

TWO PERSPECTIVES ON THE EVOLUTION OF MAN THEREFORE TWO VIEWS OF MAN Does It Exist Because I Like It or Like It Because It Exists?

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Abstract

Man, as an individual, as a society, as a species, etc., although studied from different perspectives, is always the same man. If, in addition to considering man (himself is usually considered the most evolved and perfect of animals - which we do not comment on... here) in an analytical, descriptive way, by the synthesis of some of its components, by a systematization of some of their defects or qualities, for their illnesses or pathologies, for the causes and consequences of their acts, ... if we were able to understand and explain the reasons why all this happens, the “deep functionality” of man, we would not only solve many of the paradoxes that today we face in science, as we would also gain in efficiency in the articulation, or even in the unification of knowledge. But for that it is necessary to destroy many myths and prejudices, with all the inherent risks and difficulties.

Fundamentals and Bases

What we think about how we conceive of the world, and therefore how we conjecture man himself,

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may be wrong. It's all open, with all the care we can get. We present five perspectives and a "conclusion", so that, within the defended strategy, the reader can build his own representation [1,2].

In this sense, we consider the way in which we collect and treat information, that is, how from a few points we build our conception of the global - summarized, allegorically, in Figure 1.

CALL OF ATTENTION ON MAN'S FUNCTIONALITY

Considering, in particular, but not only:

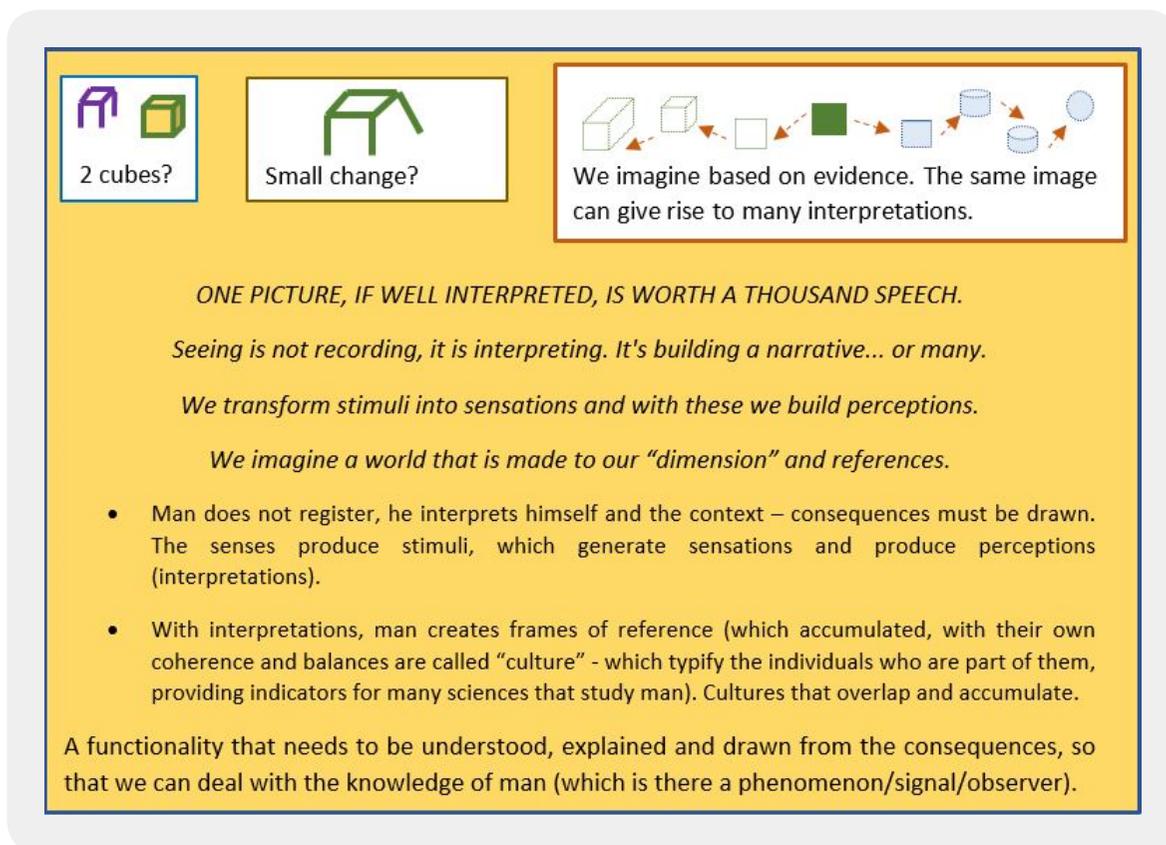


Figure 1: Call of attention on man's functionality

More than transmitting information (loosely and in a chaotic or at least random way) we seek to question how it is treated, as we believe that there is a lack of coherence between the knowledge tools we have today, the way we use them, what we can extract from them, the satisfaction we manage to obtain, that is, the income (a dialectical relationship between capital and profit) achieved [3,4].

Thus, as showed in Figure 1, we present the following points so that the reader can interpret and build their "image"/narrative:

- ✓ In 1. we build a **conjecture** with a structure different from the usual ones, although with information and knowledge that we all know and that is, therefore, at a formal level, easy to accept, but which calls into question our options and interpretations - the global framework;
- ✓ In 2, in a succinct but incisive way, more than aligning information, we appeal to the reader's sensitivity for a critical exercise that helps to reflect on the difficulties felt in the face of such basic problems and to extrapolate this reflection to the effects in situations much more complex of a global picture in which we live – **paradoxes and logical conflicts in the interpretation**, in a metaphorical way to isolate striking lines and not get lost in details;
- ✓ In 3., where, at the same time, we seek to show the effects and consequent implications of details that we should no longer ignore, due to the meaning they assume in a current context - transdisciplinarity generates new and different worlds not only to deepen the past, but to allow you to restructure it;
- ✓ In 4., we present solutions that can be simple if we are able to escape the blocks and vices that we have accumulated - unifying knowledge can increase the income obtained with it;
- ✓ In 5., we warn about the consequences of persisting in the escape error for solutions that have even given good results in the past, but which are out of date and innocuous or even harmful.

Note: The theme we deal here with in a succinct and almost schematic way, and with the conditionings of an article, is a presentation of some of the contents of a book, in which we defend and justify what we think about man and how his evolutionary strategies.

1) Man and Evolution - The Deep Problem

“Does it exist because I like it or do I like it because it exists?” - is not a mere play on words. They are distinct options that, figuratively, mark different processes in the evolution of man. Two ideas, two visions, alternatively.

That is, the world, the context, a) “was created to serve a desire” or, b) “already existing, man in his evolutionary process adapted to it”?

Put on another way: 1) life exists on Earth because the planet had the necessary characteristics, or, 2) life on Earth was shaped (adapted, within possible limits) and evolved according to the conditions and characteristics of the planet Earth?

The often-made statement that *“this is not what man was made for”* is correct - not because man was made for *“other things”*, but because, to paraphrase Gordon Childe, in a book that is already a classic, *“Man Made Himself”* (almost a century old). However, it never took off conceptually, because, we believe, it goes against many established beliefs and vested interests.

“Does it exist because I like it or do I like it because it exists?” - translates two strategies (certainly among many others).

Probably both “wrong” (what is wrong?), not only in form, but also for the effects, direct and collateral, that it causes in the interpretation and conception that we have of the evolutionary process of man. And, therefore, of man.

Implications that are not restricted to our view of the evolutionary process of man, but that extend to the idea we have of the world, of life and of science... and, if we look carefully, to the theological conceptions themselves, more or less deterministic and, even the concept of “free will”.

It is our entire frame of reference that is conditioned and altered.

If we want to seriously consider the restructuring and foundations of the epistemological framework, in its coherence and balance, at levels that we will illustrate below in the orthopedics/sport relationship, a mere example, we cannot fail to consider the foundations (bed rock) on which everything supports.

Perhaps to conclude that the model of the planet is the most adequate!

Thus, the continents (which were once *Pangea*) and will, one day, be something else, the tectonic plates, the “solid rock” after all rests on magma (fluid) until it reaches a core that It moves, therefore, in a broader way than what Galileo’s outburst said (“*e pur si muove!*”). An Earth that moves at a dizzying speed (that is, that would cause vertigo... if we had the proper references).

References! As we stated above (Figure 1), showing “cubes” (objects with three dimensions in a plane that only has 2 or, adding to it the time, that is, the trajectory, even with four dimensions), or, below, where we outline three visions of man (among many possible others, in A., B., C.).

Which does not mean that there is no right for any of us to say “...*here, for my problem, which takes place in 5 cm, I don't care about any of that*”.

An autonomy, in the form and in the strategies of interpretation of the phenomenon (well expressed in the triple relationship phenomenon / signal / observer that Einstein warned us about) at the level of the signal used and from the “point of view” of the observer, who does not admit everything (as Kuhn complained well of those who thanked him for thinking that the paradigm could be chosen at the beautiful pleasure of the interests of the moment).

A frame of reference (which is nothing more than a tool, not an ideological imposition, see what Ian Hacking says about instruments) that has to be “legitimated” (rigor, precision, epistemology, scale used, the privileged meanings, ...) and adapted to the functions to be performed and to the user’s abilities and potential.

This allowed Thomas Kuhn to speak of “*normal science*”, “*rupture*”, “*new paradigm*” and to oppose Popper that “*a fact is a fact*”, but his interpretation depends on the paradigm in which it is made. Which will be reflected in a possible debate (dialogue or confrontation - both useful), as we try to motivate below, between the knowledge of orthopedics and sport.

What it cannot (it is not must, it is cannot) is to seek to impose its (small, oftentimes) vision and conclusions on everyone (or some), even if it does so indirectly through the multiple mechanisms that societies invented to, in often insidious ways, subjugate individuals.

It is our entire conception of what is solid, of what is liquid, of magma, of what is supported by what, of how it is supported, of the articulation and functionality of the parts (if there are any parts) and of the whole... in cause. But this is another story (not a chronicle, but a tragedy), for other spaces.

Understanding beyond scratching the surface, as we have done so far, implies that in addition to working at the level (of some) of the local aspects that we manage to achieve, we seek to idealize ever wider scopes of a whole from which we are still very far away, to achieve a representation that matches the means and capabilities that we have today.

Beyond Content, Strategies Mark

Having the notion of our limits is a huge step when we go out to what we don't know (a fundamental step when we want to go out to the investigation of the unknown - an expression that may seem pleonastic, but which is not when we are aware of the concepts of investigation, of knowledge, ... (which has nothing to do with the search for truth, note) [5].

Returning to the Earth model where the solid is on the surface, but where the "consistent" structure (the support) is beyond that... and "*does not fall*".

Faced with inconsistencies, with misunderstandings, with resistances and obstacles that seek to block paths, we had to recognize that they do not originate in the conditions (technological, laboratory, ...) of today. They already took place in the clash between the conceptions and positions of Zeno of Elea, with his paradoxes, of Plato, who despite his certainties had his doubts, like the shadows in the cave, of Aristotle, with his assurances and firmness that, even wrong, they gave support and support to those who did not dare to doubt.

Without going further (deep?) for lack of space within an article, but doing it in other places and publications, we leave a point of the situation with the following position:

- The alternative between "*it exists because I like it*" or "*I like it because it exists*", represents an inversion in the formulation of an inseparable pair, the objective to be achieved and the strategy to be followed. Without an objective, there is no strategy, but without a strategy, objectives are not aimed (although they can be achieved randomly, with inherent costs);
- However, here, in the treatment of knowledge, the order of factors is not indifferent (for example - as in an addition, with a dynamic that is limited to accumulating, and not to the interaction of factors and ... that's why "*you can't mix oranges with potatoes*"). The strategy to be followed and the objectives pursued both result from a dialectic of alternatives and possibilities;

▪ Strategies and objectives that are as important as the form, structures, contents, dynamics of knowledge, the signal used in communication. In this way, they do not constitute alternatives in what should be the focus of our attention, but they are components of a whole that will lose consistency if it is not taken care of as a whole (even when our limitations force us to treat some of its facets “singly”).

We leave, in the treatment of this point, just one more note, an implementation:

1. If it exists because I like it (the man adapted the context to his needs, going there to collect what already exists for his benefit) -

The questions that arise will be, for example:

- How is the man?
- How is the world?
- What limits do we have, in the world and in man, so that life in common is possible?
- ...

2. If I like it because it exists (man adapted to the context, thus determining his evolutionary process) -

The questions that arise will be, for example:

- What adaptations did man make to the different contexts in which he integrated?
- How to improve human adaptation processes to the different contexts in which they are integrated?
- ...

3. We can still conceive another situation that is a mixture of A. plus B.

The Corollaries Withdrawn Differ, Therefore

Certainly, the “inertia” (stability) in the evolutionary process of the world (which we can limit to the Earth, but we can still extrapolate to the Universe) is much greater than that of man (which we can extrapolate to life, as we conceive it here) on Earth today - there may be other “lives”, or other conceptions of it). There may, thus, be a tendency to regard the world, say the Earth, as a “*fixed point*”.

We can always make an option for A., for B., or even for C., defining criteria to do so, creating models that are adjusted and measured, that is, having an evolutionary process that is not limited to the accidents of what is going to happen in the incidents of the routes and to try to correct the accidents that occur.

Evidently (a dangerous concept in the field of science) that contexts (spatial and temporal) are extremely broad and difficult to encompass as a whole. Segmenting this “whole” into more limited sectors could be a solution, but in this case it is necessary to try to understand how these fragments are articulated. Referring

solutions to artificial intelligence, or something similar such as “*big data*”, would be to lose track of what is happening, giving up the freedom to make choices and define guidelines.

We have reached a level of precision (resulting from the evolution of knowledge, technological means, instrumental capacity, etc.) that is no longer compatible with some of the crude ways in which we dealt with human affairs. The “*I think*”, the ideologies, the “*good intentions*”, the voluntariness, etc., are no longer enough for the complexity and delicacy of the problems we face.

Aren't these the foundations, the bases, of the crisis we are constantly talking about?

Possibly, the state of development of our knowledge (science, philosophy/epistemology, common knowledge, cultures, ...) does not yet allow us to define solutions, or we have managed to disentangle between the options in order to choose the most valid one.

What we shouldn't (can't) do is sometimes be in A., other times in B. or even in C., without defining what support our opinions. Because it only generates confusion and is, therefore, a lack of respect for those who investigate, finance, consume, ... knowledge.

Certainly, we must have the humility to try to understand and explain where we are, the resulting implications and, as soon as possible, the solutions we can have [6,7] .

In science, anomalies are challenges to look for in the unknown. Challenges that we don't want to stop trying to answer by asking questions and looking for answers to the questions we raise.

Summary

The importance of understanding and trying to explain the functionality (see down Figure 2) of man (considering the triple relationship of the positions that this man assumes as a phenomenon / signal / observer):

- In its integration in the contexts of which it is a part (not as an external and neutral observer);
- In the unification of the different aspects that knowledge evokes, so that the dialogue between these aspects is possible and not only in specific aspects (at the level of the areas of knowledge or at the disciplinary level);
- As a result, the facilitation of operational and technological frameworks where the isolation of the treatment of some of these aspects is a waste of capabilities by reducing possible income and social praxis, with sometimes tragic consequences. [see Useless Knowledge - Jean François Revel]

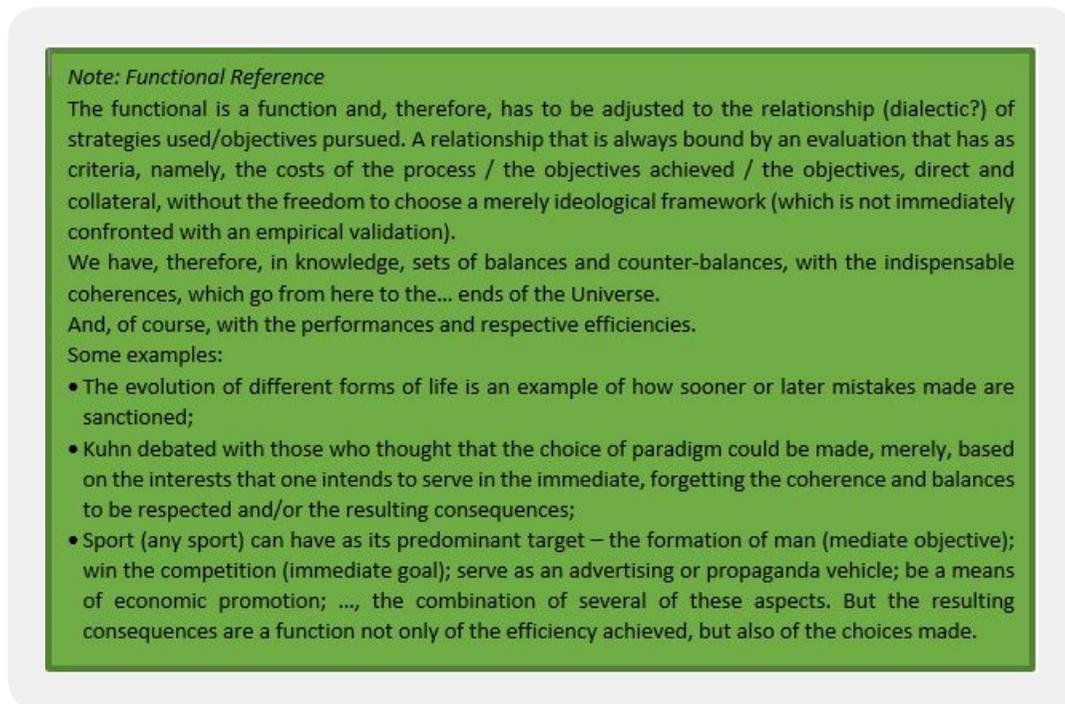


Figure 2: Functional reference

2) A Pictorial Example

The evolution of man, when taken at face value and reductionist, seems to us to be a simple and clear process.

However, Darwin, a little more than a century ago, had immense problems, which are not even solved today, in exposing his theory of “*natural selection*”. One example, among many others, of the difficulty in approaching the subject.

History (*lato sensu*) is made up of great events, thus losing the notion of fundamental details in order to understand what actually happened in millions of years of transformations and adaptations that made us what we are today.

However, it is not necessary for the existence of “*great cataclysms*” or “*enormous revolutions*” to “*change the world*”.

As important as the intensity of the cataclysm that happens, is the number of times it was repeated, the implications that each one had, the possibilities of the effects being counteracted by inverse processes, etc.

If it is difficult to follow the entire trajectory of this process, at least with the detail (at scale) that allows us to understand the detail that allows us to detect its functionality, we can, through the resulting effects, seek to understand its consequences. Synthesizing through images (Figure 3):



Figure 3

1. The introduction of a simple mirror complicates the interpretation.

- What is the “original” image? What about the mirror?
- Which shoulders are right and left?
- ...

2. Let’s add some more images. with the same questions.

- What are the “original” images? What about the mirrors?
- Which shoulders are right and left?
- ...

What is important is not seeing how many times we get it right. The fundamental is to see the complication we get into to read changes as small as the introduction of a simple instrument like a mirror.

And yet, we can easily identify that it is always the same person, despite changing the perspective from which it is seen – we have adapted to reading the faces and interpreting them, but there are much simpler things in the interpretation of the images to which we have not adapted.

If with such slight alterations we increase the difficulty of interpreting the images, imagine what happens with a few million years of “*small adjustments*” and adaptations. The strategies followed and the objectives

pursued were not only complexified, but also changed with the transformations that took place in man, in the context and in the dialectics they establish [8].

3) Importance of Being Analyzed the Need for a Break with the Current Conceptual Framework

There is another problem, not so deep and foundational (the building is consolidated, first, by the foundations; then, by the functionality of all the other components) as the one exposed above, but also an essential contribution to be able to increase in an efficient way, rigor (here also rigor) and the precision with which we understand and explain phenomena (the search for coherence and balances called science - the search for the reason for anomalies and artefacts), which can also emerge from the DEEP PROBLEM that above we expose - the fragmentation of areas of knowledge [9].

A useful fragmentation because it allows us to focus on the restricted objects of study and not get lost in the general, therefore dealing with “*generalities*” (tautologous, sorry).

Today (now), with the existing knowledge and the technologies we have, we can aim to go deeper (profound problem), which implies solving some problems that were not important or that we could not solve before, but that can constitute traps that block progression (as in combat, it is not enough to advance, it is necessary to safeguard the rear and support lines).

For millennia we had neither the ability nor the need (in terms of benefits/costs) to consider details (which, therefore, transcended us).

Today (perhaps even “yesterday”) the possible and the necessary force us to change our attitude (one of the reasons for the need for rupture). The thousandth of a second is an enormous time for the current ability to measure, the thousandth of a millimeter is a measurement without great (relative) costs, and the accumulation of data allows the creation of practically infinite information banks.

The limit came to be in man, the producer, but above all the user and consumer, who, often, does not know or can imagine what to do with all this wealth. A wealth that (like any other wealth) becomes an obstacle (pollution – a concept that only exists when the necessary coherence and balances have not been found, a conclusion arising from “nothing is lost, ..., everything is transformed” - Lavoisier), when it does not have (it is not found) any use.

When the reference frames invoked undergo profound changes (breaks, in the Kuhnian sense of the term), it is not enough to open up some alternatives. It is essential to remodel the conceptual framework (changing, for example, the focus given and the object of focus).

However, if a simple package of cookies or a package of jam has to show the contents that make up the product, a training course, from childhood to post-doc., a philosophical, or political, or scientific work, do not have such obligations.

It could be argued that it will be implied, or, on the contrary, that it is very difficult to do so. Or is it because feeding the belly is more important than feeding the spirit (an infiltration of Descartes, sorry)?

Questions remain in the air. Which means a lot of investigative work to do. Or perhaps even a rupture (in the Kuhnian sense of the term) [10].

4) A Local Orthopedics/Sports Problem

Again briefly, let's concretize with the following example, where the rupture should not be ontological. And yet..., for reasons of which we present some examples above, in order for dialogue to be possible, it is necessary to go to the fundamentals.

Sports / Orthopedics

Without going to extreme positions (in the depth necessary for the consolidation of change) as we have just shown above in some situations, the dialogue between what are called "*areas of knowledge*" (a concept that although outdated is still fully in force - with the resulting consequences) is essential. It is the transdisciplinary that complements (not replacing, of course), the interdisciplinary and the disciplinary.

Let's move on to apparently more solid and firm terrains (Note - another image, using the Earth model - "*grounded in bed rock*" - firm foundations, which are supported by a continent (?) » tectonic plates and by up there... to the bottom; remember the next earthquake... conceptual, of course).

A Problem of References and How We Consider Them

Two declarations of principle

Note 1: we don't know anything about orthopedics, but we like to ask ourselves about the different problems. Everything we say about orthopedics has, of course, a big "?" at the end. A statement of principle - we know nothing about orthopedics, but we like to ask ourselves about the various problems.

Note 2: in relation to sport, our basic area of study, we have a very critical position in relation to the predominant lines in which, despite the fabulous means committed (financial, publicity and dissemination, visibility, motivation, ... and even human resources), forgets the human development factor and is little more than a set of games with institutionalized rules so that there are competitions with what is called "fair-play" or a show in which individuals or teams are a kind of "playing the dice" to obtain a result that allows you to see who wins and who loses to satisfy opposing and quarrelsome factions.

Apparently, orthopedics and sport are relatively close. It is said.

Both of these areas are concerned with the locomotor apparatus. One for your development, the other for introducing corrections when supported limits are exceeded. It is said.

Although both of these areas are concerned with the locomotor system, man is their main focus. It is said.

Both aim at the same man. But the concept of man varies almost from person to person and, as we saw above, it is essential that we pay attention to details that until recently could have been negligible.

We believe that we can say that the orthopedics/sport relationship is still made in a “client”/service provider relationship, where injuries that appear in sports are “solved” by orthopedics and orthopedics actions are consolidated in sports in a continuity of recovery or even prevention. On the other hand, orthopedics seeks solutions in sport for functional problems encountered in its performance.

But the dialogue, which would be natural in these circumstances (around the human being and not the specific problems of each of these areas) does not take place. Perhaps because knowledge about man, in general, has not, as we stated above, reached the structuring necessary for interdisciplinarity.

Good intentions or desire are not enough, it is necessary to have the tools (conceptual and material) for the work to be carried out in an efficient and advantageous way.

We struggle with local problems (important, no doubt, but merely local) such as:

<p>Sport Definition</p> <p><i>“In the interaction of man with the context, phenomena of mutual accommodation are permanently established. When this dialectical relationship is established based on kinesthesia and the formation of man is fundamental, we are faced with a sport”</i> proposed by Almada, F.</p>	<p>Can we define Orthopedics as an action on the locomotor system when it has exceeded the bearable limits to restore functional balances?</p> <p><i>“In the interaction of man with the context, phenomena of mutual accommodation are permanently established. When in this dialectical relationship functional limits are exceeded and it is necessary to introduce corrections or adaptations in the individual’s locomotor system, it is essential to resort to the scope of orthopedics. (???)”</i></p>
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The functional limits at the level of the locomotor system of man in general and of each individual, their study and research in this area is, therefore, a border area and dialogue between the knowledge of orthopedics and sport. Sharing knowledge, problems and even some laboratory spaces become natural. Certainly, with influences, namely, in terms of the *curriculum* of courses and research in sport (we do not want to comment on orthopedics here).

We must rethink man, the functionality of man, joining efforts and also coherence and balance, unifying (not standardizing) investments in knowledge made in the most diverse situations and contexts, because, as we have already stated above, man (us) is a phenomenon / sign / observer, the object, that is, the subject and matter, of everything with which we (man) relate.

The example of physics, which found in debate (in conflict, even) the ability to integrate apparently incompatible positions, but which contributed to the refutation of what could not resist contestation (although it could still be useful for some time, at least until new solutions were more efficient) should be followed.

A contestation that is not based on the strength of institutional or personal weights, but on the ability to operationalize (in the laboratory, in an open sense, or in realization) because strategy (of the development of knowledge, too) is an art of acting, and requires objectives, even if utopian, in order to define efficient paths (strategies and objectives).

In this sense, we leave below a contribution to think about the functional man in his evolutionary process (not as a pattern that must be kept unchanged; let's remember the pressure cooker that, if it doesn't have a regulating valve, one day, sooner or later, will explode).

We thus have a set of adaptations:

A. Some, supported by sport, aiming at the development of potentialities or at least the analysis of the limits in which we can intend to extend and their coherence and balances, secondary effects and consequences;

B. Others, supported by orthopedics, which seek to correct failures and respond to situations of anomaly, prevention, injury, etc.

All this, so that it does not happen in a random way, which has very high costs, implies that a project is assumed in which one looks very "far away", where options (which do not necessarily have to be conscious) that have been made and others still resulting, even if indirect or collateral, have a reason to be (they are not only viable, but also useful), such as:

- The costs (the size of the head at birth, the time of development, the energy consumption of the central nervous system), of the capacity offered to us by the central nervous system;
- Dysfunctionality of the bipedal position (which could result from an untimely exit from a tree life due to other constraints);
- The dysfunctionality of the locomotor system in a situation of adjustment to the new contexts to which we are now subject (space, oceans, education, new circadian cycles, ...);
- And even: we only have one month of vacation when animals in general (with many exceptions like ants, bees) have twelve.

From where we can, as examples, raise questions in which, beyond (far beyond) the articulations that are made between orthopedics/sport, in a utilitarian or, at least limited, vision, collaborations in areas of common interest could be seen, such as the study of the strategies used by the locomotor system:

- Performance: that in sport (some sport, it's true) we see clearly differentiated between, for example, swimming, judo, football, tennis, golf..., (which are notoriously despised by those who make statements like "*it is need to move*" or "*must do sports - like, must take medication*" - from those who show that they do not know what an active principle is - different, for example, see how to march on smooth ground, with obstacles, irregular, soft, slippery ... has effects and requires different modes of action - a diagnosis, which leads to a prescription, an adapted dosage and control of the effects);
- Reaction to a shock: which in a judoka leads to a progressive dissipation of impact energy, in a swimmer it maintains relaxation, which causes strokes, and in a footballer (with poor bodybuilding, due to excess tone) causes injuries or, least severe pain);
- Adjusted "steady states" (balances): which in sport is seen primarily at the cardiopulmonary level, but which should also be thought of at the energy level (as in long-distance sailing), at the neuronal level (synapse polarization, as in shooting and other fine control activities or quick reactions) ...;

•

Debates that will only be possible if there is a language (means of communication, not words...), a frame of reference, ..., close enough together.

Some will say they are very long-term effects! It's because they never jumped to the ground after two or three minutes jumping on a trampoline (sport allows those who haven't lived it to go looking for the experience, and ... "train curiosity").

Mere fantasy?

Where Do We Conclude

This is a different problem from the one we dealt with in point 1, which we called "deep" because it is as if it constituted a foundation for the whole set, while the opposite is no longer the case. At most changes in 2. can be indicators or constitute an anomaly that alerts to the coherence or failures in the balances that must be considered as an alert for the whole to be analyzed and investigated.

And yet we live (until we see). But couldn't it be better?

5) A Proposed Answer

Extracted from the forthcoming book (as soon we get an editor interesting...and interested):

THE NEXT DECISIVE TECHNOLOGICAL LEAP- An interpretation of Human Functionality with the concepts of ARAT (transformation) and Mental Schema (stability).

Let us imagine that man (life) was solely (or at least predominantly) the result of one of these factors or a combination of them:

- A random process of failed mutations, even if, later, corrected by a natural selection in which the necessity of survival chose the "fittest";
- An action, of a theological or metaphysical nature, generating a finished product, even if subject to the contingencies and accidents of life.

We would only have to try to detect (as correctly as possible, as we cannot forget that the stimuli we receive are perceived as sensations that will give rise to perceptions, that is, interpretations and not to direct records of the real) the reality that surrounds us, with an experimental and empirical support avoiding any speculative process.

However, if man (life) results from an evolutionary process, with a coherence, seeking to understand and interpret the laws and principles that this coherence obeys, allows us not only to interpret, but also to seek to act in a more efficient way.

It is in this sense that we make the following proposal, which, we believe, answers many of the questions and paradoxes presented above.

THE SOLUTION WE PROPOSE

EXAMPLE:

Two processes and four principles for understanding the evolution of man – past, present, future

A. MENTAL SCHEME - stability factor

When an action is requested and / or a functionality is actuated, tracks, pathways, which, through repetition, gain solidity, and can even be stabilized and consolidated (such as the myelination of a nerve).

Note that mental is a much broader concept than "nervous system".

B. ARAT - aggression (stimulus); reaction; adaptation; transformation - transformation factor

The transformation happens not because new elements are added or accumulated (by prostheses, that is, accessories, additions), but because an aggression (a stimulus that fits the range of individual sensibilities - sufficient, but not excessive) triggered a reaction that led to an adaptation. An adaptation that can be temporary or stabilized.

Some of the principles that guide change (quotation from the above-mentioned book):

- *Principle of economy: which establishes how adaptations that are not requested for some (specific) times are set back (regulating the cost of their maintenance and the cost of their recovery; such as deciduous trees or loss of muscle tone);*
- *Principle of availability: which shows the adaptation of strategies to the limits of existing potentials (how pain stops requests made when the capacity for adaptation is almost reaching its limit);*
- *Principle of global coherence: which indicates that there is a global coherence (which defines the individual) that regulates requests and resources not only at the local level, but across the whole (such as the mobilization of segments to maintain the balance of movement in the performance of a stock);*
- *Principle of convergence of resources: which establishes that in cases of lack or shortage, the available resources are directed to where there is greater need (such as, when oxygenation fails, the protection made to the central nervous system; or the mobilization of resources for the site of an infection).*
- ...

To Conclude

Knowledge is today treated as a set of maps that are overlapped on each other as a uniqueness without considering the scales used and the different representation strategies and languages used. The result is an incoherent rant that we try to make use of with the obvious results and the visible inconsistencies.

We intend to understand phenomena, not to define orientations and constraints. Understanding others and, above all, the self, is fundamental for the debate and the definition of man and the explanation of who he is.

Knowledge, a tool that must be framed in technologies and application techniques, allows preparing futures, not determining (in a crude way, without taking care of the multiple coherences and balances that must be considered) today. A today that doesn't even exist wedged as it is between the past and the future.

We once believed that the sun (the Universe) revolved around the Earth. A small tsunami or volcano has much more energy than all existing atomic and nuclear bombs. The continents, much wider than the mountains, move.

Anthropocene? Is it a joke?

If we don't think about man (as a phenomenon, a sign and an observer) in a more precise way, we run the risk of having more and more powerful (artificial?) intelligences, to do more and more stupid things.

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