



SEÇÃO TEMÁTICA

Transcendence in the Kinanthropology of Manuel Sérgio

Transcendência na cinantropologia de Manuel Sérgio

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Abstract: This article seeks to analyze the contribution of Portuguese philosopher Manuel Sérgio to Religious Studies. The author dedicated his long academic life to the study of sports, but with a peculiar humanistic perspective. Instead of focusing on performance, the author focuses on the Human being who moves. This is what he defines as “Kinanthropology”. Transcendence is a major element in this proposal. In this article, after presenting Sérgio’s fundamental anthropological framework and his understanding of “human kinetics”, three of his possible theoretical contributions to Religious Studies are explored: 1. in the way he sees the relation between transcendence and religion; 2. in the way he opens corporeity to transcendence; and 3. in the way he seems to rehabilitate motion as a topic for religious and theological discourse.

Keywords: Manuel Sérgio. Kinanthropology. Transcendence. Motion. Intentionality.

Resumo: Este artigo investiga o contributo do filósofo português Manuel Sérgio para as Ciências da Religião. O autor dedicou a sua longa vida académica ao estudo do desporto, mas com uma perspectiva humanística peculiar. Em vez de se focar na performance, foca-se no ser humano que se move. É isto que Manuel Sérgio propõe como cinantropologia. A transcendência é um elemento decisivo desta proposta. Neste artigo, após se apresentar o enquadramento antropológico fundamental de Sérgio e o seu entendimento de “motricidade humana”, são explorados três tópicos como suas eventuais contribuições teóricas: 1. na forma como ele vê a relação entre transcendência e religião; 2. na forma como ele abre a corporeidade à transcendência; e 3. na forma como ele parece reabilitar o movimento como elemento do discurso religioso e teológico.

Palavras-chave: Manuel Sérgio. Cinantropologia. Transcendência. Movimento. Intencionalidade.

Introduction

Since the 1970s, Portuguese philosopher Manuel Sérgio (1933) has been proposing Kinanthropology. “The word ‘speaks Greek’” – he says –: “*kinein* (to move) + *anthropos* (Human being) + *logos* (treatise). It means, in consequence, discourse, treatise, theory or Science of Human Kinetics (*motricidade humana*)” (Sérgio, 2018/1987, p. 171). He took part in a broader movement in Sports Studies, which tried to overcome the idea of Physical Education, while proposing a more comprehensive anthropological approach to sports activity. This trend started during the 1960s in the USA and later spread to several European countries (cf. Renson, 1989, p. 236-244). Sérgio’s thought is fully aligned with this movement’s shift from the quantitative approach to human exercise, and, above all, from a reductive Anthropology of sport that tends to consider

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it just a physical activity. This line of thought, detaches the body from all other human dimensions, and, therefore, assumes a fundamental dichotomy in Anthropology: mind vs. body; soul vs. flesh. The relevance Sérgio gives to transcendence is, if not absolutely original, in the very least presents his singular philosophical Anthropology of sport. The decisive role transcendence plays in his Kinanthropology is the main reason why his work should also be analyzed within the realm of Religious Studies.

Particular attention should be given to the key topic in Sérgio's thought: "human kinetics (*motricidade humana*)". This topic emerged from an early age and can thus be found across his life's work. In fact, it is not only immediately recognizable in his most important work, *Para uma Epistemologia da Motricidade Humana* (first published in 1987; we use here a newer edition from 2018), but also in many others, such as: *Motricidade Humana: contribuições para um paradigma emergente* (1995), *Um corte epistemológico: da educação física à motricidade humana* (1999), or *Da ciência à transcendência: epistemologia da motricidade humana* (2019). The way Sérgio conceives "human kinetics" is pivotal not only for a general study of his work but also for the understanding of his very own considerations on transcendence. This is our specific goal: to make Sérgio's Kinanthropology the thematic subject of this study. In this article, we will focus especially on his work *Para uma Epistemologia da Motricidade Humana*. The purpose of this research is, on the one hand, to critically analyze Sérgio's understanding of transcendence, and, on the other hand, to identify some of his possible contributions to Religious Studies, thus deepening the interdisciplinary nature of this field of science.

This analysis of transcendence in the context of Sérgio's Kinanthropology is structured into four stages: 1. some linguistic remarks will have to be made in order to introduce the reader to his vocabulary; 2. Afterwards, and considering their great importance to our goal, we shall present some of the author's very fundamental anthropological views; 3. then, we will specifically analyze what Sérgio means when he speaks about "human kinetics"; and 4. finally some conclusions will be drawn, mostly trying to answer our main question: what can Sérgio's Kinanthropology contribution for Religious Studies be?

Sérgio's concepts: some linguistic introductory remarks

Two initial remarks should be made to the study of Sérgio's Kinanthropology and to its openness to transcendence. One has to do with the translation of his central notion: "human kinetics – *motricidade humana*"; the other regards the need for a clear distinction between Kinanthropology and Kinanthropometry.

"Human kinetics"

Because Sérgio's work is written in Portuguese, one must firstly analyze the necessary task of its translation. If this can be said generically about all of his work, there must be a specific mention of his nuclear idea of "human kinetics" as the core of his epistemology. As a matter of fact, the Portuguese original expression used by him is "*motricidade humana*". There does not seem to be an immediate and obvious match

in English to the Portuguese word “*motricidade*”. This difficulty is not only merely semantic (it is difficult to find an adequate match), but also conceptual, since Sérgio also reshapes the meaning of the Portuguese word “*motricidade*” to suit his project of a scientific field that understands motion as a global anthropological phenomenon, and not only as a physical reality. Instead of “kinetics”, other English terms could be used in the effort to translate this technical expression. I think “motion” or “movement” should be immediately discarded because “motion” or “movement” are precisely used by Sérgio as the counterpoints of his proposed idea of “human kinetics”. Perhaps another English word could be considered, such as “motivity”, although its use doesn’t seem common within this field of study. Another possibility would be to simply accommodate the Portuguese word “*motricidade*” into English, presenting it then as “human motricity”. This solution has been tried out by some researchers (cf. Franco Puttini, 2016). Although it might be plausible, this translation option seems to find scarce reception within the English speaking academic environment. Here, instead, the word “kinetics” is assumed as a possible and suitable translation of “*motricidade*”. Since there is no obvious solution and that all options considered have problems of their own, it seems better to adopt an English term already commonly used in Sports Studies. It expresses the fundamental aspects of what Sérgio understands by “*motricidade*” and promotes the legibility of his work, even if along this study extra clarifications to that understanding will have to be made.

Kinanthropology

A distinction should be established, right from the start, between the notion of Kinanthropology and that of Kinanthropometry. Kinanthropometry is understood as “the study of human body size, shape and form and how those characteristics relate to human movement and sporting performance” (Eston, 1996, p. i). As the name reveals, this discipline is focused on quantitative hermeneutics of human motion, as it is mainly interested in measures, figures and ways to optimize its performance. Although Kinanthropology is sometimes also interpreted in a similar quantitative sense, thus becoming a synonymous of Kinanthropometry, it tends to suggest a different, rather, qualitative approach to human motion. It appeals to a *lógos* in human physical activity, not just to its metrics. The emergence of such an approach is, at the same time, a critique to all epistemologies of human motion that do not take into consideration psychological, social, political, cultural or religious aspects. In sum, and in accordance with Sérgio’s thought, Kinanthropology and Kinanthropometry here have different meanings: the first describes a qualitative approach to human motion; the second, a quantitative study of human body and movement.

Fundamental anthropological framework: beyond definition and reduction

It is almost impossible to read a page written by Sérgio without coming across an explicit or implicit critique to all efforts in defining what a Human being is and to the

existing tendency of dividing and opposing the constituent elements of the Human being. In other words, the author pushes for an Anthropology that goes beyond the definition and the reduction of its object (who is not, therefore, completely objectifiable). In i. and ii., it is possible to draw Sérgio's fundamental anthropological and philosophical framework. These generic and fundamental issues are decisive to his line of thought, and his proposal for an epistemology of "human kinetics" must be seen as a natural consequence of this anthropological framework. Moreover, the way he perceives an openness to transcendence in human motion is deeply rooted in these fundamental anthropological perspectives.

Beyond definition

It is significant that Sérgio, before establishing the epistemological foundations of his "Science of Human Kinetics", started by raising the fundamental question: "What is a Human being?". In this long opening section of *Para uma Epistemologia da Motricidade Humana*, he establishes a dialogue with different western philosophical views on the human condition, starting from the Greeks, then granting special attention to "Christian Anthropology", and finishing off with his remarks on several "New Anthropologies" (Existentialism, Structuralism, Biologism, just to mention a few).

Sérgio concludes this personal synthesis by recognizing that the human condition is, in practical terms, indefinable:

There is no reasonable doubt: defining the Human being is a risk. [...] In truth, how can one accurately determine human subjectivity?... And shouldn't it be said, taking another audacious risk, that Human being is a mystery, given that a part of it exists that exceeds our intellectual and pragmatic categories, but which is so real that before we think about it we have already experienced it? That the Human being has an experiential taste of reality, before a conceptual knowledge of it – that seems absolutely right to me! (Sérgio, 2018/1987, p. 68, our translation)

Sérgio also adds, as he quotes and echoes some of his intellectual references, French philosopher and sociologist Edgar Morin, Karl Popper, and Brazilian writer Alceu Amoroso Lima,:

It can be said that Anglo-Saxon epistemology from 1950-1960s discovered (rediscovered) that no scientific theory can intend to be absolutely right. Popper, a major craftsman of this evolution, transformed the notion of science, which no longer is synonymous of certainty, but is synonymous of uncertainty, or better said, of trustworthiness (*fiabilismo*). If there are no more certainties, I feel like saying as a prestigious Brazilian intellectual once said: "everything is mystery!" (Sérgio, 2018/1987, p. 71, our translation)

These two quotes show, in a rather clear way, how the introduction of mystery in Sérgio's speech is closely related to the indefinable character of the Human being. Going beyond the "risk of definition" implies the recognition of the mysterious essential character of humanity. This is at the core of his anthropological views and, naturally, lays down the basis for a "Science of Human Kinetics", which is structurally open to transcendence.

Beyond reduction

The sharp critique to what is abundantly described as the “Cartesian paradigm” should be considered one of Sérgio’s main anthropological statements. This critique is directed, at the outset, towards traditional epistemologies of sports and training: “[Since a very early stage] I have openly disagreed (and still disagree) with Cartesianism, with Positivism, with Physiologism, which were abundant in sports training and in the so-called “Physical Education”” (Sérgio, 2018/1987, p. 201, our translation). This matter, however, goes much deeper than just training or sports performance. It is a far-reaching anthropological issue.

It fundamentally has to do with a divisive understanding of Human constitution *versus* a unified or integral understanding of it; the first, broadly described as “Cartesian”; the second being the one assumed by Sérgio. He bluntly criticizes all dualistic forms of Anthropology, whether they are those of body and soul, which he recognizes in several Christian authors; or recent ones, like those dividing mind and brain; or even those, like Descartes, that somehow oppose *res extensa* to *res cogitans*: “Descartes forges an idea of body completely reduced to a simple machine” (Sérgio, 2018/1987, p. 115, our translation). To Sérgio, these different approaches to Human constitution tend to share one common problem: they do not value the physical dimensions of humanity, nor do they contemplate the creative interactions between these objective elements of humanity and more subjective ones (like psychological, cultural, social, political or religious elements of human life). Agreeing with Herbert Marcuse, he denounces a “time in which the technological reason has reduced Human beings to one-dimension” (Sérgio, 2018/1987, p. 130, our translation).

According to Sérgio, the “Human being is not only a biological individual, lost in an eco-organization, but eminently a social being” (Sérgio, 2018/1987, p. 167, our translation) and, also according to the author, the “division of reality into two spheres has led to a cultural schizophrenia in which nature is simply deemed just experimentally knowledgeable and technically usable” (Sérgio, 2018/1987, p. 168, our translation). This division can be observed in the classic view of human motion studies that go by the name of “Physical Education”. This expression is reductive in a twofold manner: on the one hand, it reduces human motion to a physical phenomenon; and, on the other hand, it isolates the physical aspects of humanity from all its other elements with which they inevitably interact. Hence, the “Human being is a complex whole” and “human kinetics is not an isolated phenomenon, but a reaction and an expression of the Human being as a whole” (Sérgio, 2018/1987, p. 168, our translation).

In sum, the focus of Sérgio’s critique lies on the fact that Physical Education is interested in human motion, while he instead (and his Science of Human Kinetics) is interested in the Human being who moves (cf. Sérgio, 2018/1987, p. 201). This truly humanistic approach to human motion is surely among the most relevant and fruitful contributions of Sérgio to the fields of Hermeneutics and Anthropology of Sport. In this context, he frequently presents his proposal as an “epistemological cut” in Sports Sciences. He borrows this expression and idea from French philosopher Gaston Bachelard. “By the *cut* and with the *cut*” – Sérgio declares – “a new form of scientific knowledge

arises, which in turn causes deep transformations in Philosophy and Culture” (Sérgio, 2018/1987, p. 180, our translation). This “epistemological cut” should be seen as the first step in the development of his “Science of Human Kinetics”. Through it, Sérgio signals both his refusal of all anthropological dichotomies, as well as his defense of a science of human motion that accounts for the Human being as a whole.

Human kinetics: motion, intentionality and transcendence

Up to this point this paper has focused mainly on Sérgio’s critical approach to common forms of studying sports and human motion, as well as on the fundamental anthropological perspectives that lie beneath them. In a more explicit and systematic way, it is now necessary to introduce Sérgio’s own positive proposal for a new scientific way to deal with human body activity. In simple terms, what does he mean when he pushes for a new “epistemology of human kinetics”?

The easiest way to answer this question is, surely, to begin by considering the descriptions of “human kinetics” presented by the author himself. He doesn’t do it all at once, as more Scholastic or Rationalistic thinkers would do, but tries over and over again to express it in different formulas. That is why several attempts to describe (more than to define) what “human kinetics” is can be found across his work:

The Human being appeals to transcendence and, as such, is a praxic being, who, *as a whole and through kinetics, chases it [that transcendence]* (Sérgio, 2018/1987, p. 85, our translation).

Kinetics, as *acting intentionality*, is the superior expression of the body (Sérgio, 2018/1987, p. 107, our translation).

Adaptive, evolutive and creative process of a praxic being, in need of others, of the world and of transcendence. *Acting intentionality*, according to Maurice Merleau-Ponty. The physical, the biological, the anthropological and the sociological are all part it, as a dialectics within a whole. As a *needy being*, the Human being is a praxic being, in which, therefore, kinetics is affirmed within an intentionality of choice. But human kinetics and, as a consequence and above all, culture – not the standstill culture from a lifeless erudition – are cultivated because they are practiced (Sérgio, 2018/1987, p. 182, our translation).

It is the energy of transcendence towards an intentional and team motion (Sérgio, 2018/1987, p. 201, our translation).

Intentional motion of transcendence or of overcoming (Sérgio, 2018/1987, p. 201, our translation).

This is obviously not an exhaustive list of all of Sérgio’s efforts to describe his understanding of “human kinetics”. However, it presents us with enough information to identify what is at the core of this understanding. In fact, it is not by chance that words such as “motion”, “intentionality” or “transcendence” abundantly occur in this kind of descriptions (cf. Sérgio, 2019, p. 80). These three notions are essential to understand the peculiarity of the author’s contribution to Sports Sciences. They are the backdrop of Sérgio’s understanding of “human kinetics”, which will now be presented.

Motion

Once again, another important distinction should be made, in this case between motion (or movement) and kinetics. Motion is here understood as just a physical reality. Every movement, Sérgio argues, “may be described as translation or rotation or some special combination of these two” (Sérgio, 2018/1987, p. 74, our translation). Human kinetics, however, “cannot be confused with motion, because it is determined by what distinguishes the Human being from all other creatures: thought!” (Sérgio, 2018/1987, p. 74, our translation). The reason why there’s a definitive difference between motion and kinetics pulls us to the notion of intentionality. For the moment, it is enough to signal this decisive difference between motion and kinetics. Motion is more closely related to movement as a mere physical and quantitative reality. Human kinetics, however, has to do with a deeper anthropological reach of human activity and is definitely a qualitative reality.

Sérgio keeps coming back to the idea that motion is common to all moving beings, while kinetics is characteristically human. For instance, “kinetics” is, alongside corporeity, communication, cooperation, historicity, freedom, culture, spiritual activity and transcendence, amongst the dimensions that make the Human being an “irreducible” being (cf. Sérgio, 2018/1987, p. 71-82). One could argue that body motion is not an exclusively human phenomenon, but rather shared (at least) with all other animals, and therefore it should not be listed among those characteristics that properly describe human condition. This is where Sérgio’s view on kinetics plays a decisive role, given his non-reductive approach to the Human being. It is precisely because human kinetics is much more than just motion that he can talk about it as something typically human. Motion has, for Sérgio, a mere physical meaning, while kinetics goes much beyond that, naturally including a physical dimension, but also psychological, social, cultural, political and religious ones. That is why he can include kinetics (not motion) as one item of something singularly human.

The need to emphasize this distinction cannot deny that, even if human kinetics is more than motion, motion is an essential element of human kinetics. As redundant as it might be, human kinetics is necessarily kinetical. There must be motion in order to be able to speak about human kinetics. In its absence, all this discourse would lack its ground and, consequently, would simply fall apart. Physical activity, in all its multiple forms, is an indispensable element of this view on human kinetics. That is to say that corporeity is an essential element of it, since the “Human being is presence and space in History with the body, in the body, from the body, and through the body” (Sérgio, 2018/1987, p. 71, our translation). As the great moving constituent of the Human being, corporeity is present in all human activity and it must be considered within the Science of Human Kinetics. But, coherently, Sérgio doesn’t reduce the human body to a mere instrument or to a strict object of our will or knowledge. Assuming much of Merleau-Ponty’s *Phenomenology of the body*, he asserts: “the human body is not a thing, since it constitutes a means to express and communicate meaning. Nor is it an object, in the Cartesian sense of the word, since the human body is significant, it is origin and a source of meaning” (Sérgio, 2018/1987, p. 73, our translation). Also with

regard to the body, one can sense this dialectic in Sérgio's work, balancing between the body as a physical reality, but not reducible to its physicality.

In conclusion, motion is an essential element of human kinetics. It is its necessary physical and bodily basis, even though it goes much further. That is why it should be considered the first fundamental ingredient of Sérgio's notion of "human kinetics".

Intentionality

This is where motion gains a proper anthropological quality. If motion, in Sérgio's lexicon, describes the physical element of human kinetics, the recognition that when a Human being moves, he does so intentionally, elevates his analysis to a higher anthropological level. A conscious Human being doesn't move chaotically, but with purpose. The movement of a free Human being isn't driven only by external factors, but also by an inner force. Hence, human motion is never just that; instead, it is always the expression of the whole Human being who moves. It is an intricate combination of objective and subjective dimensions. As Sérgio puts it, kinetics is "intentional motion".

He sees intentionality as one of the greatest contributions of Phenomenology, and particularly of Merleau-Ponty. These philosophical influences have helped him recognize that "all consciousness is the consciousness of someone or of something" and that "understanding, from the perspective of phenomenology, is "capturing again the whole intention"" (Sérgio, 2018/1987, p. 99, our translation). This way, fully understanding human motion must mean to fully embrace its intentionality. Disregarding this essential aspect would be to miss all the depth of human motion. Each conscious human act "is a signifying act that gives and finds a meaning" (Sérgio, 2018/1987, p. 99, our translation). If this can generally be said of any human action, it must also be recognized in human motion. This too reveals and creates meaning in life; this too is a way by which humanity tries to find and to bring what it is utterly looking for: meaning. The Human being who moves is fully invested in that activity, not only by way of their physical constitution but always as a whole, bearing the same purpose they seek and have in everything they do. That is to say, human kinetics is an intentional act or, as previously quoted, an "acting intentionality" (Sérgio, 2018/1987, p. 107, our translation).

By introducing intentionality in the Hermeneutics of human motion, Sérgio distances himself from more traditional views on this issue. For example, to Franz Brentano, one of the authors that reintroduced this term in philosophical and psychological discourse, "intentionality defines the distinction between the mental and the physical; all and only mental phenomena exhibit intentionality" (Dennett, 1999, p. 141). This segmentation between the mental and the physical is essentially what Sérgio critically addresses along his work. But more importantly, this is an initial intake on the understanding of what human physical activity really is. It is not just motion (quantitative), it is always kinetics (also qualitative), because it is always "acting intentionality"; it is always human intentionality that expresses itself both through body and movement. Intentionality is, therefore, a first fundamental concept for Sérgio's line of thought, one

that elevates human motion into human kinetics and which, consequently, establishes the possibility of Kinanthropology.

Here the spectrum of intentionality is much broader than just reason or will. Otherwise, our author would easily fall back precisely into what he tries to counter: a reduction of body and motion into mere instruments of reason. This field of study must also comprehend those human faculties more related to the sensorial and the experiential, with creativity and art, because these make other forms of communication possible. That is why Sérgio also uses the term “Kinefantasy (*cinefantasia*)”. This should be interpreted as a derivation or as an application of Kinanthropology to the particular realm of human creativeness and imagination. The author considers this realm an “unconscious motor” (Sérgio, 2018/1987, p. 179, our translation) of human activity. On that note, he tries to make clear that

Human kinetics depends on a *decision* in which, in an unequivocal way, conscience and dream come together. Any movement we make, with the wings of imagination alone, sparks in us different sensations; and that same imagination allows for the existence of virtual movements, which are key elements to the resolution of different problems, including in sports. [...] The Human being, a praxic being, oriented towards transcendence, has always infinite *possibilities* in front of them [...]. Human kinetics [...] should not disdain this material, which is body language, with its coefficient of divination, of alchemy, of art (Sérgio, 2018/1987, p. 166, our translation).

Sérgio goes even further, underling the unique role played by what he calls “body language”. This language is able to express things that no other communication form can. The author explains:

The specific communication of body language is different from that of the rigorous and conceptual discourse, because it intends to form a new way of being and of being-in-the-world. With the alleged soul-body separation, we lived too much time without that communicative word that is body language, and therefore reach the core of our incommunicability. However, exactly because it reaches that core of incommunicability, body language brings itself and us closer to the peak of communication (Sérgio, 2018/1987, p. 167, our translation).

Turned towards living in the world, and not towards explaining it, this “body language” becomes crucial to all intentional acts. Intentionality, essential to Sérgio’s understanding of human kinetics and Kinanthropology, is here deeply connected to body and motion and in a dual way: on the one hand, because conscious motion is always intentional; and, on the other hand, because human intentionality needs this body language to fully express and develop itself. In conclusion, there seems to be a circle between intentionality and motion within Sérgio’s notion of human kinetics.

Transcendence

Sérgio brings transcendence into his discourse on multiple occasions. This is an obvious sign of the importance he gives to the matter. Human kinetics, as he understands it and as previously described, is “intentional motion of transcendence” (Sérgio, 2018/1987, p. 201, our translation), that is, intentional human motion open

to transcendence, aiming towards transcendence. As he sees it, “being human is acting to become more” and the Human being is “a pathway *ad aliud, ad alium*. They cannot stop in themselves” (Sérgio, 2018/1987, p. 82, our translation). Human life “doesn’t limit itself to logical truth”. On the contrary, “to *be more, knowing* more is not the only thing that matters; instead, it is to *love more*, in an integral praxis, in which every being moves towards love” (Sérgio, 2018/1987, p. 83, our translation). That is why “being human is not a state, but a process of never-ending transcendence”; it is being “open to transcendence, where the horizons of life acquire the expression of the unprecedented and the absolute” (Sérgio, 2018/1987, p. 83, our translation). In sum, it is clear that for Sérgio the Human being is a transcendent being. He states it himself: “a non-specialized and needy being, open to the world, to others and to transcendence” (Sérgio, 2018/1987, p. 126, our translation).

The innovative part of his take on this issue can, surely, be found in the way he sees human transcendence in human kinetics. In his words, it’s about “*moving*” towards transcendence (cf. Sérgio, 2018/1987, p. 84). Indeed, in accordance with his unitary anthropological fundamental views, Sérgio cannot ascribe transcendence just to the human soul or the human reason. That would be contradictory to his basic anthropological framework. It is quite the opposite, as body and motion are also active in that human capacity for transcendence. Body and motion are also pathways for transcendence. Consequently, human kinetics also has in transcendence one of its essential elements. That is why he sees transcendence not only as one of the “dimensions of the Human being” (cf. Sérgio, 2018/1987, p. 71-83), but also amongst the “pre-assumptions of human kinetics” (cf. Sérgio, 2018/1987, p. 126). This tension towards what is beyond manifests itself in intentional motion and through intentional motion. This too is a vehicle of and to transcendence. Kinetics is one of its agents. The “appeal to transcendence” inscribed in the Human being comprehends the Human being as a whole and, therefore, also comprehends “human kinetics” (cf. Sérgio, 2018/1987, p. 85).

This emphatic rooting of transcendence in human kinetics is, at same the time, a vigorous critique to all anthropologies deprived of transcendence, or to those that narrow it down just to reason or spirit. Here arises the scope of Sérgio’s “Science of Human Kinetics”, where the openness to transcendence plays a decisive role in this small revolution in what traditionally is understood to be just “Physical Education”. He summarizes it into two sets of three postulates:

[A Science of Human Kinetics] denounces:

- the *postulate of the primacy of reason*, where there’s no place for love, for celebration, for poetry, for game, for free and liberating corporeity;
- the *postulate of progress defined only by economic criteria*, with no reference to the fundamental and transcendent project of life;
- the *postulate of the priority of performance*, that generates a one-dimensional Human being [...].

And, at the same time, announces:

- the *postulate of transcendence*, as fulfillment of the needy being, such as the Human being [...];
- the *postulate of relativity*, as a prophetic postulate, since nothing we can do or say is ultimate, but always an unfinished task;
- the *postulate of kinetics*, as openness to relation and hope, since every true human act is a fruit of freedom (Sérgio, 2018/1987, p. 184, our translation).

Although only the first among the second set of postulates refers explicitly to transcendence, all three have something to do with that. The first openly holds the view that Human beings are transcendent. The second points out the limited and, therefore, always perfectible character of all human action. In this sense, all human activity is bound to transcend itself. Here transcendence and action, and by extension transcendence and kinetics, are already brought together. This is even clearer in his third and last postulate, where kinetics and “human acts” are seen as “openness”, which conveys an expression of transcendence.

These three elements – motion, intentionality and transcendence – describe what Sérgio means when he speaks about “human kinetics”. They are its peculiar elements, typical of the author’s thought and discourse. In an overall view, they tend to translate the author’s fundamental anthropological and philosophical perspectives into a Hermeneutics of human motion (in all its forms, and not just in sports). This allows for an understanding: 1. of motion as a fully anthropological dynamics; 2. of motion as intentional act and, consequently, not just an objective and measurable reality; and 3. of motion as a way and an expression of human transcendence. This broad understanding of human motion is what Sérgio calls “human kinetics”.

Kinanthropology and transcendence: conclusive remarks

Kinetics and Anthropology engage here in an unusual dialogue with transcendence. This conjunction is commonly seen as one of Sérgio’s main contributions to Sports Sciences. In fact, with a public mostly composed of researchers from the field of sports, this is what is usually said about his work. But, at the same time, bringing these three notions together should also be seen as a major contribution to Religious Studies. This perspective is, perhaps, less frequent and, therefore, should be emphasized.

After this summarized journey across some essential elements of Sérgio’s thought and work, it is now possible to grasp the role that transcendence plays in his Kinanthropology. This way, we get closer to the goal set at the beginning of this article: analyzing his understanding of transcendence and glimpsing its positive reach for Religious Studies. The critical hermeneutics of Sérgio’s notion of transcendence, aimed for in this study, will now be systematized in the three following topics.

Transcendence and religion

Transcendence and religion, in Sérgio’s thought, bind together in a complex form of relationship. On the one hand, they are not the same thing. Moreover, in the context of his Kinanthropology, transcendence may not be religious at all. There are many different ways to transcend. But, on the other hand, transcendence and religion aren’t dialectically opposed notions. If it is true that transcendence may not be religious, it is also true that transcendence is not a substitute for or a deviation from religion. On the contrary, they can coexist and even lead to one another. Therefore, a strict connection between transcendence and religion may not be affirmed, nor might a possible relation between them be denied.

Transcendence is, to Sérgio, a plural anthropological phenomenon. This means that the Human being is a transcendent being in several ways. He acknowledges religion as an active human way to always “be more”, “know more”, and “love more”. He also recognizes it in other anthropological dimensions, such as the human condition as a social, cultural and artistic being. These are also forms of human transcendence. The appeal (and perhaps the originality) of his proposal is, however, in the inclusion of the body and intentional motion among the ways by which human transcendence is active and present. Associating religion or culture, society or art, to transcendence is, surely, more common than to associate it with the human body and the conscious movement. Also by intentionally moving their body, the Human beings are actively tending towards transcendence. That’s because all their “acting intentionality”, and not just their rational activity, seeks to become more. This is where Sérgio’s description of Human kinetics as “intentional motion” touches the issue of transcendence. Because it is “intentional”, it is always loaded with that transcendent dimension that is also characteristic of the Human being. The author even goes to the rhetoric extreme of asking if the “champions” in sports shouldn’t be considered the one true mystics: “Who else transcends themselves like they do?” (Sérgio, 2019, p. 82, our translation).

If “transcendence” isn’t identical to religion, it is, however, open to it. In other words, this human kinetical transcendence can also push the argument towards religion and, in consequence, towards the field of Religious Studies. One could even ask the author: to reach its full potential, shouldn’t human kinetics reach some kind of religious configuration? In Sérgio’s discourse this isn’t an issue as such, but he is rather explicit when admitting “faith” or the quest for “God” or the “Absolute”:

Transcendence is also an act of faith on the part of a being who is not “something”, but “someone” capable of overcoming the reflex of the world they live in and of creating the movement of a project where God poses as the founding reality. Indeed, in nature nothing arises finished and definitive. But from everything emerges the mystery (Sérgio, 2019, p. 82, our translation).

But what does transcendence mean? To me, transcendence tells us that the Human being is not an imitator, but a creator; and, given that nature, they are capable of overcoming, [...] of opening to the Absolute (Sérgio, 2019, p. 81, our translation).

Quotes like these are good examples of showing how the author doesn’t see religion as the only outcome of transcendence in human kinetics, albeit not denying that possibility. To a certain extent, they also seem to contradict some assertions that Sérgio’s vision on transcendence and “spirituality” is purely “non metaphysical” (Real, 2017, p. 15). In fact, his references to “faith” or “God” are rather religiously neutral, but not necessarily non-metaphysical. They can include both religious and non-religious interpretations of it, as they can assume metaphysical and non-metaphysical meanings. In fact, he is less focused on religion and more on transcendence, which seems to open up to Metaphysics even when that transcendence is not religiously understood. This metaphysic possibility within Sérgio’s system, however, must always include Physics. In other terms, Metaphysics here cannot mean an exclusion of Physics; instead, it must go through Physics to reach what might be beyond it, which, lacking of a better word, the author calls “mystery”.

In conclusion, more than religion or Metaphysics, transcendence is what Sérgio is really concerned with. Although he frequently interacts with Christian authors and uses Christian symbolism (for example, he sees Jesus Christ's resurrection as the highest symbol of transcendence – cf. Sérgio, 2019, pg. 82), his Anthropology of transcendence could be considered religiously neutral, that is, neither religious nor anti-religious.

Transcendence and body

Sérgio's second contribution to Religious Studies has to do with how to reach an integral approach to humanity that fully embraces corporeity and body. This is not a new perspective in Philosophy, with several voices having claimed for a more holistic understanding of the Human being for some time. Many of these voices had a relevant and positive impact on Sérgio's work. It is neither a totally new issue to Religious Studies, an area always quite attentive to the bodily circumstances of all religious experiences. That is why this can hardly be seen as an original aspect of his contribution. It should rather be seen as a reinforcement of something that was already into force within the scientific community dedicated to study religious phenomena.

Sérgio's contribution is here much more at a theoretical level. He helps build and consolidate an epistemic basis for the study of the body and for the study of all embodied experiences. Since religious experiences are also embodied, here lies this second aspect of his contribution to Religious Studies. His fundamental anthropological framework is (or can be seen as) a valid theoretical basis for all studies regarding religion and body. This doesn't mean that he had that purpose in mind, and even less that he seeks to engage in the hermeneutics of body in religious contexts. Nevertheless, a researcher on religion will find relevant information and insightful stimuli to go deeper in their research on body and religion. Even if unintended, this reinforces the interdisciplinary nature of Religious Studies. In the work of Manuel Sérgio, a researcher of Religious Studies can find a relevant source of information coming from an unsuspected scientific area: Sports Studies.

His perspective on transcendence is surely at the core of his contribution to Religious Studies. In the first place, transcendence is understood in and through the body, and not in spite of it. Therefore, and in accordance with Sérgio's Kinanthropology, religious transcendence can also be reached from within and across the body and through "intentional action". This is not an assertion made by the author, but a conclusion to which any researcher on religion will draw if they engage in a dialogue with Sérgio's thought and work; if they embrace Sérgio's Kinanthropology as a theoretical basis for their own research. Secondly, in Sérgio's proposal, "transcendence" is always "of extreme subjectivism and of objectivism" (Sérgio, 2018/1987, p. 100, our translation). Once again, a researcher on religion may find in Sérgio's work an epistemic and anthropological compass to drive him beyond two reductive extremes: religion considered just an objective reality or just a subjective phenomenon. As a complex combination of objective and subjective elements, religion will be better studied by a Hermeneutics able of integrating that complexity. Some relevant ingredients of that hermeneutic can be found in Sérgio's Kinanthropology.

Transcendence and motion

Sérgio's view on motion is certainly the most original element of his thought and a third aspect of his possible contribution to Religious Studies. Motion is, in fact, present across the religious phenomena. By seeing it not just as a physical reality, but as "intentional action", he opens it up to transcendence and makes possible a whole new understanding of almost all religious acts (such as ritual acts, prayer, dance, chant, or pilgrimage, just to mention a few).

But, for a very long time, motion was frequently present in religious discourse. It is certainly not by chance that religious arguments built on the issue of motion can be found in old Greek philosophers or in more recent theologians. We can trace them as far back as Anaximander, to whom motion was an "eternal agent of the cosmos" (Jammer, 1972, 396), or as Aristotle and his famous "eternal mover" (cf. Aristotle, 1996, 258b). Not surprisingly, the theme reemerged in Christian ancient and medieval Theology. Thomas Aquinas can easily be listed among the great authors that also integrated motion into their Philosophy and Theology. In his *Summa theologiae*, he develops an "argument of motion (*motus*)" (the first way to prove the "existence of God") and concludes by asserting the existence of a "first mover (*primum movens*)", which is what "everyone understands to be God" (Aquinas, 2003, q. 2, a.3, resp.). Later on, to Modern thinkers and scientists, motion became the object of a new discipline: "Kinematics". It focuses on making a mathematically rigorous description of moving bodies. With this new approach to the understanding of motion, it is understandable that religious discourse progressively lost interest in it. Motion had no longer that metaphysical quality that made it suitable to religious and theological thinking.

This is where the Kinanthropology proposed by Sérgio mostly shows its pertinence. In fact, by centering his thought on "human kinetics", he can help reintroduce the theme back into the Hermeneutics of religion and into Theology; and by broadening the concept of motion as to include intentionality and transcendence, once more, he sets the theoretical basis for a reassessment of motion within religious and theological discourse. In reality, his idea of "human kinetics" renders possible a phenomenological approach to the theme, freeing it from the dialectic between a metaphysical and mathematical understanding of motion which, to a large extent, explains its disappearance from the current religious and theological discourse. In other terms, this allows for the argument to go beyond any objective reduction of motion, whether metaphysical (qualitative) or mathematical (quantitative). Phenomenally speaking, the focus is more on intentionality, since this is the specific quality of motion as "kinetics". Intentionality and transcendence introduce a subjective element in "kinetics", without falling in the opposite end, which would be depriving it of any trace of objectivity. In this balanced way, Sérgio's proposal seems to overcome the described dialectic and to make available a new approach to the theme. In synthesis, it allows for the development of an understanding of motion as "kinetics" suited for Religious Studies and for Theology.

After going through an essential part of Sérgio's work, some elements enable us to answer the fundamental question that motivated this article. In conclusion, his positive contribution to Religious Studies should be recognized. Besides his establishment of

interconnections between transcendence, body and motion, one last precious contribution should also be added. Manuel Sérgio's thought is deeply humanistic. This feature determines all his reflections. Maybe that is his greatest, ever-present peculiarity, even if not always explicit. His humanistic approach to all subjects (humanity, sports, motion, or transcendence) is much more than just an element of his intellectual production. It is a feature of his intellectual style. This too should be included among one of his greatest lessons.

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Motricidade humana: o itinerário de um conceito

Human motricity: the itinerary of a concept

Motricidad humana: el itinerario de un concepto

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RESUMO

São muitos os que se licenciaram em Educação Física e relativizam a fixidez do nome que pretende definir a sua profissão. Com efeito, nenhum deles se vê cartesianamente centrado na educação de físicos. A passagem do físico à motricidade que não confundo com movimento tão-só (ao invés de alguns estudiosos), surge como a mudança de lugar do corpo humano, num espaço e tempo determinados, com as características de um processo objetivo. Procuro fundamentar a motricidade humana na intencionalidade e no mundo da vida. Ao anunciar-se um novo paradigma (ação intencional e solidária de transcendência), a Ciência da Motricidade Humana procura servir também os anseios de todos os marginalizados pela sociedade injusta. Verdadeiramente, o Ser Humano é *ser-ao-mundo-com-outrem*. E tudo isto, em busca da transcendência, da superação, da plenitude, do *ser-mais*.

Palavras-chave: Ciência da Motricidade Humana. Intencionalidade. Transcendência.

ABSTRACT

There are many who graduated in Physical Education and relativize the fixity of the name that intends to define their profession. Indeed, none of them sees itself as being Cartesian focused on the education of physicists. The passage from the physical to the motricity, which I do not confuse with movement only (instead of some researchers), appears as the change of place of the human body, in a determined space and time, with the characteristics of an objective process. I try to ground human motricity in intentionality and in the world of life.

By announcing a new paradigm (the intentional and solidary action of transcendence), the Science of Human Motricity also seeks to serve the aspirations of all those marginalized by an unjust society. Truly, the Human Being is *to-be-to-the-world-with-others*. And all this, in search of transcendence, overcoming, fullness, from of *to-be-most*.

Keywords: Human Motricity Science. Intentionality. Transcendence.

RESUMEN

Son muchos los que se gradúan en Educación Física y relativizan la fijeza del nombre que pretende definir su profesión. De hecho, ninguno de ellos se ve a sí mismo como cartesiano centrado en la formación de físicos. El paso de lo físico a la motricidad, que no confundo sólo con movimiento (a diferencia de algunos estudiosos), aparece como el cambio de lugar del cuerpo humano, en un espacio y tiempo determinados, con las características de un proceso objetivo. Intento fundamentar la motricidad humana en la intencionalidad y en el mundo de la vida. Al anunciar un nuevo paradigma (la acción intencional y solidaria de la trascendencia), la Ciencia de la Motricidad Humana también busca servir las aspiraciones de todos aquellos marginados por una sociedad injusta. Verdaderamente, el Ser Humano es *ser-al-mundo-con-otren*. Y todo ello, en busca de la trascendencia, la superación, la plenitud, del *ser-más*.

Palabras clave: Ciencia de la Motricidad Humana. Intencionalidad. Trascendencia.

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ENSAIO

Quando, em Outubro de 1968, eu pisei, pela primeira vez, o chão frio e lajeado do Instituto Nacional de Educação Física (INEF), para trabalhar no Centro de Documentação e Informação do Fundo de Fomento do Desporto, o dualismo antropológico cartesiano dominava, nesta Escola, no meio de fervorosos admiradores. Demais, a Educação Física já era o resultado de longos caminhos percorridos por nobres espíritos, em laboriosa evolução intelectual.

Em Descartes, o eu define-se apenas como *res cogitans* (coisa pensante). No *Traité de l'Homme* (DESCARTES, 1970), o filósofo adentra-se na descrição do funcionamento do corpo, apresentando-o como máquina que contém peças várias, as quais desempenham diversas funções. Enfim, o corpo é máquina e a alma razão. A mudança, na concepção geral do universo, que passou de geocêntrica a heliocêntrica, levou o ser humano a valorizar a sua interioridade consciente e a minimizar a *res extensa*, ou seja, a extensão e a matéria. Daí que, destituída de subjetividade, a natureza esteja aí, para ser guiada e conduzida pela razão. Quando, em 1632, Galileu publica os *Diálogos sobre os dois principais sistemas do Mundo* (GALILEI, 1992), ele não diz outra coisa.

“Mecanizada, a Natureza torna-se uma simples possibilidade de exploração técnica, em breve levada ao máximo pela indústria nascente e logo invasora” (LENOBLE, 1990, p. 279). Por isso, “[...] a alma serve-se do corpo como o piloto do seu navio, para o dirigir; e a bordo da nave do mundo, por si vazio de intenção e de finalidade, o homem é o piloto através do qual o mundo pode [...] louvar o Criador” (LENOBLE, 1990, p. 267).

Compreende-se assim a conclusão de Bacon (1561-1626): “[...] saber é poder” (BACON, 1979, p. 33). Também na história pregressa da medicina e da educação física, o ser humano desvincula-se da natureza (ou do corpo) para subjugar-lá, dado que tanto uma como outra nascem verdadeiramente em Galileu (1564-1642) e Descartes (1596-1650), defensores acérrimos de que o corpo humano é máquina mesmo.

“Ao separar rigorosamente a alma e o corpo e ao aplicar a este o mecanismo universal, Descartes anuncia a reificação (ou objectivação) do corpo [...]. Ele abre a via à apropriação, experimental e objectiva, pela ciência, do corpo humano, cada vez mais des-sacralizado e des-animado. Prepara, assim, a grande distância, a medicina experimental (Claude Bernard, no século XIX) e a biomedicina contemporânea” (HOTTOIS, 2003, p. 69).

Na Educação Física, a separação das duas substâncias distintas só em plena década de 1960 começa a pôr-se em causa (se bem que a fenomenologia já havia feito bem tempo antes). A partir do século XIX, já se denunciava o erro de Descartes, mas vincando nele tão-só a incomunicabilidade alma-corpo. “Ainda que considerando sempre a unidade psico-fisiológica do indivíduo, a educação física diz respeito, em primeiro lugar, ao físico, isto é, aos órgãos que são o abstracto material da personalidade” (OLIVEIRA, 1965, p. 34). Aqui, a unidade psico-fisiológica não exerce o dualismo alma-corpo. Apenas diz que a natureza e a cultura inter-comunicam. As denúncias da instrumentalização do corpo pelo cogito, o reconhecimento de que deve associar-se “[...] a noção de espiritual a uma experiência intensa de harmonia, à ideia de que o organismo está a funcionar com a maior perfeição possível”; e que esta experiência se desenrola “[...] em associação com o desejo de actuar em relação aos outros, com generosidade e amabilidade”; e que até possa dizer-se “[...] que o espiritual seja talvez uma revelação parcial do impulso por detrás de uma vida vivida em perfeição” (DAMÁSIO, 2003, p. 317): são posturas recentes. O “erro de Descartes” é bem mais omnicompreensivo, hoje, do que há sessenta anos. Por isso, são muitos os que se licenciaram em Educação Física e relativizam a fixidez do nome que pretende definir a sua profissão. Com efeito, nenhum deles se vê cartesianamente centrado na educação de físicos.

A partir dos finais da década de 1970, depois das leituras que fiz, eu não só me rendi aos estudos epistemológicos como se me tornou possível a criação de um novo paradigma de que a Educação Física fosse a pré-ciência.

E assim, corria o ano de 1983, o meu fervor prospectivo e uma curiosidade insaciável, levaram-me a redigir *corrente calamo* o meu projeto de doutoramento. Intitulava-se *Contribuições de Althusser a uma Epistemologia da Motricidade Humana*. Era então professor auxiliar convidado do Instituto Superior de Educação Física (ISEF) da Universidade Técnica de Lisboa.

E, apoiado na sabedoria do meu orientador, Prof. João Evangelista Loureiro, meti ombros à tarefa, com o rigor e a humildade possíveis, dando um novo nome (e uma orientação nova) ao trabalho: *Para uma epistemologia da motricidade humana*. Reverso a João Evangelista Loureiro: percorria o Outono da vida, sempre bondosamente hiperbólico. Media-me tão-só pela medida do seu afeto: “Gostei da interpretação que fez do Bachelard. A sua tese vai ser aplaudida pelo júri”. E ria-se imaginoso, divertido, cavaqueador. Faleceu, de morte súbita, em Março de 1985. Só eu sei a falta que me fez o seu respeito ilimitado, pelo meu espaço e tempo concretos. Sobre a terra que o cobriu, de certo cresceram árvores frondosas e voaram pássaros a toda a rosa-dos-ventos da cultura!

E, com mais ou menos dificuldade, beneficiando, talvez (como Evangelista Loureiro classificava a minha prosa) de uma “quase luxuosa abundância vocabular” e ainda da licenciatura em Filosofia, lá consegui anunciar a criação de uma nova ciência, a ciência da motricidade humana (CMH), à custa, principalmente, do que aprendera na filosofia das ciências e na fenomenologia.

Doutorei-me, em 6 de Junho de 1986, com distinção, mas... sem louvor! No júri, houve quem não me perdoasse que tivesse permanecido na difícil trincheira dos que se batem pelo futuro. Há um caciquismo, também na universidade, privado de sentido histórico, que só sabe defender os seus privilégios e que vai protelando, aqui e além, qualquer ato criador. No entanto, fui aprovado, por unanimidade! O que me bastou, pois outros acontecimentos me trouxeram grandes alegrias, parecendo subir das raízes de mim.

Da minha pouquidade, que nunca foi quieta e conformada, assisti à definição do objeto de estudo do ISEF, a *Motricidade*, através do Decreto-Lei n. 382/86, de 14 de Novembro, que assim rezava: “O Instituto Superior de Educação Física, da Universidade Técnica de Lisboa, tem por objecto principal o desenvolvimento através da motricidade” (PORTUGAL, 1986, p. 3427) e acrescentava que as atribuições deste Instituto (entre as quais se contavam a formação académica, conducente à concessão dos graus de licenciado, mestre e doutor) se dirigiam à Educação Física, ao Desporto, à Dança, à Educação Especial e Reabilitação e à Ergonomia.

E recebi convite, nesse mesmo ano, do Doutor João Batista Andreotti Gomes Tojal, diretor da Faculdade de Educação Física da Universidade Estadual de Campinas (Unicamp-Brasil), para assumir funções de professor visitante, na sua Escola. Reticente em princípio, aceitei e os entraves administrativos e burocráticos depressa foram ultrapassados. E entre 7 de Março de 1987 e 13 de Dezembro de 1988 fui professor na Unicamp. Quatro anos antes, em Setembro de 1983, pisei solo do Brasil pela primeira vez, para participar num Congresso do Colégio Brasileiro de Ciências do Esporte (CBCE). Foram cicerones da minha visita os Doutores Lino Castellani Filho e Laércio Elias Pereira.

Não escondo, neste passo, a carta que escrevi ao Lino Castellani Filho, datada de 3 de Outubro de 1983, onde deixei escrito:

A vossa cordialidade seduziu-me – sentimento inalterável, mesmo diante da ousadia das minhas ideias acerca da Educação Física (EF). Mas, se bem atender, eu não me refiro em primeiro lugar à EF, porque ela é o produto do dualismo antropológico racionalista, que está defunto, como se sabe. Os três pilares em que assenta a minha filosofia são: o conceito hegel-marxista de

totalidade; a **intencionalidade** da fenomenologia; e o cristão **amai-vos uns aos outros como eu vos amei**. A minha CMH resulta de um filosofar (carta a Lino Castellani Filho).

Ou seja, quando assumi funções docentes na Unicamp, era conhecido o meu pensamento.

Como nunca lecionei com a pompa e circunstância de qualquer magisterdixismo, cultivando uma convivência dialogante com colegas e alunos; porque procuro, com justa expectativa, a ciência e a filosofia em que o tempo se desentranha – não quis “perder tempo” e procurei propor aos meus alunos brasileiros a leitura de textos (como já o fizera no ISEF de Lisboa) donde ressaltasse a ideia de crise, no que à modernidade diz respeito, e a necessidade de um novo paradigma, tanto para a Educação Física como para o conhecimento em geral. Descartes (1987), Locke (1963), os positivistas, a fenomenologia (e, aqui e além, a hermenêutica), a teoria crítica e Bachelard (1988) e Foucault (1987) e Popper (1972) e Kuhn (1996) e Feyerabend (1977) chegaram aos alunos, em sínteses que o obscuro filósofo que eu sou congeminou e compôs do modo mais inspirado e sugestivo que lhe foi possível.

O Ser Humano não é um ser passivo num mundo feito, mas o construtor de um mundo por fazer. E assim, se não perdia tempo, eu precisava de tempo para demonstrar a oportunidade da Ciência da Motricidade Humana, de que a Educação Física seria a pré-ciência. Ocorria-me o *Princepezinho*: “[...] foi o tempo que perdeste com a tua rosa que a fez tão importante” (SAINT-EXUPÉRY, 2009, p. 72). Simultaneamente, apresentei à Direção da Faculdade de Educação Física (FEF) da Unicamp um documento que seria discutido por todos os professores, com o escrutínio e a recensão dos vícios característicos do dualismo cartesiano, donde irrompe a Educação Física, e sublinhando o nascimento da CMH.

A passagem do físico à motricidade humana, ou do simples ao complexo; a recusa do afastamento entre a *res cogitans* e a *res extensa*, que tinha implícito uma lógica de domínio da razão sobre a natureza; a definição de “motricidade”, em Merleau-Ponty; a descontinuidade na história das ciências – facilitava o surgimento da CMH e da *conduta motora* ou *ação* como paradigma de uma área do conhecimento.

O diretor João Batista Andreotti Gomes Tojal, Lino Castellani Filho, João Batista Freire, Wagner Wey Moreira, Nelson Carvalho Marcelino, Silvana Venâncio, Ademir de Marco, João Paulo Subirá Medina e alguns mais, todos eles professores da FEF/Unicamp, partindo do documento que eu lhes propunha, enriqueceram-me com contribuições várias, quer concordando quer discordando e obrigando-me, por isso, a estudo aturado. E Regis de Moraes, José Dias Sobrinho, Ubiratan d’Ambrósio, respeitados professores da Unicamp, Anna Maria Feitosa, que se se deslocava de Recife para São Paulo para comigo dialogar, também Mauro Betti. Todos me diziam cada qual à sua maneira, que a CMH estava cada vez menos murada num espaço exíguo.

Durante os anos de 1987 e 1988 percorri boa parte do Brasil e, em algumas universidades do país irmão, encontrei eruditos cenáculos onde não se descortinavam rançosos sobreviventes do racionalismo. Afinal, eu ressoava Merleau-Ponty, quando escreve:

A unidade dos sistemas físicos é uma unidade de **correlação**, a dos organismos uma unidade de **significação**. A coordenação pelas leis, tal como a prática do pensamento físico, deixa nos fenómenos da vida um resíduo que é acessível a um outro gênero de coordenação: a coordenação pelo sentido (MERLEAU-PONTY, 1971, p. 51).

Ora, o sentido pressupõe o tempo e a intencionalidade do sujeito. E na intencionalidade não se escuta o murmúrio indistinto do projeto?

Com o meu regresso a Portugal, volto a insistir na criação da disciplina de *Epistemologia da Motricidade Humana*. A nossa área de estudo é indiscutivelmente a Motricidade Humana. Mas o corporativismo, a tradição, o comodismo vão obstaculizar, de certo, os estudos epistemológicos. Segundo Fernando Namora,

[...] tendemos sempre para as simplificações e os maniqueísmos. São confortáveis. Assim, há os que pensam justo e os iníquos; há os intocáveis e os prevaricadores; há os escribas maiores e os escribas menores. E neste catalogar sumário praticamos um terrorismo acobertado por detrás da bandeira de sacrossantas intenções (NAMORA, 1988, p. 68).

A epistemologia, porque interroga a cientificidade dos paradigmas, vai ser olhada de soslaio. Há quem, teimosamente, não aceite pôr em causa o que pensa e o que faz. Tenho receio que, por isso, a nossa Escola possa converter-se numa paróquia de devotos de antigos dogmas. A nossa Escola que tem condições ideais para ser uma verdadeira *comunidade científica*...

A metodologia holística ou sistêmica há de fazer rupturas, no interior da Educação Física. A passagem do *físico* à *motricidade* que não confundo com *movimento* tão-só (ao invés de alguns estudiosos), este surge como a mudança de lugar do corpo humano, num espaço e tempo determinados, com as características de um processo objetivo. Procuo fundamentar a motricidade humana, na fenomenologia, ou melhor: na *intencionalidade* e no *mundo da vida*. Mas, sem entender a filosofia, como o fez Husserl (1975), como simples teorização ou pura contemplação. E assim teorizo a motricidade como a energia para um contínuo processo de auto-superação, sem narcisismos de qualquer espécie, porque a minha superação há de supor um contexto antropológico (e político) global, sem alienação, nem exploração, nem marginalização. Que o mesmo é dizer: eu caminho fenomenologicamente, para além da fenomenologia. No entanto, a *intencionalidade* no *mundo da vida* trouxe-me o fundamento radical da nossa área de estudo. A Educação Física nasce do racionalismo. Eram racionalistas de apurada cultura os seus pioneiros. Não tem de envergonhar-se do seu Passado a Educação Física. Só que o racionalismo foi superado pelo “processo histórico”.

Há, nas minhas propostas, uma propensão demasiado teórica, desprezando a dimensão empírica, o trabalho de campo, a pesquisa laboratorial. Eu só procuro alertar para a crise do paradigma científico racionalista e positivista e, ao mesmo tempo, para a necessidade de um trabalho inter e transdisciplinar.

Não é de estranhar que, na Educação Física e no Desporto, se descortinem estudiosos que ainda pensam que a sua especialidade só é científica, se se exprimir em termos matemáticos. São fiéis ao paradigma cartesiano em que assentam os primórdios da Educação Física. Só que o paradigma cartesiano morreu. Não se diz que os números não são nunca necessários. Afirma-se que nem sempre são necessários...

Assim, passada a fase de uma “ciência normal”, na Educação Física e até no Desporto (que de tanto proclamar-se que é uma atividade física não tem na devida conta a totalidade humana) importa que, após férvida procura, se faça uma “revolução científica” donde nasça um novo paradigma.

Mercê da minha teimosia, da concordância de muito poucos e do absentismo da maioria, entrei de lecionar a “cadeira” de *Epistemologia da Motricidade Humana*, no ano letivo de 1991/1992. “Dar aulas” foi, para mim, um acontecimento jubiloso. Sinto-me bem entre moças e rapazes que imprimem ao que fazem uma acentuada jovialidade. Renasço jovem entre os jovens, olhando com eles a vida de frente. E chego a pedir-lhes: “Sempre que falarem de mim, não se esqueçam de acrescentar – era um professor que gostava dos seus alunos”. Só porque muito aprendi com eles, lhes pude ensinar alguma coisa. Entretanto, no dia 1 de Agosto de 1989, publicaram-se os Estatutos da UTL, onde, no artigo 45º, se

estabeleceu a nova designação do ISEF: *Faculdade de Motricidade Humana (FMH)* (PORTUGAL, 1989).

A Ciência da Motricidade Humana alarga uma profissão à Educação, à Saúde, ao Lazer, ao Trabalho, ao Desporto. Por que não saudar a verdade incômoda que é esta nova ciência?... Ser-nos-á muito útil a indócil vitalidade dos que discordarem de nós, baseados noutras categorias essencialmente criativas e dinamizadoras.

Ao nível das condutas motoras, os métodos standardizados da prova são demasiado falíveis, dado que, no ser humano, a causalidade é a plausibilidade do *possível* e não a certeza do *real*.

Falar da CMH, designadamente em ambiente universitário, supõe que se realce que não há causalidade, no que a esta ciência diz respeito, em estado de uma intocável pureza; que a CMH não é um sistema fechado, mas elemento do vasto saber das ciências e, por fim, do fenómeno social total. A conduta motora (ou ação) é humana; é ao nível do humano que se situa a *razão de ser* de qualquer conduta motora. Quando se estuda a CMH, como sistema, e sistema aberto (o funcionamento de um sistema depende claramente da sua organização e do tipo de relação que mantém com o mundo circunvolvente), mais tarde ou mais cedo se conclui que toda a conduta motora (ou ação) obedece a três princípios: o *princípio de interdependência*, o *princípio de imposição descendente* (ou *hierarquização das finalidades*) e o *princípio de imposição mínima*.

O *princípio de interdependência* apenas pode entender-se se definirmos previamente duas importantes características dos seres vivos: *emergência* e *especificidade*. Aquela quer dizer que a relação de elementos de um certo nível (por exemplo, os neurônios) no seio de um sistema (o cérebro) se traduz pelo surgimento de novas propriedades (a capacidade cognitiva e o espírito) desconhecidas dos níveis inferiores. Aqui, como se vê, o sistema é mais do que a soma das partes. No entanto, o sistema também é menos do que a soma das partes, através do fenómeno da *especificidade*, pois que, ao mesmo tempo em que emergem novas lógicas de regulação, cada um dos níveis continua a efetuar atividades ignoradas pelos níveis nos quais se insere. Um ser vivo, por exemplo, não tem consciência, nem de um murmúrio arfante, indistinto do funcionamento ininterrupto das suas células. Não é a saúde a vida, em silêncio, dos órgãos?². Ora, da síntese entre a *emergência* e a *especificidade* resulta o *princípio da interdependência* entre a reprodução de um sistema (o corpo) e a dos seus subsistemas (os órgãos). De fato, cada um dos órgãos só existe se o corpo, na sua complexidade, puder manter a sua estrutura; por outro lado, este só existe, pela correta atividade de todos os órgãos. O *princípio da imposição descendente* realça que a finalidade de um sistema vivo prevalece sobre a dos subsistemas que o compõem, donde se infere que nenhum sistema é regulado por qualquer dos seus subsistemas. No entanto, será de referir que, nos sistemas vivos (e portanto complexos) a formação do todo e a transformação das partes encontram-se intimamente relacionados. É admirável a síntese de Edgar Morin: “Tudo o que forma transforma” (MORIN, 1969, p. 115). Partindo de Edgar Morin, poderei grafar: só dura e perdura o que se transforma! Assim nasce o princípio da imposição mínima, ao assinalar que o todo não pode impor-se de tal forma que condicione o bom funcionamento das partes.

Pelo que vem de escrever-se, a CMH tem as características necessárias e suficientes, assim o digo bem menos precavidamente do que alguns poderão supor, para considerar-se como uma ciência do ser humano (ou humana e social). A motricidade humana é o fundamento da vida social, pois que é ação intencional a dar sentido à vida. Ocorre-me Paul Ricoeur, no *Bulletin de la Société Française de Philosophie*: “É preciso reintegrar a consciência no corpo e o corpo na consciência” (RICOEUR, 1951, p. 5). Talvez seja esta a

² CANGUILHEM, G. *Le normal et le pathologique*. Paris: PUF, 1991.

função primeira dos professores e técnicos do desporto e da dança e da ergonomia e da reabilitação.

Diante dos dois polos, consciência e corpo, importa construir a síntese donde nasce, fenomenologicamente, a motricidade humana.

José A. Bragança de Miranda levanta a questão de um método para a cultura. E escreve a propósito: É a aceção

[...] de **método** como **caminho** que fazemos nossa. Seguir um caminho, um dado trajecto, é diferente de seguir um método pois, enquanto este, na sua tradução pós-cartesiana, nos ajuda a ter ideias claras e distintas para não nos perdermos nos recessos do mundo da experiência, tendo de o interpretar, como se o mundo e a natureza estivessem organizados segundo uma **mathesis naturalis**, a outra opção lado a lado com as ideias claras e distintas, não recusa trabalhar com intuições e ficções de todo o género, para nos orientarmos no labirinto da experiência (MIRANDA, 2002, p. 49-50).

Se as ciências da natureza (ciências ditas “exatas”) enriquecem, todos os dias, o paradigma da complexidade (e não se trata de loquacidade volúvel) com a teoria do caos, a termodinâmica não linear, a teoria da auto-organização etc. - há que ter em conta a maranha de “intuições e ficções”, que compõe o mundo humano e, portanto, a motricidade humana.

Em 3 de Novembro de 1998, no início do meu último ano de leccionação na FMH e portanto no Ensino Público, deixei nas mãos do Doutor Carlos Neto uma prosa epistolar, onde referi:

Não há passagem do **físico** à **motricidade**, isto é, do simples (cartesiano) ao complexo (sistêmico), sem uma **ruptura epistemológica**, ou **mudança de paradigma**, como lhe queiram chamar. Não é a educação física que se alarga; é a educação física, enquanto macro-conceito, que se respeita como passado e se supera como Futuro. O desporto, a dança, a ergonomia, a educação especial e a reabilitação não radicam hoje na educação física, porque um novo paradigma é sempre incomensurável em relação ao velho e porque o novo paradigma é a motricidade humana e não a educação física (carta a Carlos Neto).

E dizia ainda:

A FMH não é uma **tradição**, é uma **revolução científica**. Quem não entendeu isto, poderá emprestar às suas palavras um verniz de erudição, só que desconhece que também a FMH é um processo histórico e não para no apeadeiro das nossas seguranças, ou das nossas conveniências [...]. Senhor Doutor Carlos Neto, a nossa Escola precisa de transformar-se num espaço onde se questione a sua atividade criadora [...]. Estudar a gênese, a formação e o desenvolvimento da FMH e descobrir neste processo a própria história das ciências; compreender a motricidade humana, como ciência autônoma, aberta e crítica, longe de um cartesianismo defunto e tendo em conta as atuais correntes do pensamento; fazer chegar à comunidade científica a urgência de um trabalho interdisciplinar com o nosso objeto de estudo que é novo e fundamentado – é orientação que V. Exa., no meu modesto entender, deve defender e propor. Por mim, sou em crer que o ramo do conhecimento que tenho a honra de leccionar na FMH aprenderá conosco a transformar-se de filosofia do **ser** e do **logos** em filosofia do **ato** e da **relação**. E as demais disciplinas da FMH? Qual o seu contributo ao desenvolvimento do saber em geral e da nossa identidade, como Escola, em particular? Por que não

organiza V. Exa. (pessoa indiscutivelmente culta e diligente) um encontro que posteriormente se transformaria em publicação, onde os professores da FMH, através da pluralidade, apresentassem a sua contribuição à fundamentação da nossa identidade universitária e científica? O fato de no estrangeiro se encontrarem instituições e pessoas que adjetivam estes temas, como inúteis ou ridículos, mais nos deve incitar a um caminho de verdadeiro pioneirismo. Porque são eles que se deixaram ultrapassar pelo avanço meteórico da ciência e da filosofia hodiernas (carta a Carlos Neto).

Mesquinhas intrigas e rivalidades bulhentas acompanharam, aqui e além, a exposição das minhas ideias e decidi aposentar-me. Aliás, não era pacífico, naquele tempo, na FMH, o convívio entre os docentes, por motivos que não honravam a ninguém. Hoje, sou professor catedrático convidado aposentado da Faculdade de Motricidade Humana e reconheço que a CMH, que teorizei, já corre o mundo, se bem que sem as liberdades que eu me permiti. De fato, a advertência de Lakatos³ não me larga: se o ser humano evoluiu, tal se deve ao fato de ter ousado pensar contra o que se julgava certo. Demais, ponho à testa de muito do que digo as palavras de Ilya Prigogine: “Estamos no início da ciência. Partilhar este espanto com as gerações mais novas é um dos desejos que formulo no final da minha vida” (PRIGOGINE, 2001, p. 28). Parecem, por isso, enquadrarem-se, na atmosfera mental do nosso tempo, as palavras de Alain Touraine: “As mudanças actuais são tão profundas que nos autorizam a afirmar que um novo paradigma está em vias de substituir o paradigma social, tal como este tomou o lugar do paradigma político” (TOURAINÉ, 2005, p. 237).

Como professor do INEF, do ISEF e da FMH, depressa entendi a Educação Física como criação sapiencial do ser humano, na decorrência do homem-máquina do racionalismo que só às ciências ditas *exatas* permitia o estudo do corpo-objeto.

Começava então, no mundo ocidental, uma minuciosa articulação ciência-técnica, impensável na Idade-Média, onde a ciência era declaradamente contemplativa. O cientista não dialogava com os “mecânicos”, gente do povo que dominava algumas técnicas rudimentares (HILL, 1992).

A ciência moderna nasceu quando a especulação, mera contemplação, se esgotou; quando a causa final foi substituída pela causa eficiente; quando tudo o que é matéria (e o corpo não passava disso mesmo) se transforma em objeto, chegando o capitalismo ao extremo de reificar, ou coisificar, o próprio ser humano. Afinal, “[...] a matéria revelou-se tão rica, se não mais rica em possibilidades, do que o espírito. Ela contém uma energia incalculável, é susceptível de transformações infinitas, tem recursos insuspeitáveis” (PAUWELS; BERGIER, 1987, p. 46). Mas tudo é processo, desde os átomos às estrelas e, não se trata de uma hipótese. Tudo está em movimento perene. Daí, a transição gradual, através de uma complexidade crescente, da geosfera à biosfera e desta ao espírito (ou *noosfera*, como quer Teilhard de Chardin⁴, ou *espiritualização da vida*, ousou eu adiantar). Verdadeiramente, o Ser Humano é corpo-encarnado, é *ser-ao-mundo-com-outrem*. E tudo isto, em busca da transcendência, da superação, da plenitude, do *ser-mais*.

Paul Ricoeur adianta a noção de *falha*, no seu tratado de três partes, *Finitude et Culpabilité*, designadamente na primeira parte *L’homme faillible* (RICOEUR, 1960), para significar que o Ser Humano é um ser defeituoso e com a consciência das suas limitações. Mas é precisamente esta *falha* que o leva, em permanente azáfama e operosidade, a uma tentativa de auto-apropriação, que não é o mesmo que auto-compreensão, pois que se refere à Vida toda e ao Ser Humano todo e não só ao exercício de uma apreensão conceitual. A auto-

³ LAKATOS, I. O falseamento e a metodologia dos programas de pesquisa científica. In: LAKATOS, I.; MUSGRAVE, A. (org.). **A crítica e o desenvolvimento do conhecimento**. São Paulo: Cultrix/EDUSP, 1979. p. 109-243.

⁴ CHARDIN, T. **O fenômeno humano**. São Paulo: Cultrix, 1998.

apropriação não decorre unicamente no “mundo das ideias”, pois que se transforma afinal num modo de vida. O “eu sou” não se confunde com o “eu penso”, pois que o ser humano pensa em função desta *falha* que tanto o atormenta como o faz vontade, liberdade e ação.

O *Eros*, conforme Platão o concebe no *Banquete*, decorre da Pobreza e da Fartura: da Pobreza que nós somos, da Fartura que ainda não somos e a que imparavelmente tendemos (PLATÃO, 2021).

Esta procura da Plenitude, onde estão presentes também os imperativos morais e políticos, é, para mim, em resumo, a motricidade humana. E assim (um exemplo) fazer desporto não deverá respeitar unicamente as leis biológicas, ou as exigências da sociedade do espetáculo, mas também propiciar vivências de superação individual, social, política e até afirmar a cidadania de todos os marginalizados. Enganam-se os que pensam que o meu “programa de investigação” da motricidade humana é simplesmente epistemológico. A transcendência, ao conduzir-nos a novos possíveis, inaugura um neo-humanismo de iniciativa histórica, que não é científico tão-só. É também político e moral.

Fundamental também citar as contribuições mais recentes que têm sido dadas a CMH pela *Sociedade de Pesquisa Qualitativa em Motricidade Humana* (SPQMH)⁵, tanto por meio dos *Colóquios de Pesquisa Qualitativa em Motricidade Humana* (CPQMH)⁶, dos quais, do primeiro, em 2003, tive a honra de realizar a conferência de abertura ladeado por Samuel de Souza Neto, Dagmar Aparecida Cynthia França Hunger, Carol Kolyniak Filho e Luiz Gonçalves Junior (primeiro presidente da SPQMH), como também por meio das publicações de seus investigadores associados, como o próprio Luiz Gonçalves Junior, e também Fábio Ricardo Mizuno Lemos, Denise Aparecida Corrêa, Cae Rodrigues, Wagner Wey Moreira, Maurício Mendes Belmonte, Nathan Raphael Varotto, Robson Amaral da Silva, Sergio Alejandro Toro-Arévalo, Cláudia Foganholi, Silmara Elena Alves de Campos, Clayton da Silva Carmo, entre outros.

A minha viagem, neste humilde ensaio, com a CMH, abeira-se do final. Recuso, no meio do nosso mundo balburdientado, qualquer dualismo, seja ele epistemológico ou social. Anuncio, hoje, na luz incerta do amanhecer, um novo paradigma (ação intencional e solidária da transcendência), onde o conceito de relação se antepõe ao conceito de substância e onde não se confunda pensamento com os processos neurocerebrais que acompanham o pensamento, ou seja, o espírito com a matéria, embora aquele encontre nesta a sua ascendente primeira, não a única, pois que os fenômenos mentais e espirituais só cabalmente se entendem, em diálogo com o meio envolvente. Anuncio um novo paradigma, dizia, onde no seio do qual se encontrem representantes e intérpretes das ciências, da filosofia e da teologia (que o Papa Francisco e a Teologia da Libertação corporizam) em diálogo crítico e solidário. E, ao invocar neste momento a teologia - no lugar de religiões mandonas e frustradoras, quase todas serventuárias de políticas fascistas e fascizantes, quero visitar o cristianismo primitivo, religião dos marginalizados, protesto contra os poderes estabelecidos, esperança num mundo mais justo. Ao anunciar-se um novo paradigma (ação intencional e solidária da transcendência) para a educação física, o desporto, o jogo desportivo, a dança, a ergonomia e a reabilitação, a Ciência da Motricidade Humana procura servir também os anseios de todos os marginalizados pela sociedade injusta. São três os principais conceitos da CMH: corpo, movimento e transcendência. Com a “transcendência”, a CMH quer dizer que *o ser humano (velho ou novo, são ou doente) é, sempre e em todas as circunstâncias, uma tarefa por cumprir*. Por isso, a pedagogia que a CMH propõe se destina a todas e a cada uma das pessoas

⁵ SOCIEDADE de Pesquisa Qualitativa em Motricidade Humana. Disponível em: <https://www.motricidades.org/spqmh/>. Acesso em: 20 mar. 2022.

⁶ COLÓQUIO DE PESQUISA QUALITATIVA EM MOTRICIDADE HUMANA, 1., 2016, São Carlos. *Anais* [...]. São Carlos: SPQMH, 2003. Disponível em: <http://motricidades.org/conference/index.php/cpqmh/issue/view/1cpqmh>. Acesso em: 20 mar. 2022.

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e... em todas as idades! *O desenvolvimento que a CMH propõe é para a vida*. E, pela transcendência, não se limita ao imanente, como Teilhard de Chardin, visa a cristogênese!

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A new proposal in Sports An Epistemological Rupture: From Physical Education to Human Motricity Science

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Abstract

Physical education is a disciplinary product of the modern rationalism period; as a consequence it is embedded in the weaknesses of the anthropological Cartesian dualism, where Human Being is studied within the framework of body and soul separation. Physical Education is then centred and closely concerned with the tangible and object part of Human Kind, focused on training and measuring its physical components and all kind of its extensions and expression. But, fortunately, Human Being is much more than this, constructed with a huge complex set of actions and interactions. Therefore, Human Complexity cannot be perceived and understood within that scientific Cartesian paradigm once it would have to be constrained to develop all human kind potential. Instead, knowledge about Human Being has to be grounded and perceived within Human Motricity as a whole.

This paper intends to state the fundamentals for what we labelled as Human Motricity Science, a new conception that, although emerging from Physical Education theoretical and professional debate (we do not deny history), it represents an epistemological rupture adapted to the overall shift from simplicity to complexity paradigm.

Human Motricity Science focus on all human activities in which we can identify any human and intentional movement for transcendence.

This human movement that aims transcendence requires, nevertheless, *praxis* – a social practice. As for all other human sciences, Human Motricity Science is not a mere descriptive and neutral science once it has its own specific concreteness conditions or *poiesis*. Human Motricity Science intends to understand and to serve Humankind, Society and History.

Finally, this science involves a new concept of Man. Man is defined as the whole set of body, soul, desire, nature and society acting in an unlimited and intentional movement for transcendence, which is subsequently considered as the sense for humankind and its life.

Keywords: Epistemological rupture; Complexity Paradigm, Physical Education, Sports Philosophy, Human Motricity Science.

1. Framing the Problem

1.1 Moving

The reform of human way of thinking is something that Edgar Morin has been studying for a long time. In *Courrier de l'Unesco* Morin states that “until the mid-twentieth century, most sciences based their methods on specialization and abstraction, *i.e.* reducing knowledge of a whole to knowledge of its constituents parts (as though the organization of a whole did not generate new properties in relation to those of its separate parts). Their key concept was determinism, in other words, the denial of random factors and new factors and the application of the mechanical logic artificial machines to problems of living beings and social life [...] the dogma of universal determinism has collapsed. The Universe is not subject to the absolute sovereignty of order; it is the outcome of a “dialogical” relationship (...) between order, disorder and organization”.

According to Morin (1996) there are three theories that distressed the Cartesian paradigm routines: The Theory of Information where both order and disorder cohabit in the Universe; the Cybernetics Theory that disrupts the idea of linear casualty since causes act on the effect and the effect influences causes; the Systemic Theory, which underlines that the whole is more than the sum of its parts.

However, in order to understand the Paradigm Shift we have to point out the contributions of scientists as Von Neumann, Van Foester, Atlan and Prigogine.

In his theory of self-organization automata Von Neumann considered the difference between artificial automata and “living machines”; he pointed to the paradox whereby the components of artificial machines, although very well designed and engineered, deteriorate as soon as the machine starts to operate. Living machines on the other hand, are made of extremely unreliable components, which are constantly subject to deterioration. However, these machines have the unusual property to being able to develop and reproduce themselves. Von Foester’s contribution was to establish the *order from noise* principle which states that all chaos is the beginning of a new order. Henri Atlan presents another theory where he emphasizes the *role of chance as an organizer* establishing a dialogue between order-chaos-organization hence the principle of the Universe. Prigogine also introduced the idea of *organization coming from chaos*.

Summing up, everything that was acquired by the *Cartesian* paradigm shattered before the assumptions of the *Complexity paradigm*. The *Cartesian* paradigm led to a separation between the free and conscious Man and the determinism of Nature. According to Kant, the expression *I think* is common to all the representations; therefore it is the subject who creates the object which cannot be external to the subject.

As I see it, developing science within the Complexity paradigm constitutes a poetic act, since all real is complex, with huge amounts of unities and interactions, challenging our calculus capacities spreading uncertainty among richly organized systems - to determine complexity can no longer be done following a rigid empiricism, which considers that only the object creates the subject, since the subject also creates the object. In fact, the affective Man belongs to the *cognoscenti* act; therefore to know is not a rational privilege. Clearly, science does not emerge straightforward as a rational discourse so it is allowable to consider that affectivity fulfils a *critical function*.

So, is it possible a meaningful life without affectivity?

After the unforgettable atrocities experienced during the 2nd World War and the ruthless aversion to multiculturalism (e.g. Auschwitz) and after Fascism and Stalinism some authors confessed to have surrendered to the great science acquisitions of the 20th century; in fact, Horkheimer, Adorno, Popper and Marcuse, among others, sturdily claimed against those Reason atrocities converted into Power. At this point we could say that Auschwitz and Hiroshima strike the end of the modern rational Cartesian subjectivism, which excludes everything external to it and where the *Self was the Absolute* and the surrounding reality was just an apprehensible form. However it was at the primacy of subject's age that the same subject was sacrificed at the altar of fetishes-values such as State, Society, Revolution and so forth, almost reduced to dust. The Frankfurt School and Popper, Gadamar and the majority of the post-war philosophy representatives revealed upon the strength of Reason, that all the truth is relative and Finite cannot be baffled with the Absolute. We do not want to become obstinate apologists of irrationality as the previously mentioned authors didn't either. When Popper (1999) rejects any totalitarian conception of science; when the hermeneutic Gadamer (1965) states that science is pure interpretation in a humble rejection of any kind of absolutism (although he emphasizes that interpretation is a creative act); when Marcuse (1968) questions industrial rationality with its *erotic thought*, all of them confirm, in their own way, May 68' slogan "Power to the Imagination".

The correction that Contemporary philosophy introduces in the repository of classical philosophy (started with Plato, Aristotle and Saint Augustine) seems appropriate: it reminds us that Reason is not constructed, does not know nor is known if it ignores the historical circumstances or if it is indifferent towards *erotic thought*, which after all, is imagination. Through imagination, the dialectic burst rather than focusing on negativity, empowers pleasantly and prevails upon what else could be out there. Both Gadamar (1965) and Habermas (1985) associate inhuman aspects of our societies to the victory of Positivism with the insensate pretension of submitting Man analysis to the same paradigm still used in physical and mathematical sciences.

Jean-Jacques Wunenburger (1990) advises the inflexible to think the *new*, answering the question of "how to think the difference"? How can we deal with multiplicity, diversity and complexity of the real? Will it still be justifiable to keep on entrenching in the principle of non-contradiction?

Along time Philosophy always struggled with the distance between thought and reality and between languages and things. Starting from unity, dyad and triad figures Reason has never overcome the stable essence of the same questions. Wunenburger (1990) presents the idea of *Contradictory Duality Paradigm* in which tension between opposites generate a precarious equilibrium point, which could play the role of a third force or third element that opposite forces don't confine within themselves; he argues that with the triadic thought, complexity could be explained and operational.

Apparently sustaining a dialectic affiliation, Wunenburger's reading reinforces the existing critique to traditional Reason that looked at the human body as a physical concept, an ignored extension, and Reason in the Truth that was rationally founded. Returning to Spinoza (1675) when he asked in "Ethics": "What can a body do?" he looks for the immanent powers of the body, analyses, identifies and sees the difference. Thus, we can consider that Spinoza was a pioneer. While the *identity principle* is the support of imperial reason (anamnesis), the principle of diversity in

complexity underlines the reason of difference and singularity. The body is not only physical – it is the difference and therefore it moves. Motricity or the capability to action is the reason to movement and not the other way around. The body has an original desire, a perfect random event that self sufficiency of the reason is not able to understand. It is then necessary to build the right path from Physical to Motricity (bearing in mind the meaning of this word within Phenomenology) to cause the shift from one to another kind of mental organization. A catastrophic-event (René Thom) is urgent, a bifurcation in Ilya Prigogine. Let us make the “chaos creator”. Order is worthless.

Knowledge, instead of generating certainties, dismantles them patiently. And the scientist has to face a challenge, before others: how to deal with uncertainty? Modernity created the history of sciences as a linear and continuous process, using an exclusively logical mathematical argumentation. Nowadays, science demands to be acknowledged by *validity*, *critical sense* and not *truth*. To generalize what is temporal and periodic is consistent with the intention of destroying time and History itself. There is no Absolute in time or time in Absolute. Moreover, a preliminary knowledge becomes naturally dynamic and inquiring. Academic life shall be characterized by a pluralist, interdisciplinary and transdisciplinary context, exhibiting a permanent commitment to a deconstruction-construction process of scientific knowledge. If the real is complex and imprecise all the ties become weak, insufficient and constructed. It is not stated that sciences shouldn't seek for precision and systematization of categories and concepts but they should seek for firmness within the imprecision's sphere.

Can we consider sciences as a complete and absolute knowledge? Sciences - because they shatter knowledge and Man; because sciences only are real when connected with each other; because the construction of new paradigms, as an answer to the global crises of a divided, atomized and disorientated conscience, appeals to the necessity of a holo-gnoseology and holo-axiology with the presence of art, politics, philosophy and religion - they are not just *one* knowledge next to others, because they can not invent or find the complexity of the *human phenomenon*.

Where disorder is able to rival with order, where discontinuous and vagueness are asserted, where deterministic predictability does not prevail, science exhibits unsurpassable difficulties in understanding totality and in understanding itself as a totality. Hence the time has come to ask for imagination's help since it has the capability to emerge new meanings. In Heidegger (1927) "*Sein und Zeit*" poetry is the most pure and ontologically meaningful human discourse. In fact, science, as positivism fiercely defended, is not the universal criterion in all existence. Science doesn't even explain a human tear. Thus, it is understandable that human vocation is not only to rationalize but to live. When Prigogine (1967) stated the concept of *dissipative structure*, where order and disorder reveal themselves capable of self-organization and, consequently, entropy came out as a creator of disorder and structure, coherence and *new properties*, he was already anticipating, in his own way, the *chaos theory* (that Prigogine explains, later, in the 4th chapter of *La Fin des Certitudes*, in 1996) and the Benoit Mandelbrot's *Fractal Geometry*.

The emergence of increasing levels of complexity shows that everything is moving: Man, Nature, Society and History...

When we talk about Man, to move is a sign of hope at the existential level and not only at the mechanical or physical level. To move was, according to Hegel

(Descartes said the same, but in a different way) to limit the physical, more or less devoid of reason, to the supreme decisions of *absolute spirit*. Physical Education and Sports were mainly seen as physical exercises (see Pierre de Coubertin's definition of sports, 1922) and aimed to materialize the purposes of reason. José María Cagigal (1972) speaks about Physical Education as "an integrally human science" combining gymnastics, games and sports with an educative objective.

The *epistemological rupture*, which is the passage from *Cartesian paradigm* to *Complexity paradigm*, compels the *epistemological rupture*, which is the passage from Physical Education (gymnastics, games and sports) to Human Motricity Science. We can always find rational arguments supporting or rejecting a theory. Besides there is an interface between science and philosophy in what is stated by me, which provokes a huge disbelief among all classical empiricists but it seems obvious that, in this field of knowledge, we have to search for the scientific ground, in order to make understandable the corresponding practice.

Human Motricity is the starting point to reveal Man's essence and because of it Man materializes and reveals himself, within a scope of a process where the will to transcendence plays a prime mediation role. In this case, Human Motricity Science is the theory of a practice which, in its turn, will be slowly transformed into the practice of a theory. Being so, the theory achieves the effective status of material practice while this practice is, by intentionality, in theory. Human Motricity Science is born due to the fundamental and dialectical unity between theory and practice.

To mythicize the practice, without studying, researching and training for a free and critical citizenship, inhibits the scientific process, as well as a congruous (and thorough) understanding of the relations between profession-society, profession-culture and technology-culture. It is important to emphasize that the formulation of a problem is the first step to its solution. The theorization of the "*Light Movement*" (*illuminists*), under the influence of British empiricism and liberalism, contributed to the emergence of French Revolution as no man, group or community did before.

Thus, the *epistemological rupture* stated by this essay acquires an ontological status, as it intends to stand in the historical process, from Physical Education, with a Cartesian and empirical root, to Human Motricity Science, where phenomenology and hermeneutics prevail and, therefore the ascendancy of *intentionality* and *sense* over the merely physical and reflexive is recognized. Human Motricity Science represents, therefore, an *epistemological rupture* towards Physical Education, as a macro concept and integrates the core of Paul Feyerabend's thought (1982) that rejects *cumulative conception* of sciences' progress. According to this viewpoint, sciences evolve through successive and constant improvements without any retreats, accepting without questioning the learning from the past, but adding more data and explanations. Unlikewise, Feyerabend proposes the methodological *pluralism*, pointing out the necessity of new theories, namely the ones that are distinguished by the *incommensurability*, *i.e.*, those theories that do not share the same scientific discourse and announce new postulates. Within this deconstruction movement, the rational dictatorship of formal thoughts must be broken and retake History as discontinuity, de-centring, and a way to indeterminacy, to contingency and to the unexpected.

Within a well comprehended temporal dialectics, Past is in the Present, at an increasing level of Complexity since without the former the last would not be possible. Nowadays, without Human Motricity Science, Physical Education would not make any sense and Physical Education without Human Motricity Science would not make any sense either.

2. Human Motricity Subject

Certain sciences think of Man as a simple machine in the three-dimensional space of Euclidean geometry. Just as in the Cartesian-Newtonian conception, a monarchical God ruled the world imposing his divine law, also some conceptions of Physical Education (as after all a great part of Medicine) irremovably acknowledges the spirit and the body as two Leibniz monads (1713), where the spirit has the main role (as it was required to acknowledge in the type of Physical Education sustained by all nationalist mysticisms) or the body is subjected to such a worship that everything that does not include muscles valuation, merely physical *performance* and idolatry of the body is described as a minor existence, a weak simulation of civilized existence. In fact, the *idolatry of the body* is only a particularly scandalous incident of the Cartesian's theories applied to a Physical Education without Future. Hence, the thorough abyss the type of Man that he claims to help to born and the hypertrophy of *res-cogitans* and *res extensa*. Therefore, the idolatry of the body does not experience the contradictions inherent to existence as a process and, so, in ceaseless dialectics, but in a Disneyland where empirical verifiability avoids, as impious, the critical answer (Popper, 1959 and Habermas, 1985). To speak about modern science within this mythical area is nonsense, since there is a misleading notion, as it is stated by the remarkable physicist Fritjof Capra (1982) in his famous "*The Turning Point*": "...of looking at organisms as Machines that function according to linear chains of cause and effect". But biomedical science, in which current Physical Education still relies on, also presents obvious mistakes derived from Cartesian's theories denying the matrix of a holistic and ecological concept of health. The holistic vision of living organisms is indeed refused by the classical conception of science, once it implies clear modifications in the entire unilateral conceptualization in which it relies and through which it has obtained amazing results.

Human nature is *Bios* and *Logos* permanently interacting in a self-organization dynamics accordingly to the demands of a systemic approach. Therefore, in the traditional Physical Education, victim of the *Cartesian Paradigm*, whenever it gives velocity, endurance, impulsion and so on, it can not bring health, since it lacks a labour at the Complexity level, *i.e.*, a work focused on a quantitative factitiousness rather than in a less qualitative reality. In other words: giving priority to abstract, to the part, and undervaluing the concrete, the whole., **In Man, to split the physical from the Person is the same as to argue that, in action, the human being does not fulfil all its potentialities but...only some of them.**

Man is a moving being, the *homo viator* of Christianity. That is why his actions are not his essence. His historicity proves it. But Man, because he is a moving being, he is the Being of Hope. Being conditioned by circumstances ("*I am myself and my*

circumstances” Ortega y Gasset) Man is not only a receiver, but necessarily a ruler. Therefore, he is a praxeological being not restrained to subjectivity but objectifying himself towards the World, the others and to Transcendence. And by objectifying himself in *praxis* Man reflects and projects the real and theory in itself becomes knowledge of a World made by Man. Through this, it is evident that the so called Physical Education, because it is Physical, can not be the root of knowledge, since it separates *physical* from *intellectual* and *moral* and hence, it can not be seen as a gnoseological or a sociological category; it is rather an accumulation of techniques without any legitimate basis. To practice is not enough, but it is necessary to understand the practice, *i.e.*, the practice-theory unity: a theory that aims to understand and project the practice. Actually, it is not clarified by itself since *praxis* always implies a self awareness of *praxis*. It can be sated that modern Physical Education is aware of all that has been written above. But, if so, if it possesses such a profound knowledge of itself already, why does it persist on one designation - Physical Education - which does not fit to its practical-theoretical contents but rather mystifies and bounds it? Physical Education, as an autonomous science, as a macro concept, does not exist.

Physical Education: liberation or alienation? It will remain considered as alienation while it continues to be *physical*, since this word has a clear ideological meaning. Actually, Physical Education can lead to a definition of conformist Man, stationary in time, and above all, to define an idea of human nature (ontologically and metaphysically) divided in body and soul and, thus, without a global project of humankind. Traditional Physical Education (although its ethical-pedagogic commitment is obvious) declares itself as culture (physical...) but it is not capable to explain itself within a cultural frame understood as creativity, invention, as research since it survives on the endowment of analogical models and on the enthusiasm of many of its technicians and not in a *scientific attitude*, based upon a scientific *decision* and *commitment* that perceive it as an evolving phenomenon, within the general scientific framework. In other words, Physical Education should be understood as a branch of an independent and autonomous science and so, as a subject to study, which is doubtless concerning its logical, epistemological and existential foundations.

This enduring defence of a new science does not mean the rebirth of a positivism which supports scientific knowledge as an exclusive human paradigm. William James (1969) advises that science must be aware that its objectives are not unique and that the unilateral causality with which it occupies itself and postulates, may be a part of a wider order over which it does not hold absolute rights. Saint Thomas of Aquine (1263) warned the “empirists” of his time: “*Praestet fides supplementum sensuum defectui*”¹. What is meant here is that after a critical re-examination, themes concerning Human Motricity are not restricted inside a scientific frame since it is related to human problems. But, if we do not want to fall in an *ontological reductionism* (only pedagogy is at the basis of Physical Education) or in a *methodological reductionism* (one should go from the lowest to the highest level of complexity) or even in an *epistemological reductionism* (even without an autonomous science, Physical Education is possible when using other sciences postulates), investigation is crucial [let us remind, here, Bergson’s verve (1907) in

¹ “*And where our sense is seen to fail, There must be faith supply restore*”

L'Évolution Créatrice, that highlights life “*as a force, a blow, an impetus, a stream, a tendency, a wave*” that crosses matter and leads it to evolution]. As said above, investigation must be done to define whether Physical Education is a sub product of scientific development or a pedagogy that is grounded in an autonomous, independent science that creates a new human potential of dynamism and versatility, causing the rupture with mystifying prejudices and opening fertile spaces to inter and transdisciplinarity. It should be mentioned that “any project is by essence over determined, to be what it is, each thing, stands for and expresses a network of conditions and determinations, emerging from a great number of disciplinary areas” (Gil, 2000).

It is then a mistake to persist, in this area, with an ideology of chance and necessity, not moving forward a scientific knowledge within the frame of the modern epistemological problematic that aims to achieve totality. Scientific evolution is order-disorder-organization. The professional deadlock where the so called Physical Education teachers lies comes from the lack of specialization inside specific areas and, as a consequence, without the social recognition that an expert in *Human Motricity Sciences* demands and claims. The idea of a scientific community in this area is also vanishing by the same reason.

In fact, the creation of a new science is not neutral. It assumes an image that enables us a more correct, systematic, intentional and planned *cognitive appropriation* and a more democratic participation in the construction of Man, Society and History.

But is there a place for Human Motricity Science within the general Science framework?

Human Motricity is not a simple movement, because it is *praxis* and, thus, *culture*, that is the transformation that Man carries out consciously and freely, both to him and to the surrounding World. Motricity is the *capacity for the centrifugal movement of personalization*. Movement is part of a whole, the finite and deprived being that transcends himself. Motricity is the sense of the whole and, therefore, it is presented in the fundamental dimensions of human being, adjusting them. It is *energy* and not so much a *product*. Scientifically, it can be studied as a product but it would be inexcusable to split the *enérgica* from *érgon*, the energy from the product. The product (movement) is a repeated and repeatable activity, although never in a perfectly identical way. In turn, energy reveals the intrinsically dynamic nature of Man and the entire Nature, from the sub-atomic world, which is, all of it, rhythm and change...but also interconnected elements, as Bohr and Heisenberg have emphasized along the History of quantum theory.

Hence, Motricity supposes:

- A systemic view of Man (that is, relation and integration)
- The existence of a non-specialized and deprived Being open to the world, to others and to transcendence. Man is, in fact, a pilgrim of the absolute, because to live is to feel the contingency of our present condition and...to try to overcome it.!
- Since he is open to the World, to others and to transcendence, a *praxeological* Being, seeking to find and produce what, in complexity, allows him to achieve unity and fulfilment. But, because they belong to the *unconditioned* Being (Viktor Frankl, 1968), his actions are an effort to be authentic ways of integral

liberation...in anguish and in hope. In anguish, or in the feeling of our ontological deprivation; in hope or in the premonition of a future plenitude.

- And, because he is *praxeological*, with access to a globalizing experience, agent and supporter of culture, a project derived from all sense, World's memory and an axiotropic Being (who pursues, apprehends, creates and accomplishes values). Not at an animal level, but of intrinsically cultural, that man knows and knows himself, transforms and transforms himself.

Motricity constitutes:

- An energy that is an ontological status, vocation and provocation of openness to transcendence. It is known, through nowadays science that all systems are made of energy...
- An adaptive process, to a variable *milieu*, of a non-specialized Being and, therefore, in which the evolution rhythm is slow, implying the existence of a lasting puberty and a stable and durable family.
- A creative process of Being in which pleasant, agnostic, symbolic and productive praxias express the will and the conditions of Man that allow him to fulfil as subject, that is, as the author responsible for his actions; furthermore, they designate the capacity (and right) of building a personal situation of maturity and dream, that makes possible a free and liberated existence and that acquires the expression of the unique and absolute.

Truth can not be discovered, it has to be built. In Sciences, there are no *structures* in a static sense rather they are clearly dynamic, temporal, innovative and creative *processes*. However, it is true that nowadays, sciences demonstrate to be refractory to all elaborations of philosophical or religious order that appear as previous or external. Maybe because they are affirmed and confirmed in discontinuity, which is visible in the epistemological rupture from where the Human Motricity Science comes out (in fact, there is a new discourse inside a new *problematic*). And, thus, understood as science (and science of man), and apprehended as the essential structure of human complexity, all work concerning human motricity has to be transferred from the position of additional and complementary element to the position of a basic alphabet, in order it can be learned before the first letters and guided until the culture springs and blooms, as a movement that keeps in it the tension to a bigger *Being*.

After all, just as science of man (in which comprehension is superior to explanation) Human Motricity finds its justification in *Universitas Scientiarum*, as an independent and singular knowledge. But if University is moving towards universality (that is, towards new subjects and forms of human knowledge); if human motricity is science, according to the growing cadence of its own history, since it is in the field of *motricity* and not in the *physical*, that is possible to reveal, to think, to educate and to investigate Man, in the direction of his personalization; if transcendence makes possible the evolution that requires it and, therefore, it is not natural to human condition to repeat indefinitely, University will open its doors to human motricity or, even better, to development through human motricity.

And what will happen then?

Another track for theorization about man, in which the sense of articulation is done in the scope of motricity, which sustains and makes present everything that in Man is development, *axiotropism*, a pleasant path to transcendence.

There have been many advances in Biology that concern Human Motricity. And I do not know if there is a certain kind of indifference concerning philosophical approaches. Perhaps because we are not as rational as we thought. António Damásio, when receiving the Prince of Asturias Award for Technical and Scientific Research declared to journalists “we are not rational in a natural way. We have the possibility of being, by means of a great personal effort and benefiting from a favourable socio-cultural context. We are slaves of emotions and of the ambience that surrounds us”. And later stated: “a correct decision demands emotion, knowledge and reason” (Damásio, 2005). This worldwide famous Portuguese neurologist had already written in his first book Introduction: “emotions and reason do not mix any more than water and oil” (Damásio, 1994). There is a large distance between a simple equation which may be reduced to a *small* computer programme and the *Complexity* that is a feature of human motricity. The mechanistic pretension to observe *complexity* only through measurement and calculus, takes away the *comprehension* dimension from human motricity and, at the same time, it submerges it in technology.

Currently we watch subjects as physics, chemistry and biology evolving from *natural sciences* to *sciences of artefacts*, capable of manipulating genes, molecules and atoms. We are moving from the Cartesian *machine* to the *factory*, forgetting the *soul*. The laboratory logic does not embrace the complete human logic. Prigogine’s **La fin des certitudes** (1996) also results from the fatigue hours and from the work in laboratory. The *wisdom* allowing us a global comprehension needs the knowledge that comes from laboratories and from their specific methodology. However, the boundary between facts and values is less and less perceptible and the world of values is now part of the world of facts. It is true that laboratorial work functions within *theoretical matrixes* and methodology, inherent to *normal science* (Kuhn, 1970), but one should not forget that we can not embrace human complexity, mainly its signification, within the general theory of specific language. Hence, laboratorial work is increasingly necessary, within a spirit of dialogue, in order to facilitate the interconnection that allows *wisdom*. It is our duty (we, who in this area of knowledge assume and defend discontinuity) to cooperate in the construction of *Human Motricity*, always bearing in mind that texts are an inter-text and, therefore, demand incursions in other fundamental knowledge...beyond the one we have become specialized!

At this point, a question needs to be asked: what is our concept of science? Have we already forgotten that science is discourse (the development of sciences is an endless rhetoric of arguments) which is necessary to construct language that displays our epistemological rupture and allows us the dialogue with common sense, in the double epistemological rupture? Are we doing our work just with borrowed words from other areas of knowledge? After all, if one science is differenced by an autonomous *theoretical matrix*, by a language that is not totally mistaken with common sense and by a *scientific community*, can we fearlessly say that our science is a *normal science*? If we examine thoroughly the distinction between *theoretical matrix* (human being, in the intentional movement towards transcendence), *empirical field* (the body, in the interaction of biological processes with socio-

cultural values) and a *logical reflexive* plan (in which the view of the *whole* has an hierarchy, is explained and understood) – it becomes imperative to talk about an *integrative method* (which synthesizes and integrates a *methodological pluralism*). Karl-Otto Apel (1975) wrote that “the fundamental transformation that is verified between language and philosophy, which distinguishes the 20th century from the previous centuries consists in the fact that language has stopped being seen as an *object* of philosophy and observed as a *condition of possibility* of philosophy itself”. Concerning sciences, the same might be said; that is why the necessity of a careful construction of a language, that expresses the thought of a School with an autonomous theoretical matrix, is obvious. Facing a new paradigm, the routine seems to be distrustful and challenging. But it is not the struggle between *old* and *new* the historical genesis of the appearance of an *epistemological rupture*?

One more question: are there not any useful elements in traditional Physical Education? Of course there are! Its human and humanizing content is to be respected and perpetuated. Physical Education must continue its existence, ethically, within the practice of Human Motricity Science. But it must be a *cognoscenti* value to be transcended, through a systemic and pluralist synthesis, truly new and differentiator, which to rationality, calculation, output and efficiency is able to set before a science that is consciousness and a consciousness that is science. I can't be sure if all human beings agree in some ethical principles. But there are values without which is humanly impossible to live. Let them become visible in Human Motricity Science and let Epistemology become Ethics, at last. An Epistemology that turns merely into an operating functionality will not do! Under Kant's inspiration, I summarize the interests of sciences in knowledge, duty and hope. And I do not forget the **crisis of European Sciences and transcendental phenomenology** (Husserl, 1936), the European sciences that became power allies, merging with it...

3. The Praxeological Being - Rupture and Project

3.1 Scientism and Positivism

The evolution of science is one of the most important events of Modernity. The history of sciences tells us almost nothing: philosophy lost strength and vigour with the birth of sciences that became autonomous from it. Even Politics (Machiavelli) and Law (Hugo Grotius) emancipated and started demanding scientific legitimacy. And a pale and unsteady philosophy began to be questioned. Scientism and positivism cogitated in the mode of mixing all knowledge with sciences, and philosophy was left without a convenient place.

The relationships between philosophy and science were discussed, with serenity and for the last time, by Kant. Due to proclamation of its unquestionable victories, science forgot that its main problems are not scientific, but philosophical. It is necessary to learn how to use an axiology of ideas, since there is no game without freedom. To play is the culminating point of freedom as gratuitousness is the terminal moment of rationality. The scientific attitude depends on the pleasant activity, as truth is originated from creativity that generates it. Epistemological rupture and paradigm shift do not mean anything else rather than that the scientist assumed a philosophy, long before he has started to walk in a scientific path.

The link between game and science immediately invokes *praxis* and, therefore, puts aside scientism and positivism because in *praxis* there are many things than just thought, including imagination or *anticipatory consciousness* (Ernst Bloch, 1986). It is *praxis* that creates the possible and finally, asserts that the World's transformation began and development is endless. And this interaction among the various elements that constitute *praxis* appeals to dialectical method and to its comprehension. I believe ruptures, for which history of sciences has become noteworthy, are truly known when one takes into account the contradictions that originated them. And therefore, the need for dialectics...that all great philosophers had to be confronted!

The configuration traces of a contradiction may be divided in three main sectors:

- *Human being and his knowledge, i.e.*, the contradictions are also developed at the level of epistemology, logic, semiotic, hermeneutics in the order of culture and power;
- *Human being and his actions, i.e.*, when contradictions develop within the scope of material, social and politics;
- *Human being searching for himself*. When contradictions occur at the level of sense and meaning of Man, Society and History.

Summing up: the contradictions are established in the plan of concepts, in the order of procedures and in the question that the human being asks himself in order to explain and understand himself. The same stands as saying: scientific knowledge is not all knowledge and when identifying Man with culture itself, *praxis* presumes an objective dialectics, a subjective dialectics and dialectics between the objective and subjective world, between matter and consciousness. The truth is not *pure objectivity*, because there is metaphysics in everything that is physical! Weber's thesis of Western *cultural rationalism* left a legacy to Europe that mistook it with self-sufficient rationalism and with capitalism, scientism and bureaucratized State. Habermas (1968) denounced it as a non-idealistic vision. Actually, there is not science without game, nor *praxis* without sense.

3.2 Practical-Theoretical Unity

Marxist philosophy has never been materialized. I believe it is the inevitable drawback of philosophies that become doctrines. Since practice is ideologically labelled, the concept of freedom is hardly respected within a doctrine.

Ties that connect theory to practice or practice to theory are the expression of a moment, just a moment of the historical process, timed and located. An omnicomprehensive speech about real knows the limits and totalities within which the human being moves.

In Hegelian- Marxism theories (among others), in order to evolve, any totality, needs dialectical contradiction, i.e., opposites are indivisible from the unity they compose, as Marx and Engels pointed out in *The Holy Family (Die heilige Familie, 1845)*. Although they struggle against each other, both belong to the same totality. And the same happens to the practical-theoretical unity. Theory (from Greek *theoria*) means *view*, a comprehensive view of a distinct being from the cognoscente

subject. Above all, theory is a contribution to the idea of *truth*, in the sense of conformity or adequacy of thought with one object, as the scholastics already understood. Pure knowledge, exclusively by theoretical means, becomes impossible because knowledge is not composed above or aside of concrete historical situations.

In the light of *Critical Theory*, the rationalism intention for lack of interest of science's social function and the development of scientific knowledge falls apart due to the unbreakable practical-theoretical unity. In fact, practical-theoretical unity, sustained by Critical Theory, does not present just an epistemological value, because it intends to attack and subvert all kind of bourgeois individualism that the separation between practice-theory presents. A theory is not determined by itself, focused in the truth that it confines; It is worthy because it can be integrated in the progress and in the development of society.

At this phase, we can look carefully at the critics that have been made to Marxist thought tendency, coming from authors with high prestige. Jacques Monod (1970) calls *animists* to Teilhard de Chardin, Bergson and Marx. Making the dialectical contradiction the "fundamental law of the whole movement, of the whole evolution, is nothing more than trying to systemize a subjective interpretation of nature that allows finding in it an increasing, constructive and creative project. This is an animist projection, immediately perceptible, no matter what the disguises were". From Plato to Hegel and Marx, all great philosophical systems suggest simultaneously normative and explicative transformations.

Some start from here to an indifference towards life and some making Man and his *praxis* the beginning of truth...

Sartre (1960) strongly emphasizes his critics to Hegelian-Marxism, without hiding some sympathy for Marxism. Human being is dialectical in his essence, because he is historical. Not in the scope of Hegelian dialectics, that has a circular shape in which the absolute is the dialectical starting and finishing point. To Sartre, totality can only be dialectically unachieved and unachievable, even in a Marxist way that considers illogical Nature dialectics. To Sartre, dialectics only happens at a *praxis* level. Karl Popper (1972) explicitly disagrees with the dialectical three-step theory (affirmation, denial, denial of denial) and accuses Marx of being a "false prophet" and the greatest historicist of all time, considering the popularity that his ideas have obtained in the contemporary world. He approaches fearlessly and directly, the question: if we can predict solar eclipses why can't we foresee social mutations? It can not be done, he answers, because the historical process depends on the human knowledge, which development is not dogmatically discerned. Therefore, he puts aside any history science that, being anti-scientific, only happens with the support of violent revolutions- that usually "end up in a bigger violence that eventually destroys freedom" (Popper, 1999). Dialectics is just a descriptive theory, which does not reach the heart of questions. Hegel and Marx constitute a group of idealists that rationalize the real in an orthodox way.

Marx, as it is known, showed an unstoppable uneasiness, confessing his wishes to destroy philosophy, in order to truly accomplish it. He meant that it was necessary to connect again practice and theory, building a philosophy that forms just one and the same thing along with reality. Instead of *accomplishment of philosophy* Marx firmly defends the unity of *philosophy and praxis*. And he adds that philosophy

comes from praxis and enlightens it with intentionality. Gadamer (1965) says that “the being that may be understood is language”. But, being so, reason, being and language combine themselves and Hegel seems to reappear in Gadamer’s words. He uses the notion of game to give us an idea of History. History is done through playing whether during the tough hours or in moments of happiness. However, isn’t there a meaning even in pleasant actions?

3.3 Man as *Praxis*

Believing or not in the Marxist synthesis, regretting or not the institutionalized Marxism defined and constructed in the absence of all references to Marx’s philosophical thought, there is no doubt that Man is done through making; transforming he becomes able to reach the consciousness of himself, *homo faber* precedes *homo sapiens*. And although I refuse materialism (whether Marxist or materialism found in the consumer society) Marxist conception of *man as praxis* and the notion of *praxis* as practical- theoretical unity (and totality) still exist although Marx acted in a time that is no longer our time.

Praxis explains and precedes theory; it is action that precedes and explains reflection and contemplation (Antunes, 1977). Marx focuses his philosophy, preferentially, on action because the human being is a *Being of necessities* or a *Being of deprivations*, in Arnold Gehlen’s expression (1974), a *core inquietum*, according to Saint Augustine, because all acts of knowledge depend on *praxis*. Man is a set of necessities... that is not exclusively material and involve aspirations for plenitude of critical reflection, for speculative maturity, for reaching the peak of cultural creativity, dream and love possibilities. But being not exclusively material, he begins by being really material.

So, many times practice overcomes theory which does not mean the employment of theory through practice, but practical radication of theory, in a real basis of human living and living together. On the other side, will it be possible to theorize, without taking into account the material conditions that allow it? Are the great revolutionaries found among people from bourgeois status, by chance? Without a certain *have* one can not *be*! Nevertheless, I repeat, *praxis* (that is revealed in corporeity and in motricity) can only be perceived within a horizon of unity in which nature and culture, sensible and intelligible, theory and practice, individual and person fit together. We are far away from the platonic project and its irremediable divisions. In the field of the historical process, *praxis* holds the entire man and all men, in a totalizing complexity and where everything is related to everything.

The concept of *praxis* is not easy to be defined. The word practice seems far too poor and sends us again to a simple opposition to theory. *Praxis*, in my viewpoint is about a transforming behaviour (individual or in group) assumed as a self-fulfilment and a humanity fulfilment. That is the only way it can be explained philosophy and praxis as being interlinked; thus, the ideas are living ideas, an entirely materialized discourse, and a total communication of everything with everything else. It can be added that *praxis* is not placed in a history of random facts, available to the voluntarism of famous politicians, nor is it mistaken with practice that, avoiding theory, justifies itself. The human being’s place is its praxis,

which makes history move on with meaning and sense. And if History has a meaning (History has never been written in a purely factual way, because facts have firm meanings) that reflects a free and liberator Being in permanent tension, longing for his individual and social realization.

And, *asking*, as a praxeological Being that to move and act, in short, to transcend, needs to find a meaning to his transcendence. To know is to boost Man, Society, Nature and History to the level of interpretation and sense.

But sense becomes clear and it is revealed through praxis, which is immediately corporeity and motricity. Therefore, there is no sense without body, since it is in body that *praxis* is articulated, determined and becomes present. The body is not reduced to an instrument while it is the needed condition for the possibility of human *praxis*. Only thus motricity is revealed as *reason* in act, as spirit that emerges from the body. The world is a world for Man because Man creates *it* and, creating it, he knows it and knows himself. Conditioned by the world that surrounds him and from which he was born (which is the same to say: origin and product of History), Man asserts himself because he is subject, that is, an alternative to what exists. In fact, no context entirely empties *or* satisfies him. *Praxis* is also a critical spirit, since *to make* is to transform, including in the gnosis scope; thus, as a praxeological Being, Man is necessary corporeity, implicit complexity and continuous transcendence.

On another side, praxeological Being *assumes a position* that is also *an assumption of opposition*, arising out of a theory that has always kept a rigorous and critical relation with practice, practical-theoretical unity must allow theory to be itself, in order that it can be located in perspective and anticipated to a new practice.

At this point, this essay seems to be embroiled in a contradiction: whether giving primacy to practice or (according to Frankfurt School thinkers) conferring an important place to theory. To me, *praxis* is simultaneously theory and practice and implies freedom of creation and expression. My “praxo-philia” pursues a fair comprehension of human movement towards transcendence; in reality, the specifically human movement. *Praxis* is the visible answer to the last questions that Man asks himself. Therefore, theory does not overlay practice, nor does practice overlay theory, as each of them is originated and (also) developed in the middle of the other. There is a material placement of theory, as there is a spiritual and intellectual placement of practice, thus *praxis* is placed in the orbit of Being. Everything is related to everything else. Being body-soul-nature-desire-society in transcendence movement, the praxeological Being is, in other words and globalizing - everything is in him and he is everything!

4. From Praxis to Rupture and Project

Modernity is the Age of Reason. Reason is the basis for scientific and philosophical speeches. Hence the *mathesis universalis*, based in *order* and in *measurement*. The *universal science* and a *unifying language of knowledge* were possible because *mathesis* was *universalis*. In fact, according to Descartes, the World’s essence is mathematical and geometrical, thus a final agreement between reason and extension happened.

But phenomenology, feelings and passions do exist.

The affective life results from body and soul union, while *cogito* has a spiritual origin. Modern man became anti-metaphysical and secular because he tends to be rational and rationalizes everything. Calculus, control, planning and objectivity constitute a systematically organized society, but in which the human being drags himself restless and tense, without metaphysical and religious references, surrendered to a universal scepticism and relativism. Today, Cartesian is identified with rational, logic, endowed with an enlightened lucidity. However, present culture walks towards the rehabilitation of the subject's emotion, as if we were living a new transition from Enlightenment to Romanticism. In History what does look new to me is that rehabilitation of affectivity is taking place due to a scientific requirement, since the active, emotive, aesthetic and dreaming subject is essential to the scientific act, as Bachelard (1983) and Feyerabend (1979) have already said. On the other hand, it is obvious that the type of progress including only the material aspects does not fulfil the most urgent human aspirations. The same goes to hedonism and permissibility. Hence the question that should be raised is: Is there room to Utopia?

I believe that to criticize may lead to utopia. Indeed, if *what is* criticized, what *can* and *should be* appear to us as a final perspective, as an answer. *Critics* and *proposal* may develop within a utopian intention, using Horkheimer's language (1971). It is licit to advance fearlessly that *utopian intention* has been living with great *élan*, in the western culture, namely in modernity. In fact, before modern age, one would not find *utopian thought*, not even in the intuitive and expressional domains. If we asked "How to organize correctly a society?" two different answers could be given: the pragmatics of political realism of Machiavelli (1513) and the ethical intention of *utopian thought*, rose by Thomas More (1516) in *Utopia*.

Because Man is an unfinished being conscious of his limitations, utopia is transformed in a privileged place of rupture with a repetitive and monotonous way of living, determined by ideological judges. Utopian tradition refers to European Renaissance and to the Greek and Jewish matrixes in which the European culture is based, with one characteristic that is important to point out: it is about a secularized eschatology! Thomas More's *Utopia* (1516), Campanella's *The City of the Sun* (1602) Francis Bacon's *The New Atlantis* (1625) abandon all kinds of teocentricism and award Man the responsibility of finding solutions to the problems that torment him.

We must also refer T. Münzer, a Protestant priest from the 16th century, who exposes himself and faces everything in order that equality (including the economic) among all Christians would happen on **the face of Earth**. Leading the German peasants' rebellion he wanted to construct a new Eden, with utopia shining in vivacious and dreaming eyes.

During Enlightenment, *rational society* aiming the emancipation of human being with marks of utopia is reflected in the path of Hegelian-Marxist dialectics. However, after the grievous pages of crimes that stained the 20th century, the crisis of the utopian thought is here to stay. The *idea of progress* was a pretext for many pages of philosophical knowledge and unforgettable rhetoric. Today, the flattering expressions are not unanimous. Popper and postmodernists saw in utopia everything but irrationality and myth. Others, such as Horkheimer (1982) and Adorno (1983), though admitting, criticize it with their own and others opinions. Apel (1977) and Habermas (1985) intend to recover the notion of utopia, by setting the possibility of

a non-mystified utopia. Actually, following the historical process of utopian thought, philosophical reflection should not put aside the *critics of utopian reason*. But the crisis in utopia, even paying no attention to those who continue to disregard it, is obvious. Utopia was excessively mystified. We need to ask if utopia without myth is possible. Utopia seems necessary as promoter of a creative instinct, as a mobilizing image of a different *praxis*, as a critique of the existing reality, as “prospective” (Ricoeur, 1975). Kolakowski (1970) defends that utopia deserves to be credible due to its *function of openness*, to its assertive vitality in the middle of the presumption and weight of established order. In Western world, the crisis in utopia is due to the fact that *reasons* considers as illusion or mistake everything that was not *observable* or could not be *experienced*. Furthermore, *reason* believes to be able of *total knowledge* (as, for instance, Hegelian-Marxism tried to). Therefore, it never allowed utopia the possibility of revealing the emancipating sense of History that emerges from it.

Because human being is a *praxeological Being*, he lives to transform and to be transformed. Considering Utopia subjacent to *praxis*, what kind of utopia should we accept?

- a utopia crossed by an *opened dialectics*, nondeterministic, in which negativity will not be limited to the casual and scientific scope but deeply ontological and axiological;
- a utopia that is simultaneously *science* and *consciousness, critique* and *proposal*, proclaimed by prophets rather than technocrats and politicians;
- since globalization of liberalism did not bring the humanizing effects anticipated by Hume and Voltaire, utopia, here proclaimed, should not announce a virtuous society, established in money as the main universal value;
- a utopia in which rupture with past and present and the discovery of new possibilities mean the encounter with *transcendence*, which makes the human being *subject* and not *object* of History;
- a utopia that will be a prophetic appeal, an ideal of humanity, in which qualitative development of men and Being is set before the quantitative growth.

This utopian thought becomes the regulating principle of *praxis* (or axial point of an ethical teleology), able to articulate and liberating the sense of History, critical vigilance and self-realization. *Praxis*, as *rupture* and *project*, is indeed a self-realization that comes with individual and social liberation. Jürgen Habermas (1985) reveals the technocratic consciousness that insists on the “elimination of the distinction between *praxis* and *project*. Indeed, its unlimited capacity of surpassing or being surpassed and the simultaneous incapacity of reason to represent and express it, in its totality and complexity, makes the human being someone who has the notion of reason’s own limits and who, therefore, **makes** in order to be able to better interpret and understand! The alternative to rationality is not irrationality, but a *new imaginative rationality* in which utopia also fits. Ernst Bloch (1976) defends, in **The Principle of Hope**, the idea of a utopian rationality. According to him, truth is not in the fact, but in the hope of fulfilling it, through its overcoming. Truth is therefore a utopia that, through *praxis*, becomes rupture and *project*.

The critical philosophy of our time (Horkheimer, Adorno, Foucault, Marcuse, Bloch, Bataille, Derrida and, we can also quote, the Portuguese Boaventura de Sousa Santos) created a finite theory of finite, opposing what had been done during Enlightenment and by Hegel that elaborated an infinite notion of finite, through rationality of History. Both positions seem to forget that the assertion of finite is not achieved through the absolutely unlimited but through overcoming the limits. *Imaginative rationality* is aware that it can not define, with a finite discourse, the whole truth and all the truth. But it knows that it finds, in consciousness of limits, the reason of *praxis*. And it is through *praxis* that Man is not only rupture (negativity), but also project (utopia), namely of a more solidary and a more fair world. And thus, in History, both *dogmatism* (and totalitarianism of opinion) and *relativism* (or a fatigue of dogmatism) end: since everything is related to everything, in a task, always unfinished, to fulfil... with certainty of hope!

5. Answer to the Problem

5.1. Human Motricity – A New Science of Man

If we consider the characteristics of Newtonian – Cartesian and positivist science (that faded away only in the 20th century, with quantum, computer and bio molecular revolutions) we will find in the obsession for quantification, even in the Sciences concerning Man, as if the human being was only a *fact* and not a *value*; the fixation for atomizing and fragmenting (to know, for that science, means divide and classify, to be able to determine the systematic relations among what has been divided); and starting from the exaggerated dualism *res cogitans / res extensa*, the fact that the mind is studied through introspection and the body according to specific methods of Natural Sciences.

From here, an evident scientific progress was undisputedly born at the level of quantification and specialization, but also a generalized neo-obscurantism, created by the same movement that produced specializations, in which the specialist becomes ignorant of all that is not within his area of expertise, as Edgar Morin keeps repeating on his work.

Modern Physical Education, which appeared at the end of the 18th century and the beginning of the 19th century, brings with it the concept of Man divided in *res cogitans* and *res extensa*, but pointing out that the human being is essentially thought, in perfect accordance with the peremptory declaration of Descartes: “there is nothing in the concept of body that belongs to the mind and nothing in the idea of mind that belongs to the body”. Modern Physical Education (it should be repeated, without any ambiguity) appeared when the major achievements of Cartesian medicine were introduced into pedagogy, or putting it in a different way, Bichat’s and Broussais’ medicine. Locke’s empiricism (1632-1704) does not surpass the framework of *physical* health in his thoughts about education. It can be added, without fear of failing that Physical Education is a modernity product, as gymnastics was in Antiquity.

It is clear that the human body is neither what physiology describes nor only what anatomy draws, not even only what biology says, since the body is the materialization of human complexity. Edgar Morin (1977) was right when he wrote: "human beings are not physical because of their bodies". It is necessary "to conceive physical organization inside biological organization and the latter inside of an anthropo-sociological organization". Actually, nobody possesses a body. There is an obvious distance between me and the object I possess: I can throw it away without stop being who I am. With my body the same does not happen: without it, I stop being who I am. Therefore, my body is not physical, in the Cartesian sense of the term, is not *Korper*, but the basis of my existence, of my own subjectivity, the *Leib*.

On the other hand, in this area of knowledge, a new discourse is discernible during the 1960's decade; a discourse focused in *movement* and in *motricity*, announcing an epistemological rupture or, a paradigm shift, which is also visible when (without great epistemological research, since one falls into a unilateral idea of human motricity) Physical Education is replaced by *Sciences of Sport*...

Thus, the macro concept of Physical Education can only be understood as a pre-science of Human Motricity Science, with actions in which Man seek of superseding and dream are linked.

Sport, in fact, occupies a relevant place for what it represents of corporeity completely assumed and experienced, searching *performance*, seeking the *more-Being*; a place of competition-dialogue, within rules that turns real the humanizing essence of practice of sports; a place for spectacle suitable to a society grounded in *efficiency* and *competition* at all levels; a place of a coded set of techniques, highly rationalized and specialized, accordingly to the capitalist and industrial mode of production. At a critical distance it is possible to find in it, more than a technique, technologist, that is, a new messianic position in which the liberation would come *in* and *by* technological society. However, this type of society produces the *one-dimensional man*, through a merely informative language that lost its appeal and dialogue characteristic and refuses the fundamental status of historicity and real diversity.

However, one should take into account that culture expresses a certain social totality, which nowadays, tends to generate the *technological man* without density or thickness, unable to see beyond sensorial and immediate...

Nevertheless, it is obvious that Physical Education (as a macro concept) is only a *disciplinary tradition*, not a *disciplinary autonomy*. As *disciplinary tradition*, it can be taught, but without *disciplinary autonomy*, it will hardly be researched or constituted as a *scientific community*. Physical Education never had the necessity of being epistemologically self-legitimated, *i.e.*, never felt the necessity to find in itself the forms and reasons of its own scientific legitimatization, precisely because Power has always used it and has never served it as an irreplaceable instrument of knowledge and transformation.

It is time to stop once and for all with the existing *epistemological anarchy* (I am not referring to the one proposed by Feyerabend) and try the act of *epistemological legitimatization*, not only through Human Motricity Science or the research in this area of knowledge, but also through the teaching of human motricity in a university version. We can not continue with that *psychological tendency* which adopts the interest of youth in physical activities (namely sport) as legitimatization criterion;

neither the *sociological tendency* that has its importance in health and in populations' leisure time as essential criterion, nor the *pedagogical tendency* (from which all types of knowledge, with little autonomy, get help) that only emphasizes its formative value in a discipline.

Formulating hypotheses that go beyond the field of what can be strictly observable and accepting the competition of tests that seek to refuse it – a discipline appears and it is maintained when internal and external factors are articulated in the *text* of logical coherence and of empirical evidence and in the context of a socio-cultural plan. However, since Human Motricity Science has the necessary conditions to rise; since this area of knowledge will (also) be scientifically legitimated in order to obtain a clearer social recognition, it is time to move towards a *normal science* that challenges the premises of the pre-paradigmatic phase started with Ling, Amorós and Jahn and opens his way to the recognition of Human Motricity Science. Now is the time to find intelligibility of change in today's culture where all sciences are now integrated!

The visibility of the emerging paradigm is necessary to the history of Sport and Physical Education, as it is already present in other branches of science.

5.2 Time and Message

According to Teilhard de Chardin (1955), it is necessary to choose “man as the centre, and around him [to try] to establish a coherent order between antecedents and consequents;(…) to discover a system of ontological and casual relations between the elements of the universe, but only an experimental law of recurrence [the law of complexity – consciousness] which would express their successive appearance in time”.

Therefore, different levels of intelligibility emerge from the course of time. To be is to be-in-time, enlightened with new significations *with* and *through* time. Foucault (1966) in *Les Mots et les Choses* tells us implicitly that there is an incessant dialectics that constitutes knowledge and in which knowledge is constituted. And this discontinuity is wider and more profound than the *epistemological rupture*: it reaches the set of knowledge of a certain epoch.

Thus, there is the discourse of epochal discourses; there is the paradigm of paradigms, which allows us to difference the *Newtonian - Cartesian paradigm* and the *emerging paradigm* (Boaventura Sousa Santos, 1989). Let us analyze the characteristics (we may say universally accepted) of *Newtonian - Cartesian paradigm*. It is important to point out that the development of Western Science in the 16th and 17th centuries constitutes, in my opinion, a triumph of *modern ratio*, in opposition to mythological explanations and even to the Aristotelian-Tomist rationality that defended the primacy of a rationality that avoids the resource to experience. Let us begin by adding the characteristics of classical science, considered to be essential:

1. Science is expressed in mathematical language. To know means to quantify. The scientific rigour is estimated through the measuring rigour. What is not quantifiable is scientifically irrelevant. But, in order to describe mathematically nature, Galilei (1564-1462) advised that one should be restricted to the study of body properties (shapes, quantities and movements). The Pitirim Sorokin's denunciation about quantophrenia (quantification paranoia) is a statement of

opposition against the victorious and dictatorial emergence of quantity, to the detriment of quality.

2. Doubt as method. There is only one thing we can not doubt: the doubtful Being. As it is known, Descartes doubted everything: doubted the assertions of common sense, the arguments of authority, the testimony of senses, the information of consciousness, the truth deduced by reasoning, the reality of external world and the reality of his own body. He interrupted this chain of doubts only in front of his own doubtful Being. So we can conclude that:

2.1 The essence of Human Being is found in thought.

2.2 The mind overvalues itself in relation to matter and a clear dualism between them is created. The myth of absolute rationality became an overstatement when, during the French Revolution, an altar was built, in *Notre Dâme*, in honour of the goddess of Reason, whose image portrayed a famous French prostitute.

3. Conception of nature as a perfect machine, ruled by exact mathematical laws.
4. Starting from the overstated dualism *res cogitans / res extensa*, mind began to be studied through introspection and body through the specific methods of Natural Sciences.
5. Reduction of Complexity in which the scientific method is based. Thus, since the World is complex and human mind can not understand it completely, it is important to divide and classify, in order that, later, the systematic relations among what was separated can be determined. Therefore, it became possible to formulate Newton's Laws that reduced cosmic complexity to a simple enunciation.

The Society of Information and the New Knowledge Society Man (the present man), still live here and beyond this *eternal present*, which are the basic concepts of Galilei, Descartes and Newton. Many things arrive to him fragmented, divided, in crumbs: the subject - object dualism (perceptible in the biomedical model which analyses disease in reductionism terms), overspecialization that releases itself from a view of the *whole*. Standing up against delirious theological and metaphysical subjections, due to the incontestable prestige of sciences that settle within an essential respect for human intelligence; resulting from the secularization that has been assaulting Europe, after the Middle-Ages, and that the *masters of suspicion*, with the prodigious halo of genius, vigorously declared, the Western man got used to a highly formalized knowledge that printed a distinctive character on his thought and took him to a certain intellectual conformism.

Indeed, longing for rehabilitating the science rigour, he lost sight of other meaningful problems, such as *Being* and the *sense* of existence, science as an emancipating, social and political act, singularity of love, of amusement, of gratuitous and even of "science that is part of the culture complex from which men, in each generation, try to find a form of intellectual coherence" (Prigogine and Stengers, 1979). Therefore science is not and never was neutral. In Modern Age, it settled down within the bourgeois purposes, in the idea of a society of industrialists and merchants. It emerged from a totality, from the amplest complex of relations, also visible in the religious contribution of Calvin and Luther, as Max Weber (1996) pointed out. Later on, because of the incomparable prestige of Newton, classical science does not only stabilize as it is transformed in a responsible institution. But, "the truth of Natural Sciences possesses an eminently critical strength, evincing

always the social and political dimension of scientific practice. It was mainly a question of opposing the order of Nature and Reason to the order of the Monarchy or Church. Science only accepted the truth proceeding from the order of things, and it explicitly rejected the *truths* proceeding from the outside, from above or from any authority. “The only authority was the Reason” (Japiassu, 1985).

And thus, sciences emerging in the middle of the bourgeoisie culture (culture is the complex of senses and significations, of social patterns and values, subjacent and included in the life of a person, group or society) slowly ignored its relations with the *whole*, very concerned with specialization, less concerned with a totality. That includes dialectically *internal* and *external* factors of the process of knowledge production.

Not even a superficial view of our time allows us to refuse the recognition that the main machine of our time is the computer and the great existing mechanism is data processing.

Thus, an *uncertain universe* is born “as scenario of research and scientific acquisition of the end of this century. The universe of perfect gases, of watches, of inclined plans and of reciprocal adaptations is replaced by the universe of dissipative structure, of quasars, black holes and of *hopeful monsters*” (Mauro Ceruti, 1994). We passed from an epistemology of the *observed object* to an epistemology of the *observer subject*; we passed from a *science of necessity* to a *science of game*; and since everything is at stake, *chance* and *contingency* emerge, crisis is obvious.

And, if science and philosophy are living an undeniable crisis, it becomes evident what Pierre Parlebas (1987) wrote: “Today, in France, Physical Education is in crisis. This crisis is manifested, simultaneously, in different plans: in techniques, in the intervention fields and in the scope of training and research”.

This quote does not amplify what is happening nor it repeats conventional banalities in the emphatic tone - it faithfully describes the panorama of crisis...and not only in the French Physical Education. In fact, Physical Education, as a macro concept, is, as the other sciences were, a Cartesian product, which made the body a simple machine in the three-dimensional space of Euclidean geometry. The body, according to Descartes, is simple *res extensa*, *i.e.*, a simple machine subjected to the laws of Nature. However, since man is not a body, but has a body, the body-object is transformed in an inexhaustible centre of scientific curiosity. It is established the “anatomical-physiological paradigm based and integrated with Descartes in the general system of knowledge[...] whose method, following the Cartesian teaching, consists in analysing, describing and rearranging or systematizing the mechanism of corporal machine” (Jana, 1995). Ling, Amoros, Janh and other coryphaei of modern Physical Education, as men of their time, started with the Cartesian model and forced the bodily practices to be measured by it.

To talk about scientific knowledge, in this dualistic space, is to refuse the great message of today’s culture, which is predominantly *holistic*, *systemic*, *synergetic*, and *naturalistic* and tends towards *transcendence*. **Holistic**, because the totality to take into account now, is not only *mind-body*, or even *mind-body-society*, but really *mind-body-nature-desire-society* and everything that can be associated bearing in mind *Complexity*. Biology, Medicine and Physical Education still appear, sometimes (sport, almost always) as a mechanistic view of Man and Life. But, the

biological mechanisms are only examples of a much wider principle of organization. **Synergetic**, once scientific knowledge of the Future will stand out from synergy among the quantum revolution, computer revolution and biomolecular revolution. Indeed, we are walking towards a planetary civilization. In what concerns **Naturalism** existing in today's culture, it must be said that Man is an element of Nature and not any substance apart from it. The objective dialectics continues in the subjective dialectics and transforms Man into memory and sense of History. And, thus, Nature makes itself Culture and Culture knows itself as Nature. It should be emphasized that we are going through the second phase of evolutionism. In the first moment, natural selection of anatomical and physiological characteristics developed into the nuclear problem of origin of species and of Man and knowledge on biology of behaviour was so reduced...that there was not any chance to go beyond the anatomical-physiological environment. Today, complexity demands much more than Charles Dickens could have imagined. The fact that we are living in a *society of information* should not make us forget that all information is *shape* and, therefore, refers to material, natural and organizational support. *Moving towards transcendence*, because there is in it a word about the possible showing the various scientist's that the object escaping from demonstration may however be designated and supplied to contemplation. Man goes beyond the immediate, always in an endless search for Absolute, from where the sense and totality are discerned. Here, there is also the intention to question the closed, self-sufficient and self-satisfied Reason. The availability to transcendence indicates new paths to Reason. It is important not to forget that it was the closed reason that denied recognition to the relation subject-object in the act of knowledge...

Man is necessarily an opened Being, who does not fulfil closed within himself. Therefore, *openness* is proper of humanity as *closeness* is proper of a thing either at a physical or at an affective and cognitive level. In *Banquet* (427-374 b.C.), Plato declares that definitive knowledge and to philosophise are mutually eliminated. In the search of intelligibility, urgency of sense and search for the truth, Man can not cease to move closer to the World of Ideas. In modern terms, he can not avoid to act, as a praxeological Being. But an action that represents a philosophy, which means a reflexive and critical functions oriented by a grounded intelligibility. We should not forget, as Heidegger says, that philosophy is a glade where a question inhabits.

6. Human Motricity Science and Medicine

If Physical Education does not present a disciplinary autonomy, since it is a mere element of integral education, is it possible to question it tending towards the constitution of an independent science or turning Physical Education on a branch of that science? Grounded in the concept of "Motricity" extracted from Merleau-Ponty (1908-1961) and in the epistemology of Bachelard and Althusser starting with their concepts of problematic (that designates the specific unity of a theoretical training) and *epistemological rupture*, although without forgetting Georges Canguilhem's philosophical researches, the archaeological history of Michel Foucault, Popper's falsifiability, Thomas Kuhn's scientific revolutions, Feyerabend's methodological anarchism and the critical theory of Jürgen Habermas, I arrived to the conclusion that Human Motricity Science does exist. Furthermore and accordingly to the

already mentioned features of modern culture, Human Motricity Science would come up sooner or later and several factors converge to support the proposal:

- The feeling of crisis felt in Physical Education since the 1960's decade as it was not used to self critical literature. Even if I don't agree completely with Foucault when he states that Man is an accident in the discourse path, I must agree that discourse is the matter to be handled by an epistemologist.
- Children psychology, with Wallon's (1879-1961) researches about the consciousness of the body psycho-motricity using relaxation techniques and motor learning theories.
- Sociology, as proved by the interest shown by Norbert Elias and David Le Breton (two examples among others) in body condition and practices.
- The advances in linguistics concerning body language.
- A "body" vision of new anthropologies, from Bunge's, Monod's, Freigl's and Popper's materialism to Mounier's Teilhard de Chardin's and the theologian Karl Rahner's spiritualism.
- The confirmation of quantum, informatics and bio molecular revolutions and of the synergy that unifies them providing Man with an unprecedented power to manipulate matter, life and intelligence.
- The recognition of an intimate mind-body relation, through studies that reinforce the connection between *stress* and colon cancer or a certain amount of heart diseases and the survival rates of cancers and heart diseases through the support of a solid affectivity.
- The existence of a functional nervous system without the helpful role of motricity (Wallon, 1964). As Maurice Blondel (1973) said: "If thinking is related to being, to think and to be don't exist without action, without an interconnection made to an original operation". António Damásio (2003) says, regarding this subject: "In the beginning it was emotion (...) and in the beginning of emotion was action". We might add Berthoz (2003) words: "... at the beginning it was not reason, at the beginning it was not emotion, at the beginning it was not the body; at the beginning it was action. Action is not the movement; action is the intention of interacting with the world or with oneself as part of the world. Action is always the pursuit of the goal; it is always justified by an intention".
- The definition of Man as a Being available to transcendence, and therefore, a *praxeological Being*, a Being that is made...making.
- The excellent and singular development of several subsystems of human motricity (sport and dance, for instance) in today's world.
- The incalculable contribution of phenomenology, namely Merleau-Ponty's **Phénoménologie de la Perception** (1945), observing in motricity the **operating intentionality** and the *praxis* as an intentional act. He sustains a clear critic against all traditional dualisms: empiricism-intellectualism, body-soul, and man-world. According to this author perception begins and grounds knowledge; consciousness, body and world are not three existential unities with possibilities of an intimate relationship, since they are structures that can only be understood when related to each other; at last it should be pointed out that a new gnoseological subject is born with Merleau-Ponty, in which corporeity prevails.
- Francisco Varela (1995) should be quoted, since he considers "mind as an emerging feature and this feature most important and interesting consequence is our sense of self (of identity). My sense of self exists because it gives me an

interface with the world". Here, Varela reminds phenomenology and shows us how the Philosophical School enlightened the paths of science.

- The rising of a rationality model that questions Newtonian-Cartesian model and intends to conciliate Eastern spirituality and Western pragmatism (Grof, 1988).
- The unstoppable production of scientific knowledge within the scope of Social and Human Sciences.
- The fact of man being, nowadays, admittedly, the complexity body-soul-desire-nature-society constantly longing for superseding (or transcendence).

However, many say not to find in Human Motricity Science, the autonomous *theoretical matrix*. "A problematic partially matches others, representations undergo influences, the operator's field of action is not always well defined" (Gil, 1986).

All sciences have within its articulated and hierarchical structures a set of theoretical elements and influences of different fields of knowledge. To analyse a science means, among other things, to seek the relations that can make of it a culture.

But, are there *theoretical concepts* and *empirical researches* that allow us to accomplish autonomy of disciplines, within Human Motricity, and does the solution to this problematic depend on the biomedical sciences? Problematic is historically created, has a social basis and lately, many people consider that biomedical sciences include the human motricity area. That's why some Physical Education professionals assume a submission attitude before doctors (physicians). Actually, if we see university personnel or professionals working within the *health area*, as the only technicians with the capacity to heal and face death, to stay in that area presupposes to assume a position of inferiority before doctors (physicians). Obviously, health problems are not exclusively physicians' problems but belong to the entire society.

Mário Bunge created the term *Iatrophilosophy* to designate the *Philosophy of Medicine* and divides it in: Iatrology, Iatrosemantics, Iatrognoseology, Iatromethodology and Iatropaxeology (Bunge, 1980). The knowledge of Medicine (as other sciences) comes from an *informed practice*, bearing in mind totality. Iatropaxeology is the gnoseologic ground of Iatrophilosophy (knowledge is socially built). At prevention, therapeutics and heal levels, it is health that Medicine pursues. There is a circular relation between health and disease: healthy is non- morbid; morbid is non-healthy; healthy is normality, disease is abnormality. However, in Medicine, concepts of normal and pathological are settled in the biological norm, in the anatomical functional integrity (Canguilhem, 1971). The normative pattern is established in terms of average, resulting as abnormal or pathological the norm deviation. Despite being the draft of an innovative work, the organics orientation in psychiatry conceives the mental illness as a deviation of normal patterns of brain's morphophysiology.

Berlinguer (1954), Canguilhem (1961) and Foucault (1963) showed the disease historical character defying the organics prejudices and were willing to destroy the routine knowledge. Let us take a while to analyse Michel Foucault's book "*Naissance de la Clinique*". We must refer that in this author there is a history without subject, where ideologies precede the creative labour of men and women. It comes out of him a fatalist resignation, where discontinuity in itself seems to be far away of the traditional Aristotle's vision on human behaviour. Let us go back to the "*Naissance de la Clinique*". This book states that *the rupture* which gives way to the modern medicine is the path from a space of ideal representation, taxonomic and artificial to a profound real and objective space. That is, the passage of a place

where disease is configured, seen as nosographic, to a place where disease is located, the individual body space. At the same time, there is no signal of a more perfect conceptual re-definition of medical language, through the term of the metaphoric and the qualitative, but we can see the emergence of a new language. Classical Medicine sees itself as a taxonomic medicine that is elaborated taking into account the natural history model. And, because of that model, classical medicine presents, as subject, the superficial look of the physician and, as object, the classification of diseases.

With the *birth of clinic*, at the end of the 17th century, new steps were taken and *the rupture* happens. The first clinic in the beginning of the 18th century does not aim to create a nosography but “bringing together and make sensible” the already existent nosographic space. It is subjected to a theoretical elaboration that precedes it. Classical Medicine did not depend on perception. Its object was the rational space of illnesses taxonomy and the function of looking at, was to think instead of defining the essences. So, the observer is the real knowledge producer. Disease is inaccessible to knowledge. At the end of the 18th century, the huge difference between symptom and disease disappears; disease is no longer hidden within the unknowable; its nature mixes up with the phenomenon of its sensitive manifestation. A disease is taken as a set of symptoms perceptible through the eyes. It should also be taken into account the difference between *symptom* and *sign*, whilst it is the symptom that allows the distinction of a pathological phenomenon; it is also the sign of a disease (a sign of itself, since the essence of the disease is nothing but a set of symptoms). Thus it becomes clear that the clinic’s fields of action are the signs and the symptoms - an area of perception and language, hence real in itself is submitted to the language model.

Comparing clinics to classical medicine (where the nosology of diseases preceded the objective study), Foucault states that the former is basically an investigation developed in relation to signs and symptoms; reason why there is a specific type of relation between perception and language.

During the 19th century, clinic maintains its course of rupture by transforming itself into an anatomy- clinic. With Bichat, in the early 19th century, the concept of disease abandons the *ideal* and becomes *corporal* and *analytic*. The anatomy-clinic synthesizes the methods of clinic and pathological anatomy: the clinic that makes an effort to read the pathological symptoms and pathological anatomy that studies tissues changes. Hence, two heterogeneous entities are interrelated: symptoms and tissues. This relation allows that anatomy-clinic to overcome the function of proceeding to symptomatic or tissue analyses – it creates a new space of medical perception – the sick body.

The possibility of looking inside the sick body is the big transformation introduced by anatomy-clinic. Consequently, disease ceases to be a nosological entity to become an identified by the lesion reality. The disease space is inside the organism space. Disease is the sick body. With Bichat, who is Broussais contemporaneous, it is completed the process of transformation from where modern medicine came up. And what was invisible in classical medicine becomes visible with modern medicine. What is taxonomical becomes corporal space! But is it possible to find a space without verbalization of the pathological? Obviously no! The study of medical

language is necessary to the archaeological analyses since it becomes the key complement of the eyes. In fact, vision seems to be more important than language, but to see and to say are complementary aspects. Isn't it true that archaeology is a speech analysis whilst tries to articulate it with non-discursive formations?

After what we said before the body, even when it is seen under the new ideas of complexity (and, here I remind Prigogine and Morin) is observed by physicians accordingly to its somatic-therapies, socio-therapies and psycho-therapies. And even when the physician acts under the new theories of the medical model, looking at the patients and not to the diseases, preferring a clinical examination, where the diagnostic, the prognostic, the semiology, the symptomatology, the therapeutics and the medicine doses are based on the patient's speech and not in pictures, *a priori*, produced by the traditional medical knowledge. Practicing a *gestaltic* medical act in opposition to etiologial practice, homeopathic or allopathic – the language used to report the observation of the body is almost always anatomy-clinical and, even if it takes place at a prevention level it keeps on viewing the body as something that is susceptible of getting several diseases. We could listen to Brian Goodwin (2002) when he says: “Our science is a quantitative one. But, notions such as health can not be reduced to quantitative data (...) we have to develop a qualitative science which incorporates the quantitative aspects. This will be the great challenge to the 21st century”.

Human Motricity Science, assuming that Man is an itinerant and praxeological Being in his way to transcendence, and that motricity is the ability to centrifugal or centripetal movement, looks at the body as capacity to superseding and fantasy. Man differs from things because he knows to be in an intentional movement towards transcendence, *i.e.*, to reality as a totality. Transcendence allows the *possible* in Human history. That's why it is difficult to Man to close himself within the limits of immanence. Besides, what is Man's hope? Isn't it the capacity to go beyond what is here? Isn't it what liberates us from the *immediate present*? Isn't it what takes us to explore the world of the *possible*? Hope is, as I see it, presence and presentation of the possible that we wish for. The tensions that hope causes in each one of us, manifests itself in motricity.

The main task is to present human motricity as a science, in a broad and in a narrow sense, reassuring the strict character of its methodology and its own object. And, if we understand human motricity as the energy and the intentional movement act towards transcendence (the truth, in original sense, is the opening of possibilities in Heidegger's words) we have to emphasize subjectivity, since all intentionality is within us before it gets to the world; human motricity is a condition to the possibility of a truly human *praxis*. Human motricity looks for sense that previously was given it by the subject. Nothing within human motricity can be reduced to the object because in itself it has a previous opening to subjectivity. But theory and contemplation are not enough to understand human motricity, because in the formal object of this science lies a subject that is an element of an historical process. The capacity of the human being to transcend in a bio-socio-cultural and spiritual level lies in health. Human motricity science is, by nature, biological, synergetic, ecologic, holistic and so, its conception of health does not settle in a biomedical concept. It starts from it but it knows that health holds in itself the biological as well as the intellectual and the spiritual aspects.

7. Pierre Parlebas Motor's Praxeology

Across his work, Nietzsche (1844-1900) criticises Leibniz, Kant, Hegel and the classical science that is incapable of criticizing the Cartesian - Newtonian rationality and metaphysics in general. His critics announce a Dionysian liberation-knowledge, where an “open – reason” is no longer misled with the “*magister dixit*”, with the Euro centrism or colonialism, machismo, capitalism and incorporates in its multicultural perspective reason's own democratization since there is no global cognitive justice without social global justice. Pierre Parlebas, starting from *universal ludo-motors*, adopts the thesis that Physical Education will be transformed into an autonomous science, having as object the *motor-action*. He says “will be transformed”; I say that it has already transformed. The decolonisation of Physical Education brought up the birth of a new science. I agree with Boaventura Sousa Santos' words: “The regulation – knowledge knows across a path that goes from conceived ignorance as disorder to the conceived knowledge as order, while the emancipation-knowledge knows across a path that goes from conceived ignorance as colonialism to the conceived knowledge as solidarity” (Santos, 2004).

Serrano Sánchez, graduated in Physical Education at Barcelona's INEF, in the essay published in the series ICD of Investigación en Ciencias del Deporte (Consejo Superior de Deportes, 1997) admits that Physical Education scientificity suffers from deep controversies caused by a certain lack of definition concerning the study object and the name of the science; the dependent or independent character concerning other sciences; the absence of a theory with wide and visible acceptance by the scientific community, as well as an appropriated method to its investigation. But with a tough critic he sets aside the hypotheses of an *autonomous-discipline*, since, and according to this author, “we can loose the unity of our knowledge [...] the fundamental feature of our discipline, due to the nature of its object, which is the multidisciplinary. The need of a multidisciplinary approach comes in first place as a “particular historical reality of our science” because it holds within itself several contents born in other sciences, especially the ones with a biological mark. I allow myself to distinguish this piece of Serrano Sánchez prose that I quote in the original language²:

“Cuando se argumentan propuestas en tomo a nuestro objeto, casi siempre surge el problema de su dualidad que se revela en las diversas conceptualizaciones que de él se hacen. Intentar definir nuestra ciencia a partir del concepto de movimiento de los ejercicios físicos, de la conducta motriz o de la acción motriz, podría ser comparado al dualismo-cartesiano psique-soma, aunque en esta ocasión el dualismo se establece entre el *hombre* y su *movimiento* [...] Más que dicotomizar, deberíamos reconocer una unión entre *hombre-conducta motriz*”.

² “When we defend any proposal about our study object, we will mostly have a duality problem, whatever the conceptualization we can make about it. Trying to define our science upon the movement concept of physical exercises, or the motor conduct or motor action, could be compared to the Cartesian dualism psycho-soma although, at this point, dualism is established between man and his movement [...]; Rather than automatism, one should reckon the union between man and motor conduct”.

Let us attack the core of this author's thesis: the concept of *motricity*, accordingly to phenomenology, comes from an original unity of Man with himself and of Man with the World and so, human motricity is the body-subject and not the body-object. There is no reason, whatsoever, to overvalue a man-action separation, because it doesn't exist, always when motricity is the main question and bearing in mind the self organisation phenomenon in a living organism. The inseparable union man-action is a motricity presupposition. And it is by recognizing this union between man and action that we move forward into a new Science of Man that Serrano Sanchèz does not accept, sine he believes that an autonomous science steals the unity a makes it fragile, in the wide world of knowledge, the area of expertise in which he works. If Human motricity represents the effective unity of a Being that moves intentionally and in this unity finds the mark that originates his movement, it is not understandable that we shouldn't integrate ourselves in the plurality of social and human sciences as the human motricity science and because physical education, with all its usual spontaneous epistemology must legitimate the goals, the criteria, the methods and the techniques of a scientific area.

Unless the reasons can be found in a corporativism distant from the present crisis of traditional paradigms, "the epistemological problems are not limited to the issues that concern the internal coherence conditions of the statement but they have to be faced with issues of other content. These aspects include those of an institutional nature connected to the political and economic organization of society and that will restrain the scientific knowledge development" (Luz, 1994).

Physical Education can only be understood when grounded in a science infrastructure and so it is not licit to build by itself, a *paradigm*, because it does not hold in itself some of the fundamental propositions that constitute an epistemic frame. Physical Education has a certain type of autonomy, with its own rules and a certain kind of dependence related to the scientific paradigm where it is included. As Musical Education, Medical Education, Legal Education, Mathematics Education, and so on, but it doesn't have all the correct features of a *paradigm*.

When Serrano Sánchez states³: "when someone claims for knowledge unity (...) he is stating a positive attitude enabling to stop the knowledge split of a certain discipline. When this statement goes together with an autonomous science demand, then the former attitude would be considered as an optimistic ontology allowing knowing the whole object and, as a consequence, keeping the unit of the discipline knowledge. No autonomous science has the total knowledge of the known object, hence, the existence of interdisciplinarity and transdisciplinary approaches. If interdisciplinarity may be understood as cooperation between several disciplines while testing the same part of real and the elaboration of a synthesis that takes into account methods, laws and applications, it is obvious that interdisciplinarity holds a disciplinarity properly grounded and conscious of its limits... that inter and transdisciplinary approaches try to solve. The meaning of an autonomous discipline is that there is a body of knowledge and results that produces a doubtless scientific

³ "Cuando alguien apela a la unidad del conocimiento (...) se está haciendo una declaración que manifiesta una actitud positiva, según la cual es posible frenar la división del conocimiento de una disciplina dada. Cuando esa declaración se junta con una demanda de ciencia autónoma, entonces la actitud inicial se reviste de un optimismo ontológico que viene a afirmar la posibilidad de conocer todo el objeto y en consecuencia mantener, desde la nueva disciplina, unido nuestro conocimiento"

object, which Physical Education can not do because it is a sub-discipline, as I see it, of Human Motricity Science. The Physical Education autonomy, by fulfilling itself in rupture with the epistemological ground, which assures it a disciplinary-scientificity status, pushes itself down to a second class discipline, because it makes hard to clarify the key-concepts that are its basics that is what Serrano Sánchez acknowledges:⁴” We have been living with mechanic, energetic, conductive, cognitive, cultural and social conceptualizations of our study object. Rather than excluding concepts these should be seen as complementing conceptualizations”. But in order to be complementary, they must be included in the same process of scientific construction and theoretical reconstruction of human motricity, conceiving a rupture with the *spontaneous evidences*, the traditional corporativism and the ideological dogmatisms.

So, in my viewpoint, Physical Education *science* is the Human Motricity Science. If communication and argumentation are needed to get an interdisciplinary and transdisciplinary meta-discourse, only a science from where Physical Education comes from may give a finer credibility and intelligibility to the whole of this scientific area. And I am not referring to the expressions *sport science* or *sport sciences* or as usual in Spain, *sport and physical activities sciences*. All of these terms sound as incomplete expressions. The expression *sport science* is a mixture of theories and methodologies that belong to other scientific areas. As I see it, there are no *sport sciences* but *sciences in sport*. The Sport science tends to reduce the human motricity to the sportive practice and theory. And, then again, our area is placed in a second degree of scientific knowledge. If science is a discourse, sports’ discourse became one of the most important features of the Human Motricity Science. Human Motricity is a wider and deeper concept, nobler and richer than all sport can give. Sport is valuable because it is human motricity hence it is transcendence, an attempt to supersede the bio, axiological and spiritual limits. The expression *sport and physical activities science* is just a build up of several disciplines with no reference to the roots enabling an epistemological construction, before sports and physical activity turns into human motricity.

Human Motricity Science aims to develop Man’s knowledge through the intentional act as stated by Pierre Parlebas. According to this author, it is the praxiology as a motor action science that justifies the traditional area of physical education and sport. Nevertheless I believe that human motricity science, the way I see it, enlarges the universe of the Human Motricity discourse. Anyway I follow Pierre Parlebas when defending the existence of an autonomous science, grounded on the human motricity as it is required by the liberation - knowledge.

As stated by Thomas Kuhn (1972) in **The Structure of Scientific Revolutions**, no type of research is conducted “without an implicit minimum of theoretical and interdependent methodological certainties that allow the selection, evaluation and critics”. But, in science’s historical evolution, certainties aren’t always the same, hence the birth and death of paradigms. The specificity of phenomenology in this field of epistemology we have the movement that goes from science, as a *fact*, to its *radical justification*. Why shouldn’t we consider Human Motricity as the radical justification of “our area”, if Human Motricity can not be an experimental science seeking for steady laws, but rather a hermeneutic science looking for meanings?

⁴ “Hemos convivido con concepciones mecanicistas, energéticas, conductistas, cognitivas, sociales y culturales de nuestro objeto. Más que excluirse, esas concepciones se complementan entre si”.

Human Motricity Science study object is not just the moving Being; moreover it studies a Being that intentionally moves. As we stated above, to the French philosopher Maurice Blondel (1973) “in action lies to think and to be”; to Alain Berthoz (2003) “the act always aims a goal sustained by intentionality”. And what is meant by “filosofia della praxis” in Ant3nio Gramsci (1971) and the “homo ludens” in Johan Huizinga (1955) either than “within all act lies human complexity”?

In my viewpoint, motricity means all of this. And I should add the Marxist observation that no individual is completely isolated since he lives within a set of social relations. There is no subject aside the historical conditions from which it emerges nor the *praxis* with which it acts and reacts. This is the point that makes me move beyond Merleau-Ponty: as I see it, dialectics between conscience and the outside world is produced and developed in *praxis*, namely in work. The *experienced* integrates the social practice. Besides, the individual conscience may not be conceived far from a social practice that ties it to a certain society. So, de-constructing Physical Education as a macro concept and a pre-science (as well as the irreplaceable role in the historical process of creation and development of Human Motricity Science) a new area stands before us, in the core of human and social sciences, having human motricity as its object either in a scientific level or in an institutional and ethic level, once in the same conditions of concreteness, in its *poi3sis*, it aims to know and serve Man.

To safely walk into a specific Human Motricity Science (what is firmly rejected by Serrano S3nchez) means:

- to reject a pluralism that is mislead with parcelling, division, fracture of a whole (*e.g.*: sports practice comes from Human Motricity and not the opposite);
- to reject normative rules from traditional physical education free of all epistemological and axiological elements, because Human Motricity includes norms and values, counting the gnoseological ones;
- to reject any sociological or biomedical deviations, once Human Motricity did not overcome the space of a mere parcel from a wider and more complex *whole* ;
- to sign that Human Motricity Science aims an epistemological framework characterized with other sciences dignity, whilst transcendence intentional movement (or superseding) is a social practice that separates it from all other practices;
- to sign that the epistemological difference in this and other areas of knowledge, integrates differences between body and soul, as it persists by religious reasons;
- at last, to sign that in the act of transcending there is no the expectation of whim, or the awakening of a growing pride, because superseding is just possible when it is happens at all the *being* levels without forgetting the axiological one leading us to a superior dimension of humanity.

Therefore, Man is body-soul-nature-desire-society considered as an inexorable and intentional anxiety towards transcendence.

Following Clifford Geertz *Interpretative Anthropology* (1992), this call towards transcendence does not allow any outlined and efficient systematized methodology that looks at culture as text, context and system. From culture as text I move to *Human Motricity as text*, where, either than laws there is a search for meanings. “There is a history or corporeity that is body’s presence in the history culture,

noticeable through the allegorical speeches of the body across the history of Thought and the metaphors about the body in art's history" (Ribeiro, 1997). But isn't it true that after all, in corporeity's history its corporeous closeness is denied confirmed by the expression *floating significant* in Marcel Mauss (1953)?

In scientific knowledge, especially in the world of the human, there is an obvious growing independence and a necessary solidarity between probability and determinism. This is why the scientific regulation of Human Motricity Science can not be mathematically exact.

In Parlebas praxeology, Serrano Sánchez discovers a number of limits and too many weaknesses. It would be odd if it was otherwise while it is through the recognition of its present weaknesses that Science can find its agenda for future investigation. Anyway I agree with Parlebas when, he finds the boundaries between Human Motricity and the others in the knowledge chart; not in order to create a feud, an island or a trencher, but because no one can claim today the exclusiveness of several and different knowledge. Moreover, interdisciplinary and transdisciplinary approaches hold a straight and solidary disciplinarity. If we do not want "our area" to be invaded and conquered by physicians and psychologists we must have well grounded arguments distinctive of an autonomous science. Here again I go beyond Parlebas message; in fact, it is not enough to understand a paradigm as culture, in the general sense of a defining vision in a wide experience area. I declare the existence of Human Science Motricity starting from existential criteria, theoretical-logical of scientific and institutional basic principles. Although every methodology should value self-criticism needed to keep an open dialogue with other methods (we shall not forget "*everything goes*" in Feyerband) and... creativity!

The fact that the Physical Education's leap to Human Motricity Science means *complexification* transforming this area into a wide place of other science's interactions, but we have to define the boundaries as for instance it is claimed to psychiatry in José Gameiro (1992). "Each branch of knowledge is built along its life as a theoretical body, around key-concepts that keep on changing to the rhythm of knowledge advances. If we take as an example Medicine we will see that in the last one hundred years there was a progress from the study of descriptive anatomy to the cellular biology and immunology".

So, Human Motricity should come up as a system open to other science and cultural systems, with its own self-poiesis and self-organization keeping on track with the historical process, with the coming up of new characteristics and new interactions as well as with the capacity to clearly choose its epistemic analysers: health, amusement, education, show and efficiency. According to Paul Ricoeur (1955), there is a close relationship between History and Philosophy since, "the history of philosophy is revealed with the retaking of historians' history, led by philosophical conscientious awareness". That means that History is Philosophy's fulfilment space, the same to all men and things. By theorizing Man (body-soul-nature-desire-society), Human Motricity Science in the transcendence movement follows the continuous reformulation process crossing the History of Ideas well expressed in the refusal of the firmly established and definitely acquired "made ideas". According to Gaston Bachelard (1983) "scientific knowledge must be rebuilt at every moment". Within a science level, tradition mostly gives us an immediate experience of reality. On the other hand, scientific knowledge goes beyond the immediate experience from reality given by the common sense. Besides, we have to have in account that

sciences evolve in accordance to the knowledge instruments they possess, and that those instruments keep on transforming and developing themselves.

Human Motricity Science uses José Barata Moura words: “essence is not a property or a patrimony that one has, it is a to be that one practices” and also Paul Ricoeur’s (1969) statement: “the question of truth is no longer the question of method but the manifestation of Being, for a Being whose existence consists in the understanding of to be”. The human being lives in a permanent exercise of superseding and reaching a wider own comprehension because here he feels motivated. The global motivation action implies a *goal*, a *meaning*; and the best motivation is to have the capacity to overcome as an objective. Actually, in this *action* Man reckons himself as a value. And to be able to succeed is not primary physical; it is located at the level of the *lived body* (whilst biology, anthropology and nature sciences refer to the body in its visible and objective dimension). Human Motricity Science reckons in a person, the organism, the lived body, the desire, the affectivity and the language. Only through the judgemental thought and the physical we would be able to built thinking machines.

Human Motricity Science is a science of Man where he pre-exists to the theories and methods, the reason why it is in permanent construction.

CONCLUSION

What do we aim with the creation of a *Human Motricity Science*?

First of all, we intend to supply a *theoretical matrix* to a field of knowledge that is not usually seen as an autonomous science. Human motricity is virtuosity to the action of a Being that goes after transcendence. This intentional movement towards *more-Being* is visible in a clear shape and inexorable.

I suggest reorganization where Bachelard’s *epistemological rupture* and Kuhn *incommensurability* become visible. As a macro concept, physical education does no longer exist. I see it as a pre-science of Human Motricity Science or as a pedagogical branch of this science.

The still named Physical Education teachers have a far more rich profession than those of educators of... bodies or physics. From an epistemological point of view, the expression physical education (and we know how the omnipotence and omnipresence of speech is probably the essential dimension of our time) becomes unfitted with a global and coherent meaning to its theoretical production. There are no teachers of physics... but teachers of *men in their intentional movement towards transcendence!*

After all this is the field where sport blooms, and the new science of Man that I name as Human Motricity Science.

Human Motricity Science epistemological plans are plentiful since it is so necessary a unifying idea of *men in intentional movement towards transcendence* as it is the expertise of the particular knowledge that constitute them. To organize a plurality of heterogeneous knowledge is not to obtain the *unity of diverse*, but it is the first step to integrate heterogeneous knowledge. In what concerns Human Motricity Science

we have to realize that it is developed in the empiric-positive, logical-reflexive, phenomenological-existential, phenomenological-ontological and political plans.

In the empiric-positive plan, Man is the object of sciences. In the logical-reflexive plan, Man studies himself as a subject agent, promoter of science and culture.

In the phenomenological-existential plan, each man is an unrepeatable subjectivity and the value of subjectivity is required as in Kierkegaard (1941) before the Hegelian philosophy. The individual existence becomes a theme for Human Motricity Science.

In the phenomenological-ontological plan, Man is studied as an origin subject with a bodily movement...which is the meaning of the *Being that moves*.

In the political plan, the goal of all dualisms is demanded and it is stated that a science does not come up just through epistemological motives. The human roadway is transcendence through which the human being surpasses the limits of his *situation* in the World and puts himself in a aware and willing path in relation to *absolute* becoming real when Human Being knows he exists beyond what he is *offered*.

Recognizing that this issue is not compatible with a simple approach, it may be concluded that it does not seem possible to define a method for Human Motricity Science accounting the plurality of methods and epistemological plans interpreting and embodying it (as it happens with other social and human sciences).

The *theory of information*, *Cybernetics* and *Theory of systems* talk about order, *disorder* and *organization*. So, it is needed to move towards the construction of a meta-problematic that results in the inter-subjective comprehension of human motricity. In other words, standing before the smashing of old mental prejudices and actual rupture manifestations, it is licit to walk towards the creation of a new science in which the human motricity phenomenon might be systematically identified, described and analysed without falling into a *methodical solipsism* that Karl-Otto Apel (1994) refuses because all human action may be settled by many formulas.

All of this within the complexity paradigm in which, certainty and uncertainty, the particular and the global, the whole and the parts, order and disorder find themselves complete and superseded.

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