009), it was still necessary for the areas to justify their



academic value. One did not necessarily exclude the other. Therefore, it was necessary to rethink the restructuring of a body of knowledge that could better sustain the breadth of PE, to endorse and legitimize the scientific nature of the area. It was with this aim in mind that Henry (1964) proposed reprogramming the disciplinary structure of PE training spaces in higher education.

In this sense, instead of maintaining the interdisciplinary character of the area, that is, continuing with the model that places PE as a field that only receives knowledge provided by other disciplines, namely, anatomy, physiology, psychology, education, anthropology, sociology, etc., without an effective contribution from the area, leaving it to remain in a position of subservience in the face of such disciplines, Henry (1964) suggested altering the PE development structure as a field of knowledge, establishing a transdisciplinary character with other disciplines. That is, PE would be made up of certain portions of these disciplines, and it would be part of the discipline to integrate and expand these contributions (TANI, 1996) around its object of study, human movement.

It should be noted that this new proposal for the configuration of PE emerged much more as a necessity than as an idea of academic distinction on the part of the theorists of the disciplinary movement, since the area was at serious risk of exclusion from higher education. That is, if other areas of knowledge had already established a position in higher education, PE still felt the need to epistemologically justify its relevance in the American educational and social context. In other words, Henry was really worried about the fate of PE, a concern that intensified after the outbreak of two episodes that signaled a possible decline in the area in the North American academic-scientific field (CALCIOLARI JÚNIOR; SORIANO, 2015; NAKAMURA, 2011; TANI, 1996).

The first episode was due to the Fisher Act proposed by the then-senator from California, Hugo Fisher, which dealt with the separation between courses considered academic and non-academic (CALCIOLARI JÚNIOR; SORIANO, 2015). The second major threat to the PE academic space came through the bravado of James Bryant Conant, in the book *The education of American teachers*, in 1963, in which the lack of scientificity in the area was alleged, including, therefore, the defense of its exclusion from graduate programs. According to Rose (1986), the events in California produced a challenge for the area and PE became a recurrent target of attacks. Familiar with these advances, Henry (1964) declared that the PE profession urgently lacked academic disciplinaryity, something that everyone, to some extent, recognized and accepted at that delicate moment in the area.

Faced with this situation, the stimuli based on the discussions by Henry, Conant, and Fisher impelled the members of the American Academy of Physical Education (AAPE) to rethink what should constitute a valid body of knowledge for PE. In this wake, Schultz (2016), in inventorying the Big Ten Body-of-Knowledge Symposium<sup>4</sup> as one of the driving forces of the disciplinary movement, points out six areas of specialization that could be preliminarily identified in its scope: (1) administrative theory in athletics and

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**4-** The *Big Ten Body-of-knowledge Symposium* (or Symposium of the Ten Entities of Knowledge, in free translation) is an event that became known for fostering debates about the constitution of the body of knowledge of the PE discipline in the United States. The event that began in 1930 was named that way because it had the participation of ten North American institutions, namely: Illinois, Indiana, Iowa, Michigan, Michigan State, Minnesota, Northwestern, Ohio State, Purdue, and Wisconsin. This meeting that took place annually in each of the universities also contributed to the actions of the disciplinary movement. For further clarification, see Zeigler and McCristal (1967).

physical education; (2) biomechanics; (3) exercise physiology; (4) history and philosophy of physical education; (5) motor learning/sport psychology; and (6) sociology and sport. This new, broadly taxonomic distribution in PE gave the different subgroups of the area the possibility of creating their journals, as well as offering a range of specialization courses that would help to intensify scientific production and raise the notoriety of the PE field. Despite this reconfiguration of the area having conferred a greater degree of scientificization to the discipline, some collateral effects of this reorganization could not be fully controlled, since the field still felt great difficulty in equalizing the actions of the scientific space with the space of practice of interventions.

For Schultz (2016), there was yet another consequence of the disciplinary movement, namely: the process of fragmentation of the area. Overall, one of the main products of this ultra-specialization landscape was the independent path that many of the sub-areas chose to follow. Therefore, the different regions of the countryside, instead of integrating knowledge for a more holistic understanding of human movement, ended up developing very vertical lines of intervention (SOUZA, 2021). In this vein, still according to Schultz (2016), many physical educators at the time had a kind of fear regarding the possible exhaustion of those interested in the area, since researchers in the subdisciplines could easily belong to departments of Physiology, Physics, Biology, History, Sociology, Philosophy, and Psychology, thus making PE departments obsolete in the eyes of university campus administrators.

In line with the dynamics of fragmentation of the area (GREENDORFER, 1987), there was also weakening of the physical education terminology itself, giving rise to a plurality of nomenclatures (CORBIN, 1993), which were closer to the respective subareas that orbited around the discipline rather than the area itself, such as the departments of Exercise Science, Sports Science, Sports Studies, Human Kinetics, Kinesiology, etc. (SCHULTZ, 2016). In addition to the diversity of names for the area, another visible side effect of fragmentation was the decline in the number of programs dedicated to teacher training in the pedagogical field until the early 1980s, as a result of disagreements and internal disputes in the field largely linked to institutionalization of the new subdisciplines (RARICK, 1967). This indication of the current transformation in the area, or rather, of the fragmentation of the components of a discipline in multiple subdomains is verified in the scientific institutions linked to PE, as can be observed in the following table that lists the North American organizations related to the area in the 1960s and 1970s.

**Table 1 – North American Scientific Organizations of the 1960s and 1970s**

Year	Entity
1967	International Society for Biomechanics in Sport
1968	North American Society for the Psychology of Sport and Physical Activity
1972	North American Society History of Sport
1972	Philosophical Society for the Study of Sport
1973	International Society of Biomechanics
1974	The Association for the Study of Game
1978	North American Society for the Sociology of Sport

Source: Schultz (2016, p. 47, tradução nossa)



As it is possible to identify from the information in the table, the different occupations of scientific organizations denoted that the PE field was beginning to be divided into different specialties. More than that, this plurality also outlined the need for a common thread that could better organize the area. It was in this bulge that the efforts of Henry (1978) were inserted, who at the end of 1970 defended the potential of kinesiology as the distinctive scientific area that best represented and aligned itself with PE.

In this way, the process triggered by Henry with kinesiology gained supporters as well as opponents who alternated in successive attempts at epistemological reflection on the area, increasing in part the tension between peers in the field of North American PE. Let us now look at some of these theoretical tensions and, above all, side effects related to the disciplinary movement.

### **Side effects of the disciplinary movement and criticism of kinesiology**

According to Lawson (1991), from the 1980s onwards, those agents adept or sensitive to the disciplinary movement in PE began to provide alternative views on the field of knowledge, in addition to suggesting new nomenclatures, concept associations, academic specializations, etc., largely anchored in the “disciplinary proclamation” made by Henry in the 1960s. In order, therefore, to aggregate the dissimilar approaches, the concept of kinesiology (or kinanthropology) was presented as an epistemological claim and a common denominator for the area so that professional applications would be concerned with human beings on the move. For Renson (1987), the concept of kinesiology can be explained as “the science of humans in movement in the context of sport, play, dance, physical exercise, work [...]. Instead of the mere application of knowledge borrowed from the so-called mother disciplines, this holistic approach integrates the physical-organic, motor, and behavioral components” (RENSON, 1987, p. 86, our translation).

With the recognition of kinesiology in the academic-scientific field, not only undergraduate and graduate programs could be designed and developed, but also new scientific journals. In addition, kinesiology gained such functional weight that departments, in committing to the development of this discipline, largely suppressed the term physical education. In this context, among the arguments for the use of the term kinesiology, Newell (1989) highlights that this concept had a more adherent relationship with the field, since the terminology used showed a more academic, succinct, and neutral texture when compared to other competing assumptions and directives<sup>5</sup>. Therefore, at this point, several academic institutions were already beginning to use the term kinesiology to name their departments.

Given the scenario, could one then imagine a certain consensus spreading in the field, with kinesiology as an internal referent? Not necessarily, after all, there are

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**5 -** Very present in the understanding of science by Laudan *et al.* (1993), the guiding assumptions can be understood as theories, statements, hypotheses, methodological procedures, among other conceptual structures that manifest themselves as proposals or alternatives within the academic-scientific field. So here the guiding assumptions concern the other synthetic proposals/notions for PE that were emerging at the same time as kinesiology in other contexts.

indications that this path was not so peaceful and free of ambiguities. In this wake, it is important to recognize that, despite the term kinesiology (not only the name but its paradigmatic “baggage”) being established, in fact, in some centers and teaching spaces, many resisted (and still resist) the change (BRACHT, 2003b; SIEDENTOP, 1990, 2002). Therefore, in the face of this lack of consensus, epistemological tensions intensified within the field, as reported by Sparkes (1992, p. 10, our translation) who argues that: “In the late 1980s, the signs of this debate began to appear with increasing frequency in a range of academic journals”.

Renson (1989), in turn, offers a table of publications made between the late 1960s and the late 1980s (Chart 2) that demonstrates this increase in the number of scientific productions aimed at the epistemological debate on PE. Despite the centrality of such productions for the scientific development of the area, it is also noticed that there is particular interest in them and that, to some extent, they overlap with the effort to internally demarcate PE, since, in addition to the epistemic race to organize the area, there was a search for status and legitimacy in the academic space, or even a dispute for the symbolic power that permeates the field (BOURDIEU, 2007).

**Chart 2 –** Chart of publications on the PE crisis

Title	Authors
Is the term physical education obsolete?	Sage (1969)
Where are you going, physical education?	Wrenn; Love (1973)
2001: The profession is dead – was it murder or suicide?	Bressan (1979)
Physical Education: A House Divided	Harris (1981)
Has the name, physical education, outlived its usefulness?	Ojeme (1984)
Specialization + Fragmentation = Extermination: a formula for the end of Graduate Studies	Hoffman (1985)
Physical Education and Paranoia: Synonyms	Thomas (1985)
Is there a physical education discipline?	Rose (1986)
Are we already in pieces or falling apart?	Thomas (1987)
Specialization, fragmentation, integration, discipline, profession: what is the real problem?	Greendorfer (1987)

Source: (RENSON, 1989, p. 237).

It is opportune to reiterate, from Bourdieu (2007), that the existence of conflicts and tensions is something inherent to any social field, and it is necessary to historicize the specificities of these struggles in each of these universes. In the case of North American PE, this combustion process, which ignited the scenario, reverberating, therefore, in disputes particular to this very microcosm, continued to strengthen in subsequent years through debates in scientific spaces. Newell (1989, 1990, 2007), for example, was one of the authors to continue this debate, being one of those responsible for covering much of the epistemological discussion in the area, which was inaugurated in the productions

of Henry (1964, 1978). Within this context, Newell sought to print a critical reading on the directions of North American PE, indicating in his undertakings that the area was developing in a disorderly way, given the plurality of conceptions that began to emerge in the field (RODRÍGUEZ-LÓPEZ; VICENTE-PEDRAZ; MAÑAS-BASTIDA, 2016). This miscellany, roughly speaking, of directive assumptions was reflected in the labels of the main departments until the 1990s, as the author demonstrated in one of his main texts, namely, “Physical education in higher education: chaos out of order”<sup>6</sup>. In the following excerpt, Newell’s criticism of the supposed chaos that was being indicated in the field of North American PE is clear due to the lack of a minimum consensus:

I do not claim that this list is complete for academic departments in the United States, but captures most of the current departmental labels for the field of study in this country and the world at large. The very fact that it can generate an extensive list of departmental labels is the most obvious reflection of the existence of chaos in the field of physical activity in higher education. Furthermore, the lack of order in academic programs is even worse than it appears on the surface because the same department label is often used to reflect different academic foci. For example, some sports studies or sports science departments do not limit their study focus to the “Sport” activity category but use the sports label to imply a variety of physical activities. (NEWELL, 1990, p. 229-231, our translation).

In turn, this condition, when analyzed by Bourdieu’s framework, suggests that the attempt to find a “structuring structure”, generating distinct and distinctive practices as a counterpart to this predominant eclecticism in the field of PE, was something that was at the center of the epistemological concerns of the area in the United States. It is important to emphasize the relative success of kinesiology in decompensating these dispersive effects in the area, although it should also be recognized that the institutional arrangement of the discipline in the country did not follow a convergent and unison process, given that its federative units not only provide considerable autonomy but also articulate in different ways the internal logics of undergraduate and graduate courses (NEWELL, 2007; TWIETMEYER, 2012).

Furthermore, it is important to emphasize that this process of epistemological demarcation in the field of PE never ends (SOUZA, 2021) and that many researchers continued (and continue) to focus their efforts on this agenda, following in Henry’s footsteps, or going in the opposite direction, taking him as a reference. This is the case, for example, of Siedentop (2002, p. 374, our translation) when he argues that “[...] the discipline of kinesiology is not taught in schools and, therefore, the discipline cannot logically serve as a knowledge base of content for pre-professional preparation in education”. In general terms, for the author, kinesiology would not be able to bridge the gap between the scientific field and pedagogical intervention.

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**6-** “Physical education in higher education: chaos out of order” (our translation).

This type of criticism that opposes the triad “theory-pedagogy-education” to the triad “science-technique-profession” has made its mark in North American PE,<sup>7</sup> as it seeks to draw attention not only to the excessive specialization that kinesiology has induced within its subdisciplines, as well as for its distance from PE practice. As Bulger, Housner, and Lee (2008, p. 44, our translation) put it: “an unfortunate consequence of the movement, in seeking this specialization, was the fact that many programs reduced what were believed to be crucial components of an educational curriculum to open space for scientific work”. In other words, this scenario of ultra-specialization in which kinesiology found itself immersed ended up focusing on the lack of a greater alignment between the fields of investigation and intervention in the PE area, since without an internal synthesis in the context of the scientific field to articulate the biodynamic, sociocultural, and pedagogical aspects of the human movement, it became difficult to derive pedagogical models that supplanted regionalisms and false oppositions (SOUZA, 2021).

It should be noted that, on our part, this criticism does not call into question the recognized scientific contribution of the discipline for the PE field, but only the gap that seems to be established with practice, especially school PE, that is, “when the kinesiological content does not support pedagogical strategies applied in K-12 programs<sup>8</sup>, with misalignment” (BULGER; HOUSNER; LEE, 2008, p. 45, our translation). In turn, this epistemological tension not only reflects a scenario of disputes over symbolic capital in the context of North American PE but also maintains relations with the configuration of PE in other parts of the world, such as Brazil, where, to some extent, this theoretical debate ended up being important, since the reverberations of this discussion were felt in the country, in particular in the figure of those who took a position in favor of or against the disciplinary movement. As suggested by Massa (2002, p. 30):

Much of what is discussed concerning the identity crisis of physical education is of North American origin. Although it seems something out of our reality because it is a different socio-cultural and economic context, we can observe, by the depth of the discussions that will be addressed, that the similarity between the history of physical education in the United States and the one that is manifested and/ or manifested in Brazil is remarkable.

Manoel and Carvalho (2011, p. 391), in turn, not only endorse this understanding of the North American influence on the academic characterization of PE in Brazil but also state that “the beginning of this process took place with the creation of postgraduate programs -graduation in the area between the end of the 1970s and the beginning of the 1980s”. Arguably, in other terms, it can be said that the scope of the disciplinary movement initially conceived by Franklin M. Henry to confer scientific legitimacy to the area transcended North American borders and impacted the being, thinking, and doing of PE in other places on the globe.

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**7-** In Brazil, the equivalent of this process found its most systematic proposing effort in Valter Bracht. For further details see Bracht (2003a).

**8-** K-12 Programs (pronounced “kay twelve”), Kindergarten through Grade 12, an American expression that indicates the number of years of primary and secondary education found in the United States, similar in several other countries such as Afghanistan, Australia, Canada, Ecuador, Egypt, India, Iran, Philippines, South Korea, Turkey.

This influence, however, is not deprived from ambiguities and one of the potential side effects triggered from this perspective was that the effort to demarcate the study of human movement into specialized dimensions (biological, cultural, pedagogical, etc.) was watertight, from which the different researchers, research groups, and institutions were based on their reflections to the detriment of others. In addition, by advocating a vertical hierarchical relationship between kinesiology (basic science) and PE (applied pedagogical branch) (SOUZA, 2021), the disciplinary movement helped to reinforce the distance and lack of communicability that seems to exist between the postgraduate structure, *strict sense* graduation, and the graduation structure in the PE field, that is, between the PE that is researched and the PE that is taught in the context of initial training.

## **Final considerations**

Following the development of PE in the North American context raises numerous doubts, mainly in the purpose of questioning whether, after the disciplinary movement, there continued to be a more systematic interest on the part of the agents in trying to overcome the tensions and the problems of regionalization prevailing in the interior of the country in the PE field. In other words, the feeling is that many preferred to continue acting from the perspective of their specialties rather than facing this problem. It is noted that the tensions related to this debate were not restricted to the elaboration of the epistemological problems in question, but also reflected elements of an external logic, representative of personal/oligarchic interests (SOUZA, 2021).

It would not sound incorrect to assess that the contributions provided by kinesiology advocates were numerous in the development of a scientifically oriented and specific field of knowledge, although it should be noted that the PE area in the North American context remains heterogeneously configured in the courses and higher education academic curricula (RODRÍGUEZ-LÓPEZ, VICENTE-PEDRAZ, MAÑAS-BASTIDA, 2016; THOMAS; REEVE, 2006; TWIETMEYER; 2012). The lack of even a minimum consensus on which term PE should assume leads to a scenario of disputes for prestige and recognition in the academic-scientific field, on an international scale (SOUZA, 2019, 2021).

In terms of the scope of our analysis through the literature review and theoretical discussion carried out herein, it is worth noting that it was not possible to portray the current state of kinesiology in the United States. However, from this exploratory exercise it was possible to identify important information about the historical-scientific development of PE in the North American context; the impact of Franklin M. Henry's performance as one of the inaugural agents and defenders of kinesiology; and, in particular, on some of the side effects triggered by the process of academic disciplining of PE as a specific body of knowledge.

Thus, from this digression carried out here, it is possible to affirm that the trajectory of North American PE occurred in a non-linear and normative way, being surrounded by processes of historical continuity and discontinuity, characteristic aspects of spaces or fields that seek to grow their autonomy, after all, as Bourdieu (2003) asserts, a science with reflexive pretensions can only be restored by radically refusing the abstract opposition

between an immanent or internal analysis and an analysis external to the scientific field and, instead, proposing an investigation by relationships, since if “it is true that the real is relational, it may happen that I know nothing about an institution about which I think I know everything because it is nothing outside its relations with the whole” (BOURDIEU, 2007, p. 31).

In summary, it is worth reiterating that the disciplinary movement of North American PE brought significant advances and contributions to the academic-scientific development of the area on an international scale. Despite these productive aspects, however, this organizational structure was not able to align the different subareas in a common direction. That is, far from equalizing the dilemmas and tensions that were caused, to a large extent, by the context of fragmentation of science into broader parameters, the disciplinary movement, although internally coherent from the point of view of its epistemological options, did not meet the external conditions necessary of internal and external sciences, for the basic science of human movement to emerge and prosper more systemically in the field of PE.

In addition, in the midst of struggles for holding the capital at stake, organizing the PE field based on a minimum consensus became a difficult (but not impossible) task, since the various parties also began to compete for the position of the whole (SOUZA, 2021), signaling a dispute for supremacy that the disciplinary movement could not contain. In any case, the disciplinary movement, by recognizing in human movement the common connector of the different research fronts in the area, not only induced but made credible the process of organizing PE as an autonomous science. Nevertheless, even though it managed to delimit the specificity of PE and justify it in higher education, such a theoretical movement did not manage to mitigate the side effects arising from the framework of ultraspecialization within the scientific field. Indeed, this condition not only led to the formation of a scientific space of almost incommunicable realms but also had an impact on the distance between the academic field and the area of intervention (SOUZA, 2021).

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