156 - HUMAN MOTORICS: SCIENCE OR FIELD OF INTERVENTION?

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Human Motorics stands as a proposal to change the current paradigm within Physical Education - which is regarded, in Brazil, as a career initially connected to the universe of school education, being afterwards (more precisely at the turn of the millennium, following the Federal Decree no. 9696 of September 1st, 1998) considered as a higher education career, regulated by law - which makes possible the implementation of a new professional category within the labour market already present in the society.

One finds that speaking about Human Motorics in Brazil implies approaching issues that involve subjects such as the understanding of what Physical Education is; its constitution as knowledge, concentration area, academic discipline and professional field.

Not intending to trace the history of the existence of Physical Education in Brazil, what I aim this moment is to declare that, taking into account my already long period of practice in the area, I reckon that Physical Education has been lacking that scientificity which is so necessary to every specialised profession, i.e., its professionals haven't been able to express themselves by means of proper scientific and technical terms identified with the several skills that within it - and through it - are developed. What is possible to realise is that the area lives - and has always lived - on what it borrows from other areas, namely Biology, Psychology, Sociology, Pedagogy, not showing any scientific rigor belonging to itself as a new area or field of knowledge.

Further on, Physical Education has been making use of different terms to express the same questions, as it accepts every adjectiving that the common sense associates to it, complying and showing interest in being present in the heart of society, even when it is designated as *gymnastics*, *physical exercises*, *physical activities*, *sport*, *shaping-up*, *games*, *recreation* and so many others, which doesn't make possible to identify its possibilities, advantages and meanings in every case.

What is found is that Physical Education keeps lacking a specific theory to sustain it, since it doesn't present and it can't even justify any composition of knowledge, contents, concepts and practices to furnish it with singularity - condition and behaviour observable even among a great range of scholars of higher education in the area, who advocate that sport and school practice are their main share of knowledge. As it lacks its own scientific community to provide it with objectivity and sustainability, it lives on the proselytism and ideological manipulation by many pseudo-professionals who, through the practice of demonstration as perfect models, normally coming from and even resulting from the sports' modalities and practices which they performed as athletes, now as instructors, end up subverting the public opinion, keeping, however, that same attitude and qualifications as a professor, sheltering themselves in that image, but, due to the low level of configuration of specific knowledge, end up not reaching beyond any condition of subjectivity in their actions.

As I tried to identify above, Physical Education, even when developed within the university, must be reviewed and better identified with the minimal requisites for academically develop a given area, academic subject or career, as an area descending from investigation and having a technical-scientific vocabulary, and not merely the structuring of repetitive practice which, even though it may sometimes bring results, has not been able to demonstrate its systematised condition in the quest for problem solving and the proposing of alternatives based on the practical solutions which are used.

I will now detain myself within the context where the 1o. Colóquio Sobre a Epistemologia da Educação (1st Colloquy on the Epistemology of Education) is set; the event being organised and developed in the city of Campinas, State of São Paulo, under the auspices of the Federal Counsel for Physical Education, which, even though it doesn't perceive itself responsible by the scientific and terminological definitions of the occupation it represents in the country, has nevertheless sought to show total involvement with every aspect that might represent the improvement of the quality of specific knowledge in the area, which may certainly result in the improvement of the higher-education courses for preparation of the Physical Education professionals in Brazil, thus contributing for the equability of - above all - the qualification of the professionals who are graduated and hold a license to practice the occupation, meeting with the expectations and necessities of the society concerning the cultural training for the adoption of an active lifestyle.

I therefore hold that the initial step must be to analyse, clarify, define and justify what Human Motorics is, and how it is understood, aiming that the ones who are interested in the theme may find possible to follow its pace, both as specific knowledge on a given scientific area and a resulting field of professional practice.

In order to start this explanation on what it is about, I understand to be of initial necessity to consider, as it well did TOJAL (2004: 153) that “the thesis on the science of Human Motorics was first presented in public exams for the doctoring of the Philosopher and college professor Manuel Sergio Vieira e Cunha, in June 1986, at the ISEF (*Instituto Superior de Educação Física*) - now Department of Human Motorics - of the Technical University of Lisbon, Portugal”. One realises with relative ease that this is a recent knowledge which needs attempts of refutation as a theory, so that it might be considered as a new science in the future.

In his aforementioned thesis, Manuel Sergio defined Human Motorics as the science of comprehension and explanation of motoric conduct, and therefore, as every scientific knowledge, Human Motorics is also a theory, according to the author. TOJAL (1994: 96), observing the construction of that statement by the Portuguese philosopher, declares that it may be considered that Human Motorics arises from the corporeity as a sign that it is in the world with a purpose, i.e., as a project, and thus is man a presence throughout space and history, with the body, in the body, from the body and through the body, since basically there is no difference whatsoever between motorics and corporeity, keeping in sight that both are part of the human biological complexity” (see further TOJAL, 2004: 153-154). It is also the truth of perception, understanding that perception as making anything present with the help of the body, considering that: “I am not standing by my body; I am in my body, I am my body” (see further SERGIO, 1986: 11).

What is being claimed here is that motorics, as vocation and provocation, is, to a certain extent, both the 'being' and the 'having' of development, configuring: *the being*, as it is supposed that whoever intentionally moves is looking to 'be more'; and *the having*, as it means 'having (something) in me', being able to make use of it. Thus, motorics stands to guarantee the disclosing and communicative dynamism of the conquest of the 'being more'; of the creation of sense, since 'being' without 'having' is not possible to anyone (see further TOJAL, 2004: 154).

Thus, the Portuguese philosopher Manuel Sergio makes the point that Human Motorics - which he takes into

consideration even while a new science - is the science of the personalisation's intentional movement towards - and related to - transcendence, i.e., man moving with sense and content - the content of wish and the sense of transcendence - for every existence of the human being is a succession of overcomings, of transcendences, towards the 'being more'; towards the completeness which makes overcoming and self-improvement possible; i.e., towards its absolute.

TOJAL (2004: 155), dealing with the transition from Physical Education to Human motorics, explains that while developing an epistemological analysis on the activities with which the Physical Education professionals are involved, he observed that it is Motorics that seek to fundament them, as it is the case when the practices are set towards sport, and not the other way around, since Physical Education lacks the basic enunciates to establish the due demarcations, which has happening with borrowings from Biomedicine or Pedagogy - which, according to ESTRELA (1992: 11) is also an area which lacks an authentic scientific status.

Therefore, due to such an analysis that demonstrates the complexity of the Human and of the attitudes and activities coming from him/her, the aforementioned author understands that Human Motorics is the scientific radical where sport, dancing, gymnastics, ergonomics, rehabilitation, yoga, fights, martial arts, capoeira, among others, are based. It can be thus understood that within Human Motorics the physical is not denied; but it also considers the social, the political and all things comprising the Human Complexity, which means that one must always - in every situation of participation and involvement by any individual - regard the different structures involved in his/her every action, i.e. body, spirit, wishes, nature, society in intimate and constant dialectics; since there is no way to live an experience without the inter-subjectivity assumed by praxis. Such a praxis, therefore, disclose a world of possibilities, and Human Motorics reveals incomparable creativities, specific of a being who is an agent and a cultural promoter.

MANUEL SERGIO (1995) argues that man is a wanting being and, as such, a praxic being, a being in a process of construction, who can only live if he is acting, and for such a reason is always looking to act in order to 'be more', which represents his capacity and potential for transcendence. Therefore, Human Motorics represents the very individual's working intentionality, in the quest for overcoming something that interests him, looking to reach his absolute, which is only his; to that end he will need professional aid to help him identify his own abilities, as well as the possibilities and ways for completing that objective of his.

One of the motivations of the colloquy on Physical Education's epistemology is to discuss issues on certain terminologies and concepts with which the Brazilian Physical Education has been dealing every moment, and which involve the terms and concepts: Human Motorics, Kinesiology, Physical Activity, Sports Science and Human Movement.

Aiming to contribute to the understanding of such epistemological issues, the Federal Counsel of Physical Education (CONFEF, in Portuguese), ordered the publication, in 2002, of the document that approaches, analyses and defines the possibilities of intervention by the Physical Education professional, through which it looks to disseminate, among the professional category of Brazilian Physical Educators, which are the concepts with which the terms Physical Activity, Physical Exercise and Sport must be used.

I will then transcribe, from this range of terms, one which is among those of interest to this essay, i.e., Physical Activity.

“Physical Activity is every voluntary human bodily movement, resulting in an energetic expense above the levels of repose, characterised by daily activity and physical exercises. It's a type of behaviour inherent to the human being, with biological and socio-cultural characteristics.”

(CONFEF - 2002, title VI).

I sought above to identify the first terms Human Motorics and Physical Activity with the commonly used concepts. Therefore, it is now necessary to identify what is understood by Human Movement, Kinesiology and Sports Science, that will demonstrate their differences relative to the previously mentioned ones, since it is noticeable that some of them are usually employed as synonyms, namely Human Motorics / Physical Activity / Human Movement, as one reads in the Report CNE/CES 0138/02, which dealt with the national curricular guidelines for the undergraduate courses of Physical Education, which was approved and standardised, having been afterwards, however, substituted due to issues of political nature rather than to epistemological and scientific ones. Thus, when analysing and comparing the first two terms, it is already observable that they are not identical nor equal; thus, the use of the slash (/), meaning 'equal', is unjustifiable.

As the choice of the knowledge to be used in the process of identification, justification, signification and training of Brazilian Physical Education professionals, as stated in the Resolution CNE/CES 07/04, which defined the national curricular guidelines for undergraduate courses of Physical Education - I advocate the baccalaureate, following a position by the *Ensino Superior Nacional*, the observation of every other occupation but that of the physical educator sufficing for such an understanding - befell on the term Human Movement, it is mandatory to understand that such a definition did not occur through any epistemological analysis, but rather due to the preferences of some participants of the decisive meeting, even though it was not possible to conceptualise it satisfactorily.

Therefore, I regard as extremely important the identification of the concept which presents the term Human Movement. 'Human Movement' is defined as: the meaningful range of bodily technologies, historically and socially built, through which are developed: the exercises, the sports, the games, the dances, the fights, the expressions of physical aptitude related to the performance, to drills and recreation; it is considered as the systematised sequence of physical exercises, defined from an objective, established from without and moving within, i.e., not dependant on the individual's operating intentionality, since it is imposed on them according to a programming developed with specific ends to be reached (TOJAL, 2005).

It is observable that with such a conception its usage favours the quest for meaningful results, defined by means of tables and rankings of physical or sportive results, allowing the representation of a condition of overcoming which is, however, not an option by the subject himself, being established rather through processes of social-productive referential fairly used in business, transforming the practicing individual into the mere vehicle of consecution of results that are generally linked to other ends - other than the development of culture, health, valorisation of the human being and social-biological benefits.

Furthering the discussion here established, I now proceed to an attempt to identify, from the study of authors such as Go Tani, Markus Nahas, Philip Rasch and Valdir Barbanti, the terms Kinesiology and Sports Science, as well as their concepts.

I will initiate such identification with the term Kinesiology, about which RASCH (1991: 3) says: “the term Kinesiology is a combination of two Greek verbs, 'kinein', meaning 'to move', and 'logos' - 'to study'. The kinesiologists - those who study movement - actually combine Anatomics, the science of body structure, to produce Kinesiology, the science of bodily movement”; and the dictionary (Michaelis, 2000 - I), reads: “Kinesiology: 1 - sum of all knowledge relative to the muscular movements; 2 - science of human body movements”. To BARBANTI (2003: 104), on the other hand, Kinesiology is conceptualised as: “a scientific field which, strictly speaking, deals with the phenomenon of movement and its pre-conditions; with the moving apparel and its control”.

MORFORD (1993 *apud* NAHAS 1997: 73-78) claims that a significative advance was marked by the positioning of the American Academy of Physical Education, when it positioned itself on the subject in 1988, suggesting that the academic career

should be named Kinesiology. There has been a larger agreement around the idea of a field of knowledge referred by as kinesiology, Sports Science, Physical Activity Science, or simply Physical Education. The author states further that such a field of knowledge would comprise an academic career (or a set of knowledge) which would fundament the occupations agglutinated around the central theme 'human movement', 'sport' or 'physical activity'.

Still looking to clarify how the term Kinesiology has been treated, I now transcribe what TANI (1996 *apud* NAHAS 1997: 75) proposes: "Within the relation Kinesiology - Physical Education, an area of basic research (Biodynamics of Human Movement, Motoric Behaviour and Social-Cultural Studies) and an area of applied research (Pedagogy of Human Movement and Adaptation of Human Movement). The same author - Nahas - informs that in the academic structure of Kinesiology - Sport, the author Tani includes, in the area of applied research, sportive training and sportive administration.

Intending to identify how the term Sports Science is used, I turn to BARBANTI (2003: 100) whose Dictionary of Physical Education and Sport states that: "Sports Science represents the whole of the scientific findings; of the discussions and methods concerning the problems and manifestations of sport. An essential characteristic of Sports Science is its theoretical character". In the same dictionary, the author says that: "The structures of theoretical consistence regarding the unified theorems, findings and declarations, still lack uniformity in the scientific and theoretic discussions within the discipline. It is characterised by the science known as transversal, aggregated, joint; also as an applied, interdisciplinary, multidisciplinary science, among others".

When stating that Sports Science will only satisfy the common criteria applied to other sciences by borrowing them from other disciplines, BARBANTI (2003: 101) explains that: "Such criteria are: a single focus of interest (sports' area); specific concepts and survey methods (coming mostly from the 'parent disciplines'); systematisation of knowledge (it happens within the sub-disciplines of sports science); and scientific terminology (strongly dependant on the 'parent disciplines')". The author proceeds to clarify that due to the fact that the representatives of the sub-disciplines of Sports Science have different research interests and different professional training, there are considerable differences concerning goals and working methods which hampers the reaching of a basic consensus. He also complements that the sub-areas of Sports Science are: Sports Pedagogy, Sports Psychology, Sports Sociology, Sports Medicine, Sports History, Sports Philosophy, Sports Biomechanics, Physiology of Exercise, Training Theory, Sportive Journalism, and others which are starting to integrate themselves into the group.

Observing this description and conception of Sports Science (which, depending on the point-of-view, can be either singular or plural - Sports Sciences), I declare that I agree with MANUEL SERGIO (1989: 22) as he concludes that the language used in Physical Education has been manifestly rhetorical, criteria-lacking; merely analogical, if so". Physical Education lived (and lives, if the epistemological cut is not made) on what it borrows from Biology (but there are biologists); or from Psychology (but there are psychologists); or from Sociology (but there are sociologists); or from Pedagogy (but there are pedagogues), being difficult to find within it the scientific rigour."

Therefore, I consider that just as Manuel Sergio reached to the conclusion above, I may trace the same statement regarding Sport, since every other professional and profession use their own specific methods and concepts, having as a standpoint the social phenomenon 'sport'.

Aiming to deal with the considerations on terminology and concepts used relative to Physical Education, I observe the conclusions presented by NAHAS (1997: 77) when he states that: "More than a matter of names, our field lacks a clear academic/professional and socially justifiable identity. Even internationally, towards society, the term that still gets closer to what is studied and done in our field is Physical Education. Internationally, charming and academically 'superior' terms (like Kinesiology, Kine-anthropology or Human kinetics, or even Human Motorics or Science of Movement), besides not socially identified with this area for whose existence we stubbornly fight, cause confusion and mischaracterise our essence".

If it is true that the analogical models represent an incontrollable stimulus, they also - and still - constitute a risk, since they were conceived aiming other aspects of reality, and they should be under a necessary epistemological watch, since a science only deserves to exist if it knows itself as equal and different. Thus, Manuel Sergio advocates that: "The Science of Human Motorics studies the comprehension and the explanation of the motoric behaviour or actions, and without it Physical Education and physical activity become a gathering of facts, in disorganised and non-systematic coexistence. As the scientific knowledge must be constantly reconfigured, the theory has a unique role, as a conceptual, coherent and clear framework, to become a reference along every investigation, reason why it established that the paradigm, both the earlier and the present one, is the motoric behaviour or action. And it is with that understanding that the Science of Human Motorics is defined as the science which studies the intentional, spontaneous, free and uninterested movement, which allows transcendence, constituting itself by perception, conscience awareness, expression through movement that makes possible the quest for overcoming, concerning, thus, the subject in his completeness / complexity, which represents his corporeity". (see further TOJAL, 2004 : 157-158).

Now closing this brief text, I believe to have approached interesting issues that keep on deserving attention and involvement on the part of all professionals of the area, specially those working at higher education institutions, who must be permanently looking for the identity of the area.

Thus, I would like to affirm my conviction that the object of study which the area up to these days named Physical Education should treat, study and theorise, is Human Motorics, regarded as: virtuality for the action of a being who seeks transcendence, and that is life's ultimate meaning, i.e., the intentional movement towards the 'being more', which is visible in sports, dancing, ergonomics, in the heeding of health conditions; therefore, the multiple possibilities that the Human Being adopts in his/her life and thus it must be Human Motorics to serve as a ground for preparation of the professionals who will operate with the different aspects of this human's development within society, his/her culture and surrounding nature.

I will close declaring that Human Motorics is likewise the science which serves as a ground and occupies itself with that academic area, which is also a field of intense and wide professional intervention.

Referências bibliográficas - Bibliographical references - Références bibliographiques - Referencias bibliográficas

BARBANTI, V. J. **Dicionário de educação física e esporte**, 2ª ed. Barueri/São Paulo: Manole, 2003.

ESTRELA, A. **Pedagogia, ciência da Educação?** Porto/Portugal: Porto Editora, 1992.

MICHAELIS 2000. **Moderno dicionário da língua portuguesa** - 2 v. Rio de Janeiro/RJ: Reader's Digest; São Paulo: Melhoramentos, 2000.

NAHAS, M. V. e LUCHTEMBERG DE BEM, M. F. **Perspectivas e tendências da relação teoria e prática na educação física,** in Revista Motriz - v. 3, nº 2, dezembro de 1997.

SERGIO, M. **Educação física ou Ciência da Motricidade Humana?** Campinas/SP: Papirus, 1989.

TOJAL, J. B. A. G. **Da Educação Física à Motricidade Humana - A preparação**

do profissional. Lisboa/Portugal:Editora Piaget, 2004.
_____ **Perspectivas da Motricidade Humana no Brasil - nas diretrizes curriculares, nos programas de formação profissional e nas relações e ações em saúde,** in Anais do IV Congreso Internacional de Motricidade Humana - Motricidade y desarrollo humano. Porto do Son/Espanha, 2005.
RASCH, P. J. et all, **Cinesiologia e Anatomia Aplicada**, 7ª ed. Rio de Janeiro/RJ: Guanabara Kooga, 1991.

HUMAN MOTORICS SCIENCE OR FIELD OF INTERVENTION?

ABSTRACT

The text seeks to identify the present condition of what is still called the 'Physical Education', which still lacks a specific and scientifically proven theory to sustain it. It emphasises that even when developed within the university, it must be reviewed and better identified with the minimal requisites for academically develop a given area, academic subject or career, as an area descending from investigation and having a technical-scientific vocabulary, and not merely the structuring of practice. In the text, a few terms used by professionals of the area, such as Human Movement, Kinesiology, Sports Science, Human Motorics and Physical Activity, are analysed, with the concepts usually presented. Following some theoretical and epistemological treatment applied to the terms just mentioned, the author closes declaring that Human Motorics is, for him, the scientific knowledge which serves as a ground and occupies itself with that academic area - Physical Education - representing also a field of intense and wide professional intervention.

KEYWORDS: Human Motorics; Science; Professional Intervention Field.

MOTORICS HUMAIN LA SCIENSE D'UN CHAMP D'INTRTVENTION PROFESSIONNELLE

SOMMAIRE

Le texte cherche à identifier l'état actuel de ce qui s'appelle toujours le ` l'éducation physique ', qui manque toujours d'un détail et d'une théorie scientifiquement prouvée pour la soutenir. Il souligne que même lorsque développé dans l'université, il doit être passé en revue et mieux identifié avec les conditions requises minimales pour scolaire développez un secteur, un sujet d'universitaire ou une carrière donné, en tant qu'un secteur descendant de la recherche et ayant un vocabulaire technique-scientifique, et pas simplement structurer de la pratique. Dans le texte, quelques termes employés par des professionnels du secteur, tels que le mouvement humain, la cinésiologie, la Science de sports, le Motorics humain et l'activité physique, sont analysés, avec les concepts habituellement présentés. Après un certain traitement théorique et epistemological appliqué aux limites juste mentionnées, l'auteur clôture déclarer que Motorics humain est, pour lui, la connaissance scientifique qui sert de terre et s'occupe avec ce secteur d'universitaire - éducation physique - représentation également d'un champ d'intervention professionnelle intense et large.

MOTS-CLÉS: Motorics Humain ; La Science ; Champ Professionnel D'Intervention

MOTORICS HUMANO CIENCIA EM EL CAMPO PROFISIONAL DE LA INTERVENCIÓN

RESUMEN

El texto intenta identificar la actual condición de qué todavía se llama el ` la educación física ', que todavía carece un específico y una teoría científico probada para sostenerla. Acentúa que incluso cuando está convertido dentro de la universidad, debe ser repasado e identificado mejor con los requisitos mínimos para académico desarrolle un área dada, un tema académico o una carrera, como un área que desciende de la investigación y que tiene un vocabulario te'cnico-cienti'fico, y no simplemente la estructuración de la práctica. En el texto, algunos términos usados por los profesionales del área, tales como movimiento humano, kinesiología, ciencia de los deportes, Motorics humano y actividad física, se analizan, con los conceptos presentados generalmente. Después de un cierto tratamiento teórico y epistemological aplicado a los términos apenas mencionados, el autor cierra declarar que Motorics humano es, para él, el conocimiento científico que sirve como tierra y se ocupa con esa área académica - educación física - representación también de un campo de la intervención profesional intensa y amplia.

PALABRAS CLAVES: Motorics Humano; Ciencia; Campo Profesional De la Intervención.

MOTRICIDADE HUMANA CIÊNCIA OU CAMPO DE INTERVENÇÃO?

RESUMO

O texto procura identificar as condiçòes em que se encontra hoje a ainda chamada Educação Física, a qual continua sem uma teoria específica e cientificamente comprovada que a sustente. É nele evidenciado que mesmo quando desenvolvida no âmbito da Universidade, deve ser revista e melhor identificada com as condições mínimas exigidas para que determinada área, disciplina acadêmica ou profissão, venha a ser desenvolvida academicamente, enquanto área que descende da investigação e que disponha de vocabulário científico-técnico, e não tão somente da estruturação da prática. No texto são analisados alguns termos utilizados por profissionais dessa área como Movimento Humano, Cinesiologia, Ciências do Esporte, Motricidade Humana e Atividade Física, com os conceitos comumente apresentados. Depois de diferentes tartamentos teóricos e epistemológicos dados aos termos citados, o autor encerra declarando que a Motricidade Humana, é para ele o conhecimento científico que se ocupa e que serve de base para essa área acadêmica, a Educação Física, mas que representa também um campo de intensa e ampla intervenção profissional.

PALAVRAS CHAVE: Motricidade Humana, Ciência, Campo de Intervenção Profissional.