



Opinion

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Infimum Times: Dimensions, Scales and Implications



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Opinion

Gone are the days when the phenomenon was “an absolute” that should be treated in an aseptic way, seen by a neutral observer with rigorous measures (precision is another thing). The positivists, who thought in this way, and therefore Hacking characterized them saying “Positivists.... are anti-realists about both theories and entities” (Hacking, 1983) [1], had their reasons (perhaps remembering Giordano Bruno who ended up at the fire pit, or Galileo who managed to escape even when he stated in relation to the Earth “and yet it moves”). Fear is a terrible thing, but the courage was made to face and overcome it. It was a long time ago. Einstein, among many others, alerting to the triple phenomenon / signal / observer relationship, at the beginning of the last century, let us not forget, ended (??) an era of science made by “laboratory technicians”, sterile (not infected) because lived on “pure facts”, but also sterile for not taking the risks of inferences and deductions that did not dare to draw (but “being certain” is not innocuous and has costs) and, therefore, it was difficult moving from one area from knowledge to others and moving from science, to research, development & technologies (SRD&T). Still in the current context, the link between the methodologies and techniques “validated” by normal science is notorious, without the concern of contextualizing them and understanding whether these are the best answers to the starting problem. In 1928 two giants of statisticians (Jerzy Neyman and Egon Pearson) said about statistical analysis “The tests themselves give no final verdict but as tools help the worker who is using them to form his final decision” (as cited in Denworth, 2019) [2]. A criticism of the abuse of statistical significance as a scientific polygraph, which is still very current.

There is a lack of people who know how to deal with knowledge and science: scientists. Scientists capable of thinking (today it is said “outside the box”, but it is an old problem like technocracy) and solving problems (called “intelligence”), instead of applying routines (which today is better done by some informational algorithms), contextualizing instead of staying in the abstract (leaving for the abstract is not bad, serious is staying there forgetting the SRD&T cycle and its sequence industrial, commercial, social, etc.). It is not surprising that there was this difficulty when there was a risk of “going to the fire pit” (it is true today there are “smokeless” fire pit, the risk exists, but there must be the courage to face fears). Strange is that the effects of these blocks are still maintained (mentally, but not only). Let’s proceed to analyze and give some examples.

In sport, the infimum times (fractions of a second) have always been fundamental. In the impossibility of measuring them, these could only be apprehended empirically (so the importance of the champion). For ease, it was usual for coaches to be former practitioners (preferably champions), since they had “lived” the situation, “felt it”, ... thought it (there are still those who think so, due to the inability to analyze and identify the variables at stake). The appearance of material resources (instruments and laboratory capacities) that allowed the collection of data, made it possible to get to know the situations better. The use of photo-finish (which allows to “freeze” time) is over 100 years old. Or the “hawk eye” in tennis, the video referee in football or the sensors in the blocks for false starts in athletics are other examples of material instruments that allow to record the detail, measure,

account increasingly shorter times of man in sports. But if this instrumental (material) evolution allows us today to measure times in a different way from what was done in the past (because in a more precise, more detailed way), conceptually we have to accompany this ability to measure infimum times, with conceptual instruments that allow to select, analyze and understand the (innumerable) data that can be collected and stored. A problem that exists not only in sport, but that is common to practically all areas of knowledge. See, as an anecdote, how in space one seeks to identify life through indicators such as carbon, a certain range of temperatures and pressures, when on Earth, in front of our eyes, life exists in other conditions.

Currently, the problem is no longer measuring, not even measuring with precision (and evidently rigor), but also with the necessary (costs are important) precision and objectivity. The problem is managing the abundance of data. The immense amount of data that is available and easily accessible today requires knowing how to ask the questions to collect and select interesting data. Data that can be used to test, refute conjectures based on conceptual models that allow us to understand the phenomenon and the globality where it is inserted. However, "one teaches how to debit and reproduce existing knowledge" - but where does one "learn" to ask pertinent or even impertinent questions? All of this implies a structural and conceptual change, a rupture. A rupture involving science [3]. But criticizing and questioning existing positions is not enough. It is essential to open doors, think outside the box and show how to do it. The discourse (which is important) has to give way and prepare a course, in a circle of functionalities that mesh and articulate in a process (a global process and not a sequence of processes) in which the whole gains coherence and is not the mere accumulation of disconnected parts. The sciences differ in the dimensions and the scale in which phenomena are treated. If microbiology seeks to identify, measure, very small, tiny aspects of cells, micro aspects of them, on the other hand, in sociology the scale is different, looking for the macro aspects that allow us to understand man in his social relationships and interactions.

It is not enough that each area of knowledge gains autonomy and is coherent in its space, according to the existing capacities and the degree of development reached. It is also essential to dialogue at its borders and be able to perceive (think) how the dimensions dealt with involve changes in scale, strategy, ways of reading and communicating. Maps do this by adapting the scale used to the dimensions referenced, using appropriate signs and captions, and even considering that the Earth is sometimes flat, sometimes spherical, according to the desired advantages. The

fact is that maps, like science, are just tools of a process that must serve and not "sacred monsters" that subdue everything to some beliefs adored by uncritical servants. This inability to understand the dimensions and scale at which it is useful to collect data so that it can be used and managed in the different fields of science and knowledge [4], not only entails a set of costs that sometimes are unnecessary and could be directed to other types of more profitable investigations, but they also distort the meaning of the research carried out, devaluing it not only from a scientific point of view, but also to professional careers, to institutions, to means of dissemination.

Let's return to the example of sport: The ability to record and measure infimum times is essential to understand the phenomena.

- a) The interests at stake, financial, prestigious, emotional, etc. are enormous;
- b) Competition is permanent and fierce;
- c) Awareness is evident;
- d) The number of people involved and the exposure of people is colossal.

All factors that should promote change and adaptation, even ruptures, to new configurations. And many others could be cited. However, the installed interests, the inertia, the lack of wills,... lead to a clear immobility in the wide expression that their actors (sportsmen, coaches, managers, referees, journalists, etc.) have. It is a space to reflect and consider because it is just an example of the blockages that science, societies, institutions, etc. live with enormous costs in the quality of life of individuals and institutions. Resistance is enormous due to very visible or hidden interests, but most of the times only for short visions or (terms must be used sometimes) stupidity.

References

1. Denworth L (2019) A Significant Problem, standard scientific methods are under fire. Will anything change? *Scientific American* 321(4): 63-67.
2. Hacking I (1988) *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science*. Cambridge: Cambridge University Press 22(2): 299-307.
3. Almada F, Fernando C, Vicente A (2020) Causes and Consequences - Key Concepts Ignored (or Hidden). *Journal of Physical Fitness, Medicine & Treatment in Sports* 7(3).
4. Almada F, Fernando C, Lopes H, Vicente A (2019) Precision, Rigor and the Visions of Man. *Journal of Physical Fitness, Medicine & Treatment in Sports* 7(2).



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