

## EPISTEMOLOGICAL (RE)CONSIDERATIONS ON PHYSICAL EDUCATION IN BRAZIL FROM THE KINESIOLOGY OF THE UNITED STATES: A HORIZON BEYOND THE EPITHETS

### (RE)CONSIDERAÇÕES EPISTEMOLÓGICAS SOBRE A EDUCAÇÃO FÍSICA NO BRASIL A PARTIR DA CINESIOLOGIA DOS ESTADOS UNIDOS: UM HORIZONTE ALÉM DOS EPÍTETOS

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#### RESUMO

Este estudo discute reverberações teóricas que se destacaram no campo da Educação Física (EF) no Brasil diante das investigações epistemológicas demarcadas no âmbito da EF nos EUA a partir da década de 1960, e devido às contribuições do Movimento Disciplinar e ao contexto pelo qual a Cinesiologia se estabeleceu então como escopo no campo da EF americana. Foi realizada uma revisão exploratória da literatura com a seguinte questão norteadora: qual impacto dos desenvolvimentos epistemológicos da EF norte-americana na configuração da teoria geral da EF no Brasil? Nessa perspectiva, verificamos os autores do campo brasileiro que adotaram uma posição sobre as ressonâncias e limites decorrentes das conjecturas do campo científico da EF nos EUA. Através desta investigação, foram destacados alguns processos de inibição pelos quais a proposta da Cinesiologia não conseguiu aumentar reflexões no Brasil, com poucas exceções.

**Palavras-chave:** Educação Física, Epistemologia, Cinesiologia.

#### ABSTRACT

This study discusses theoretical reverberations that stand out in the field of Physical Education (PE) in Brazil in the face of epistemological discussions demarcated within the scope of PE in the USA from the 1960s onwards, and due to the contributions of the Disciplinary Movement and the context by which Kinesiology then established its position as a scope in the field of American PE. An exploratory literature review was carried out with the following guiding question: what is the impact of the epistemological developments of North American PE on the configuration of the general theory of PE in Brazil? From this perspective, we verified the authors in the Brazilian field who took a position on the resonances and limits arising from the conjectures of the scientific field of PE in the USA. Through this investigation, some processes of inhibition were highlighted by which the proposal of Kinesiology could not increase reflections in Brazil, with few exceptions.

**Keywords:** Physical Education, Epistemology, Kinesiology.

#### Introduction

It is understood that the epistemological organization of the field of Physical Education in Brazil, in its historical constitution, has encountered many obstacles to its consolidation as an autonomous area. Consequently, the task of responding to the social demands present in the places of action becomes arduous, since these same demands are renewed in parallel with the social contours of the world in metamorphosis, and PE, in turn, appears to be trapped in a sluggish discussion of specificity. Even though this lucubration is vital for the survival, structuring, and advancement of the area, some decades have passed without there being, in fact, the delineation of a minimum consensus - like in other more emancipated areas of knowledge - of an epistemological statute that could establish the scientific-professional agency of the field.

This experience of struggles in the justification of the field as an autonomous branch of knowledge is also vivid in other countries, such as the USA, which, especially from the 1960s onwards, experienced an intense crisis in the field<sup>1</sup>. To justify their place at the university and

safeguard their profession, intellectuals in the field engaged in an action later recognized as the American Disciplinary Movement (MD). Having as its main instrument the search for disciplinarity and the composition of a body of knowledge specific to the area, this movement orchestrated an important process of self-inquiry, taking the core of the field to another level of academic maturity. The scientific academic status, however, did not prevent the occurrence of several side effects that marked – and in some cases still mark – a strong presence in the epistemological itinerary of the field<sup>2,3</sup>.

Paying attention to the possible set of solutions that, hypothetically, would interrupt, among others, the infrequent process of hyperspecialization and the distance between scientific practice and pedagogical mediation, Newell<sup>4</sup> argues in favor of the generalized adoption of new contours for the area: “the study of physical activity in higher education should be uniformly called kinesiology at the levels of core program, degree title, area of study, and department title”<sup>4</sup>.

It is noteworthy that such a paradigm shift is already strongly underway in the country, since the request for disciplinarity was introduced by Henry<sup>1</sup>. As stated by Sage, the decades from 1960 to 1990 “are the three most significant decades in the development of Kinesiology as an academic discipline recognized in US universities”<sup>5</sup>. Even so, the argument put forward by Newell marked, to some extent, the advance of Kinesiology in place of PE within the limits of North American territory.

At the same time, the epistemological field of Brazilian Physical Education was historically marked by debates that encompass discussions about the different perspectives and theoretical conceptions of the area, also considering the 1980s and 1990s as a time frame for the effervescence of these questions, which came to be understood as the period in which PE's identity crisis was established, in which part of the academic environment yearned for epistemological guidelines and definitions for the area<sup>6</sup>. During this interval, there was a shift in the issues addressed in the area, based on concerns of an epistemological nature, in which themes about the production of knowledge and its scientific status gained relevance and space in the agenda of PE issues. These arguments came to encompass the search for “identity” in the area, where it was brought into question whether Physical Education was a science. These questions included matters such as: What is its object? What would be the place of PE in the knowledge scene? These diagnosed epistemological uncertainties were symptoms, which showed a state of an identity crisis hovering over the area<sup>7</sup>. The events that followed provoked a broad reflection to discuss and question academic identity, professional preparation, professional performance, research, and postgraduate studies in PE<sup>8</sup>.

It was in this scenario that new perspectives and aspects in dispute in the field of Brazilian PE were inaugurated, having at that moment two main groups in dispute in the academic scenario: one from the scientific aspect and the other from the pedagogical aspect<sup>7-9</sup>. The scientific aspect was characterized by the question of understanding that the PE crisis was of an epistemic order and the supporters sought formulations of an autonomous science, proper to Physical Education and less hostage to other sciences that historically gave it theoretical support<sup>7</sup>. It is in this context that space was opened for some theoretical currents to be formulated, aiming to build an epistemological identity “of” Physical Education and to confer scientificity to this area of knowledge. Kinesiology is inserted in this aspect, as well as the other scientific currents proposed for the area, namely the Science of Human Motricity, the Science of Human Movement, and the Sports Sciences<sup>7</sup>.

However, this historic moment –which was not limited to discussing specific PE problems, but which also allowed and stimulated discussions on broader issues, related to the philosophical matrix and propositions and formulations for the question of its scientificity, that is, about its epistemological status<sup>7,8</sup> – showed, at first glance, little concern on the part of coreligionist groups, in relating the internal events of the infamous crisis of the area with other

similar experiences, of epistemic reflection of PE, concomitant at a global level. With such perspectives in the background, the present study proposes some (re)considerations of Brazilian epistemology given the unfolding and possible influences arising from the paradigmatic revolutions of the field structure currently outlined in the USA as Kinesiology.

### **Theoretical-methodological aspects**

The present study developed here is based on an exploratory review. In general terms, as is understood in the literature, this type of research aims to allow the researcher a greater margin of action and autonomy during the selection of documents or information that may constitute the analytical field of their research<sup>10,11</sup>. In other words, the researcher can select the materials that he deems most relevant for the composition of his sample, thus being able to obtain the documents that are most related to the scope and objective of the work developed.

In terms of research procedures, the information and data that composed the discussions were selected from scientific articles, dissertations, theses, and other documents shared in academic events in the PE area. As a search criterion for the studies, the words kinesiology and epistemology were used as the main descriptors. After surveying the documents, the selected texts were those demonstrating an association with the epistemological debate or that had a close relationship with the study descriptors. The research was carried out through Google Scholar, using databases such as Scielo and Scopus, and the CAPES catalog of theses and dissertations, as well as research on the websites of the main Brazilian PE journals.

### **Resonances of kinesiology in Brazil: why, after all, could it not prosper as in the United States?**

As is known, Kinesiology Faced several barriers when being forwarded as a potential proposal for a scientific, epistemic, and pedagogical organization for the field of PE in Brazil. In general terms, like any other theoretical proposition aired in the area after the 1980s, with little adherence to the type of critical theorization that emerged in the sectors of the field that worked in dialogue with education, Kinesiology was often questioned or discouraged within the area, as also occurred with the proposal of Humanist Physical Education supported by Vitor Marinho de Oliveira<sup>12</sup>. In this context, while other propositions gained greater functional weight in the structure of the field and, to some extent, were able to influence the course of the discipline in contemporary times, Kinesiology was not able to leverage itself in an auspicious way, only demonstrating an influence in more isolated cases and the work of some researchers, as will be explained below.

There is no doubt that Kinesiology managed to establish itself or resonate with greater intensity on North American soil compared to in Brazil. However, to what extent could such an area still somehow be circumscribed in the Brazilian academic-scientific context? Despite some highly relevant research on the subject<sup>8,13,14</sup>, this issue remains unclear, since it permeates many aspects, especially epistemological issues that not only dynamized the PE debate but also highlighted some problems of correspondence of ideas between the different social agents in this field<sup>15, 16, 17</sup>.

In this vein, although Kinesiology has not established itself in the academic sphere as a unifying proposal with consensus between the different PE interfaces, in some contexts it not only managed to remain active but also provided subsidies for other propositions to emerge. When directing efforts to explore and analyze the literature, it appears that Kinesiology is still present in some fields, even in spaces where it was often discouraged among PE intellectuals, such as the school context. Although there are few reports in this regard, some professionals

decided to try or implement this proposal in their *locus* of intervention, as well evidenced in a recent thesis by Ribeiro<sup>14</sup>.

It is extremely important, however, even before approaching these proposals, to recapitulate the reflections made by Inezil Penna Marinho in the early 1980s, airing the incongruities present in PE and the inadequacy of this name for the area. The set of Inezil's works, despite being recognized as one of the greatest historiographical sources of Brazilian PE, was harshly criticized by part of the rising intellectuals in the field in the 1980s, who claimed their study consisted only of the verification of dates and events, without greater critical reflection on the objects analyzed. Inezil's proposition, however, not only covered the historical events, worldwide, that intervened in the emergence of the expression Physical Education, and its generalization in Brazil, but also included considerations and suggestions for a new denomination to designate professionals and the field in question, including restructuring the curricular base of training courses.

The Physical Education teacher carries a heavy cross, which is its denomination, socially pejorative and professionally stigmatized. In the present essay, we are appreciating the origins of this denomination, and how it spread not only among us but also worldwide, concluding by presenting suggestions for its replacement by another more adequate denomination, more in line with the scientific content of their formation<sup>18:1</sup>.

In this essay presented to the I Brazilian Symposium on Physical Education and Sports held in Brasília between December 4th and 8th, 1983, Inezil highlights the contributions of Manuel Sérgio, when considering a new designation for the field, suggesting its replacement by Cinantropologia, Kinesiology, or Kinesio-didactic. Professor Manuel Sérgio Vieira e Cunha, at the time of the National Institute of Physical Education of Portugal, did not seem to be oblivious or inadvertent to the discussions of the epistemological identity of PE in the North American field, a condition that is verified both in the similarity of the proposals, and in the defense of a reasonable justification for the presence of PE in higher education:

ISEF's and FEF's, as university institutions, must present, without ambiguity, the reason why they are a University. And are they universities just because they are relegated to pedagogy or because, without excluding the pedagogical act, educational training, they have an unmistakable theoretical object? Physical Education itself assumed and taught in the Higher Schools of Education must be seen as the pedagogical branch of a science to be in gnoseological and institutional equality with the remaining knowledge that fits in them<sup>19:27</sup>.

Such reflection - although it is not possible to demonstrate with more assertiveness, due to the scarcity of records in the literature on the direct epistemic contact of the two aforementioned authors with the academic production in vogue in the USA - coincides with the defense of PE as an academic discipline claimed in the USA. by the authors who then composed the MD. That said, it is plausible at least to consider the analogous character of these propositions aired in a contiguous time frame, since PE was being summoned to justify itself scientifically and epistemologically in the context of several national academic fields in that period.

Following the survey of proposals related to Kinesiology within the Brazilian context, the work of José Guilmar Mariz de Oliveira is highlighted, a researcher who dedicated himself

to presenting the bases for the insertion of Human Kinesiology in the prism of basic education<sup>20</sup>. Employing thematic blocks, with movement as an orientation and protective belt for the proposal, Mariz de Oliveira seeks to find an epistemological and pedagogical solution that in the author's view would be more productive and satisfactory for the organization of the discipline in the fields of activity, especially in schools. Among the thematic blocks, knowledge from different PE sub-areas would be included in the theoretical framework, from contents of the subfields of biodynamics to issues associated with the socio-cultural dimension of mobility. These contents, in turn, as the theorist of the proposal points out, could be managed either individually or in an integrated manner, which would determine the reasonableness of the scope of the author's approach. Also according to Mariz de Oliveira, Kinesiology, as an area, would have potential in the school context because it supposedly has the power to explain the three logics of human movement, namely, the why to move, the how to move, and how much to move<sup>14</sup>.

In this context, given the perspective of human Kinesiology evidenced in Mariz de Oliveira, some experiences could be reflected and conducted in the school fabric, as we can see in some works in the literature<sup>14, 21</sup>. All these studies, to some extent, aimed to exercise the fundamentals of Kinesiology at school, seeking to mobilize and instrumentalize pedagogical practices through thematic blocks by positioning PE as an indispensable presence in basic school education, however, also associated with some stirs, the author highlights:

I also consider that, in terms of the meaning and objective of teaching and learning Physical Education in Basic School Education, there are many interpretations and understandings, which, because they are too ambiguous and even conflicting, concerning their specificity, contribute to a secondary treatment of what pertains to it<sup>20;3</sup>.

Because of his reticence to the theoretical-conceptual debate on PE as it was developing in Brazil, it is interesting to note that Professor José Guilmar Mariz de Oliveira underwent his master's and doctoral training between the 1970s and 1980s in the United States, a period still of great effervescence in Kinesiology in the North American academic context<sup>4,5,22</sup>. In this vein, it is quite likely that Mariz de Oliveira's American formative dynamics impelled the author to build a close relationship with the *modus operandi* of Kinesiology and, subsequently, upon returning to Brazil, to transport this logic to the field of PE, at USP, where he was a professor. Therefore, the influence of the epistemological developments of North American PE in the academic performance of Brazilian professionals is perceived, who, at some point, were able to have intimate contact with Kinesiology, being alerted not only to the existence of this scientific current but also to the possibility of implementing it in the field of PE in the country.

Regarding this context of reflection in the school field, it is also worth mentioning the work developed by Tani et al<sup>23</sup>. In general terms, when talking about Kinesiology in Brazil, it is impossible not to mention the theoretical approach proposed by the authors in dialogue with the organizational precepts of North American PE and with the knowledge structure that progressively emerged with MD. The developmental approach, as it is known, would have human movement as the main focus of its scientific-pedagogical intervention, taking into account the different kinetic activities developed in Physical Education classes, from the most generic to the most specialized movements that would be experienced through dance, gymnastics, sports, and games, among other activities<sup>8,23</sup>. As stated by Tani, "due to its intrinsic relevance to the human being, movement must constitute one of the central concerns of the educational process"<sup>24;326</sup>.

For the author, one of the factors that led the developmental approach to reach notability in the field was the massive criticism it received from the so-called Marxist or historical-critical

approaches, since the developmentalist proposal was not limited to the list of these formulations<sup>24</sup>. In addition to an approach only directed to the school segment, it is opportune, however, to emphasize that Tani brought contributions to think about the whole field of PE in Brazil, or rather, through reflections on Kinesiology, he tried in a very pioneering way, to present an alternative to the field that could connect the different sub-areas of PE. In other words, the Kinesiology observed by Tani had, to some extent, a power that allowed the linking of different fields of knowledge to a single object of investigation and work.

Thus, through Kinesiology it would be possible to make research sub-areas such as biodynamics, pedagogical and sociocultural orbit, and dialogue on the same scope of interest, contributing to strengthening the area and presenting more systemic and scientific characteristics<sup>15</sup>. Therefore, when looking at Kinesiology, it is impossible not to emphasize the systematic work developed by Tani in Brazil over more than three decades. As already mentioned, its contributions transcend the *locus* and reach higher education, having an unmistakable projection in the prism of postgraduate studies in PE in the country. Above all, Tani tried to provide a non-teleological theory or, in the researcher's own words, a proposal that was not a "straitjacket", something that could stifle the autonomy of different specialists<sup>4</sup>. Thus, the main purpose of Kinesiology defended by Tani was to enable greater organization of scientific production, as well as better systematization of knowledge<sup>4</sup>.

In addition to the work developed by Mariz de Oliveira and Tani on Kinesiology, it is possible to locate the engagement of other researchers within this scientific area. In this context, it is also worth mentioning the efforts of Jefferson Thadeu Canfield, from the Physical Education Center of the Federal University of Santa Maria (UFSM), who, like Tani at the University of São Paulo (USP), also sought in a pioneering way, to defend Human Movement Sciences as a scientific area capable of housing the multiversities of the various disciplines that research or work in some way with human movement<sup>25</sup>. In this sense, if Tani was decisive for the work with Kinesiology at USP, Canfield was a central agent at UFSM, because it was through him that the Graduate Program in Human Movement Science could be born and prosper from the end of the 1970s<sup>26</sup>.

An important aspect to reflect on is that, like Mariz de Oliveira, Professor Canfield also had contact with North American graduate studies in the 1970s<sup>26</sup>, which again raises the suspicion that these researchers had some approximation with Kinesiology during their academic training processes. In the same direction, attention is also drawn to Markus Vinicius Nahas, another researcher who, between the 1970s and 1980s, carried out his master's and doctoral studies at universities in the USA. Although Nahas did not enter into the epistemological discussion of Kinesiology itself, he was one of the researchers who returned to the country with a large accumulation of knowledge from the North American PE system and who, thus, worked on the propagation of this knowledge, especially in the area of Physical Activity and Health<sup>27</sup>.

Despite the participation of these researchers in the debate and the demarcation of very visible initiatives for reflection on the epistemic potentialities of Kinesiology in the country, it appears that such actions were not enough to impact or structurally change the field of PE on Brazilian soil, to the point of influencing the course of events within the scope of pedagogical theory. In this sense, even if such a theoretical proposition provided a well-defined scientific and organizational structure, Kinesiology, at least in Brazil, has become, so to speak, in some circles, just another academic subject among others and not an area of transdisciplinary science capable of encompassing all knowledge interfaces that work with a focus on human movement. This is what Inezil Penna Marinho already attested to, for example, when he warned that:

In the current curriculum of Physical Education schools, there is a subject called kinesiology, whose content is, in fact, biomechanics. This

word could be used to designate the study of the subject in question, giving kinesiology a broader and more enveloping meaning, that is, contemplating the study of the movements of the human body, or the human body in motion, ultimately the study of the movements of man or man in movement<sup>18;14</sup>.

In this way, Kinesiology could only remain, roughly speaking, as a subject of undergraduate courses or with an area restricted to a few specialties, especially adjacent to the field of biodynamics, as well as in some postgraduate courses related to the studies of human movement<sup>28</sup>. It is important to note that, about a decade later, Teixeira<sup>29</sup> took a similar position, commenting on the circumstances of the field and the change in nomenclature:

The only obstacle that seems to offer some resistance to the acceptance of kinesiology as a name for the field of the study is related, in a way, to the evolutionary history of the area. Kinesiology for a long time was the name of a discipline of the professional training course in Physical Education, oriented towards the organization and transmission of knowledge that nowadays is usually taught under the title of biomechanics. However, this change in terminology is something that has been happening since the 1970s and, currently, this terminological imprecision is no longer justified, and the same applies to the use of Physical Education to label an area of scientific investigation<sup>29;88</sup>.

Although the aforementioned change in terminology was mostly confined to the USA and not to Brazil, the impetus to rethink the scope of the area from a new configuration on the part of some authors in recent decades is axiomatic. Therefore, it is also worth mentioning that this annexation to the *hardcore* seems to have been unintentional, as since its formulation, Kinesiology sought not only to insert the discussions of Humanities but to reveal in its constituent structure the sociocultural and pedagogical areas, such that it is possible to glimpse the *hardcore* of this theory as developed in Tani<sup>4</sup>.

However, if Kinesiology was a promising theoretical-directive assumption in the academic field, why then did it encounter so much resistance in Brazil, and could it not prosper as it did in the United States in different institutions and undergraduate and graduate programs? First, it is important to highlight that in the United States, the MD provided the basis for the construction of Kinesiology in the academic field and was responsible for giving survival to the PE field<sup>4</sup>, unlike what happened in Brazil, where PE was academically not so categorically challenged. In other words, at a time when PE was almost being extinguished from the university in the USA, mitigating itself in a technical course, thus demanding from the intelligentsia of the area in that country a series of initial requisition measures for disciplinarity and pre-composition of a solid body of knowledge for the area, what followed was the impetus of the progressive transformations of the discipline, in which Kinesiology emerged as an option to orchestrate and signal the potential of the science of human movement for society<sup>28</sup>. Given this, the contribution that the American MD bequeathed to Kinesiology is undeniable<sup>30</sup>. In this path, it seems, there was a kind of recognition of the area in the USA as it gained greater functional weight within the academic structure, a situation that did not occur in the Brazilian context due to a series of factors.

Among the reasons, the main hypothesis is that Kinesiology was introduced to the country at a time when PE was going through a very conflicting period due to internal issues in the field, but mainly due to extrinsic aspects that directly impacted how intellectuals conducted their studies, reflections, and interventions within the area<sup>6</sup>. As is known, in the post-1980s, in

line with the political changes in Brazil, the PE field was radically influenced by theories sensitive to the political-economic context and which attributed the area to be responsible for social transformation<sup>31</sup>. Consequently, as these theoretical propositions gained prominence within the field, everything that did not share or connect to these theories was to some extent rejected<sup>12,32,33</sup>. This is what happened with Kinesiology and so many other theories that tried to outline PE defragmentation initiatives.

Thus, if in the North American context, the new intellectual generations joined and continued to discuss and support Kinesiology<sup>3,4,22</sup>, in Brazil it was strongly criticized by some critical academic circles. In this sense, it must be remembered that within the scientific fields, the pressure of the structure will not necessarily generate a direct imposition on the agents, but will evidence domains in scientific research, in which dominant researchers or research programs will end up defining, in a given period, the important objects and questions to be investigated and, thus, spend their efforts on these research agendas, appropriating the laws inscribed in the history of the field and configuring them as trends, giving impetus to this sense of the game in the academic universe<sup>34</sup>.

With Kinesiology in the USA, it was no different. Its logic has evidenced, in the last 50 years, a search for scientificity and the equalization of academic-professional problems in the area, aiming to dissipate some of the incongruities that weakened the professional status of PE. Such a proposal had among its questions to determine which area of knowledge would correspond to the curricular discipline of PE, since the search for scientific propositions was essential to ensure the sustainability and legitimacy of PE in the academic and social scope<sup>4-7</sup> thus justifying the ideal of such a perspective to be identified as a form of application of theories<sup>15</sup> in the search for greater adherence of the professional field to the university structure.

In this vein, Manoel e Tani<sup>35</sup> states that training in the area in question would depend on the search for scientific advancement, to consolidate the professional field through science (which would evoke the creation of its own scientific spaces, its own associative organizations, following the example of the process that took place in the USA and in part also in Brazil). Another point to be considered in this context concerns the need to constitute a body of knowledge, as well as the definition of its own object. To this end, human movement presents itself as an object of the area because it understands that it would enable the organization and systematization of knowledge, considering the specifics of the area. According to Tani<sup>4</sup>, such delimitations of the object of study are equivalent to a way of organizing and guiding the production and systematization of PE knowledge, not as something that would plaster the area, but that would make it possible to investigate the nature and meaning of human movement in interfaces that it would convene, in order to minimize the distance between PE's specialized subdisciplines<sup>36</sup> and move towards a coherent and somehow transdisciplinary structure. These points would be important, from the perspective of Kinesiology, for the consolidation of the area as a more autonomous scientific and professional field. Having listed these aspects, we will approach some tensions of an epistemological order routinized in the national literature.

### **Epistemological tensions in Physical Education: disputes and critics of kinesiology in Brazil**

It is well known that the numerous conflicts in the scientific field of Brazilian Physical Education culminated in the process of making the contribution of some theoretical currents invisible, as is the emblematic case of Kinesiology, as stated earlier. In this wake, little is currently reflected on the possible potentialities and limitations that Kinesiology has offered (or may still offer) to the field of PE in Brazil. Despite demonstrating that it is a research program with the potential to have a significant impact and bring about structural changes in the paradigm of crisis established in Brazilian PE, Kinesiology received strong criticism from other



circles of representatives in the area, who presented their core concerns and interpretations in the defense that PE is characterized as a practice of pedagogical and social intervention, although this premise has not been denied by the articulators of the kinesiological proposal.

In this current are different perspectives and authors that give vent to the understanding of PE theory as a pedagogical practice<sup>31</sup>, or as an area of knowledge and reflection on its practice and socio-political function<sup>9,17</sup>, or even as an area of multidisciplinary mediation, whose legitimacy would be given by its contribution in the social environment<sup>37</sup>. Both versions, despite presenting theoretical divergences, end up converging on the understanding of PE as a pedagogical practice with social functions, where the possibility of constituting a scientific field is centered on bodily practices<sup>7</sup>. Based on similar theoretical positions in the field, Betti states “it becomes difficult to sustain the proposition of PE as a scientific discipline, along the lines of a Kinesiology”<sup>17;184</sup>. Along these lines, the author emphasizes that it is not the science of PE that will determine the object or objects of scientific investigation in the area, but professional practice is what can evidence and define such indications.

These authors, each in their own way, defend that the emerging paradigm of PE to solve the problem of its epistemological status would be the professional-pedagogical intervention, and Bracht<sup>31</sup> defends the primacy of cultural objectifications in this scenario, having as an articulating object the body culture of movement. Thus, in contrast to Kinesiology, he argues that PE is a practice of immediate social intervention, but it cannot renounce scientific knowledge to support its intervention.

There is considerable understanding that the aegis under which the body culture of movement, or its derivatives, as a Cultural Physical Education<sup>38</sup> is based more properly on the terrain of the political demarcation of the field<sup>33</sup>, than on a directive proposition adhering to people's daily lives<sup>39</sup>. Although, in recent decades, some PE models have been developed in Brazil, guided by utopian ideologies<sup>24</sup>, whose main belief hovers over the transformation of the reality constituted through the relations between education and society, it ended up with a kind of thaumaturgical, intricate, and unrealistic expectation falling on teachers and professionals, and particularly on school PE. It is not veiled that such propositions deflect, to a greater or lesser degree, the purpose of the existence of the field to external biases, imputing on this or that practice, as is the case of sport, the guilt of emulating the inequalities and cutthroat of the capitalist system. In short, the theoretical-regionalist positions in the field, while blocking the progress of other proposals, perhaps with a more reflective matrix, were equally unsuccessful in substantiating a general theory of PE, which would minimally satisfy the plural characteristics of the area.

Despite other criticisms made of Kinesiology in Brazil, Dacosta & Duarte point out, in turn, that due to the different perspectives that conjecture the approach in vogue, through the fragmented specializations of knowledge, the creation of “ [...] subdisciplines incorporated into the curriculum without further questioning, resulting in the training of professionals with analytical capacity, but with great difficulties in synthesizing knowledge”<sup>15;150</sup>. Under the same tone, Lazzarotti and collaborators claim that:

(...) the fragmentation and specialization that mark the process of constitution of the scientific field of PE in our country, in a way, can also be explained from the American influence, considering that, between 1970 and 1980, several Brazilian PE teachers completed their master's and doctoral degrees in graduate programs (PPGs) in the United States<sup>40;234</sup>.

The authors' position is evidently volatile in light of the small number of intellectuals from Brazilian PE who returned from the *stricto sensu* in the USA - as already exposed - and

who actually undertook tactile actions related to the implementation of Kinesiology in the country, in addition to relying on the subjectivity of the metatheoretical influence on field agents, by which it is understood that “much of what is discussed in relation to the identity crisis of Physical Education is of North American origin”<sup>13;30</sup>. Therefore, what is presented in a contradictory way in this conjecture is that the strategies used by Kinesiology in the search for disciplinarity and constitution of a body of knowledge, may also have represented for PE an intensification - even if unintentionally - of some dichotomies in understanding the objective of the area.

Added to this is the fact that the specialization process, despite being quite assiduous in the field of Kinesiology/PE, became practically inherent in all scientific fields of the 20th century, so that it becomes vague to attribute a leading role to Kinesiology in this process. It is also worth remembering that the proposal, although showing an expanded view of PE, did not meet the epistemic and structural requirements that would lead from disciplinarity to transdisciplinarity<sup>4</sup>. Such a dispersive conjuncture, in turn, could not influence the reorganization of a coherent/adherent structure for the area, without first assuming the element that acts as a guiding thread between the different perspectives and subdisciplines of the field, that is, human movement.

Another routinized critique of Kinesiology in the field of Brazilian PE is built on the exercise of correlating the creation of the bachelor’s degree in Physical Education in the country to kinesiological assumptions, transferring to a certain current a dynamic that is structural to the entire field and to all theories that are accumulated in it.

By admitting, therefore, that part of the professional demarcation of PE in Brazil came from international reflections, the thesis that we borrow an *ethos* in our scenario from other neighboring fields gains weight, which for<sup>41</sup>, derives, in part, from the very dynamics of competition between the different perspectives and aspects of PE on the subject in view of the potential of action of the area in various international contexts. In addition, according to the author, “academically, it would be up to Physical Education to develop research programs with applied characteristics, that is, capable of subsidizing and responding to the problems presented by professional daily life”<sup>41;173</sup>.

As can be seen from this brief census, part of the current criticism around Kinesiology and the configuration of the academic-scientific field of PE in Brazil also responds to external and political-ideological imperatives. Such contents, in turn, not only invade the academic sphere, but are also the motto of countless endless conflicts between the currents proposed for the area, bequeathing theories of a less provisional character than desirable and distancing themselves from a perspective of inevitable transformations, in the core not only of the academic field, but also of the profession and the social world. In this path, some currents, such as Kinesiology, according to the filter they received from some field agents in Brazil, ended up being distorted in their basic premises, taking on the burden of fragmenting PE, even before they could provide clues for significant changes to structuring<sup>42</sup> of the area in the country.

In other words, such a reassembled scenario highlights the conflicts of interest at stake in the academic universe and refers to different visions to solve the epistemological crisis of PE in Brazil and hold the monopoly of explaining the reasons that support it. It is not by chance and without reference to this sense of game that the criticisms presented to Kinesiology ended up, to a certain extent, inverting the polarity while preserving the paradigm of fragmentation instituted in the area, so that the identity and epistemological crisis of PE follows its course.

In summary, much of what was seen in this process stems from attempts to demarcate the specificity of Physical Education from a regional point of view in the countryside<sup>33</sup>, with proposals that, while accentuating an “eternal” incapacity for internal communication in the area, at the same time, have shown low adherence to the reflective characteristics of society. The normative propositions arising from salvific theories became to many researchers more

valuable than the demarcation of a greater adherence of the field to the reflexive social scenario, through which subjects gradually became more mobilizing (conscious or not) of the axiomatic systems in question. Furthermore, from a synchronic perspective, according to Souza<sup>32</sup>, it must be verified up to this historical moment that, at least potentially, the field of PE is (1) the most qualified in the construction of scientific knowledge about various aspects of human movement and (2) the specialized profession in translating this knowledge into pedagogical actions that substantiate meaningful experiences in people's lives.

### Final considerations

From the points presented, it is clear that Kinesiology emerges in the country as attributing a new scientific paradigm to PE, with a view to structuring a body of knowledge for the area in a transdisciplinary way, which assumes the existence of some aspects that are still seen in operatively in the field of *stricto sensu* postgraduate studies and are structured in the country. However, it failed to sustain some vehement needs for a more amplified pedagogical restructuring in the field. For this, actions of a more individual nature contributed to a forceful collective work around the theoretical limits of the proposal by some sectors of the countryside in Brazil<sup>43</sup>.

Clearly, there were and remain many theoretical positions against Kinesiology and the effects of its propagation as a scope of the area, even in its own "place of origin". However, the establishment of such criticisms in the USA was apparently based much more on a reflection for the internal demarcation of the possibilities and limitations of PE/Kinesiology than on external biases to the area.

In this logic, it is evident that the PE scientificization process continues in constant transformation. Thus, while this process indicates a fragility in some of its basic aspects, it also reverberates metamorphoses caused by the intensification of access to information, technological advances, and changes in the social structure, elements that influence the necessary instruments for the promotion of scientific advances in the area. In addition, Souza<sup>32</sup> reveals that in the midst of Brazilian PE, two fronts were established, one linked to the search for scientificity in the area and another with a view to approaching the *modus operandi* of Education, "[...] an external entity already existing, it is true, but that was still exogenous to the field and resented/resents a theoretical crisis as intense or more intense than PE itself"<sup>32;52</sup>.

Both paths transferred the scientific "responsibility" of theoretically informing the practice of PE to external fields, whether from the point of view of scientific or pedagogical lenses. Souza<sup>32-33</sup> reveals that the attempts at a scientific and/or pedagogical revolution originated from a plurality of reasons, from the ideology of essentially practical practice to the basic theorization per se, without an effort to promote an ontological retreat of a similar nature reflexive to the scope of the profession and to the problem of *homo movens*, as it could be historically elaborated by PE.

In this logic, despite the importance of the search for scientific revolutions, with a view to greater adherence of professional action with reality, it is emphasized that the need for a transfer of knowledge from other sciences weakens the potential of PE as an area of knowledge and as a professional field. In general terms, despite the context of PE scientificization presenting itself as a potentiality within Kinesiology, it is up to us to reflect to what extent its research program focuses on proposing a realistic research agenda for PE, given that what was presented as its potential has, paradoxically, also become one of the limitations of the proposal.

Furthermore, defenders of strands that are less open to a provisional character of paradigmatic propositions, oppose the understanding of PE as a science (read applied science of human movement). Among their main arguments is the question that they consider it impossible to build a unifying object of PE, given that the area interacts with different

disciplines and approaches, a condition that, to a certain extent, hinders thematic studies that allow an integration. Everything indicates that, despite the criticism of the kinesiological model, we remain far from a self-knowledge that transposes the regionalities<sup>44</sup> of the PE field and that allows us to clearly affirm (recognize) what we are and what our objects and virtues are, which have long been present in us.

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