



Opinion

Volume 8 Issue 4 - March 2021
DOI: 10.19080/JPFMTS.2021.08.555749

J Phy Fit Treatment & Sports

Copyright © All rights are reserved by Almada F

A Brief Contribution to Understand the Structure of Knowledge and The Construction of Science



Almada F^{1*}, Fernando C² and Vicente A³

¹Retired University Professor/Independent Researcher, Portugal

²University of Madeira, Portugal CITUR

³University of Beira Interior, Portugal CIDESD

Submission: September 09, 2020; **Published:** March 17, 2021

***Corresponding author:** Almada F, Retired University Professor / Independent Researcher, Portugal

Abstract

Knowledge has rules. But there are rules imposed by the functionality of the process and rules that are imposed by rulers that have some power and try to impose it. Those are the good rules, these are “only” enforcement attempts. To understand the structure of knowledge and the construction of science is the beginning of the way to look for efficiency.

Keywords: Anthropology, Epistemology, Subsector level, Perceptions, Knowledge, Ambitions and desires, Reasoning abilities

Introduction

Knowledge is a tool to understand and explain phenomena and, in this way, allow to deal efficiently with the integration of man in the different contexts in which he takes part. A tool, and nothing more, which is certainly very colossal. The tools, which for a long time (naively) were thought that man was the only one to use, are fundamental to accomplish a work (conceptual or material) in an efficient way, we emphasize in an efficient way [Note: Einstein was nicknamed as the man who retained the laboratory - a laboratory is a tool - inside the hat, due to the conceptual experiences he carried out], they are so striking that many areas that have as object of study the evolution and development of man, (history, anthropology,...) base their work on the interpretation of the instruments and tools that have been used through the ages, as they allow not only to define the objectives that were aimed at, but also the perceptions, knowledge, ambitions and desires, reasoning abilities, etc..

Strategies, operating modes, such as tactics, technologies and even techniques, integration processes and established dialectics, all in short, count when we do not look at phenomena in an almost isolated way (such as events) but consider the processes in their integration (“internal” and “external”) with a concern to seek

optimization of means and the efficiency of the whole. Knowledge, the primary object of science, must also be (perhaps even above all, being a multiplier) the target of these intentions and care. And yet, as we will try to show below, possibly because of its importance, it is one of the most fractionated and uncoordinated fields and tools that man uses. Not that knowledge is disrespected in a particular way. The same happens, for example, with the houses in which we often forget that have foundations, with the trees in which we do not attend to the roots that we do not see, with the sea that we consider as a water surface ignoring the kilometers of depth that it sometimes has and the currents and movements that develop there...

Epistemology, which some despise (or ignore?) classifying it as “mere philosophy” (in opposition, they defend, to a science that is “a solid thing”, but of which they must know little because they do not understand the importance of some of their foundations), also sometimes suffers from the same marginalization. Sciences themselves (classified as hard / soft, pure, experimental, natural, exact,...), also pass through this colander (also a mere instrument, which serves to “fix” the knowledge tools), a sieve that goes beyond its function as a mean to become an end in itself (abusively and at

a cost because divert attention from what is fundamental, that is, literally, grounding, giving the support that it consolidates). Many forget that positivism (logical empiricism) had the purpose of, in addition to providing greater rigor (compared to empiricism) and thus facilitating the search for precision, defending its authors from the risk of expressing opinions (which sometimes went against the current with solidly established “truths”, and we don’t even have to go to the realm of the sacred, the inquisition or parallel things, such as “the heavier bodies that the air cannot fly”,

or “the continents cannot move, Pangeia is idiocy”). The “crime of opinion” must be avoided (or disguised), the importance of the assumptions considered, corollaries, postulates, axioms, etc., does not make sense, “...from the data presented we conclude that...” what avoids more exposures, “these works should only be published after my death”, that avoids retaliation against the author.... The examples have no end, the harmful effects too and..., unfortunately, they are not past waters.

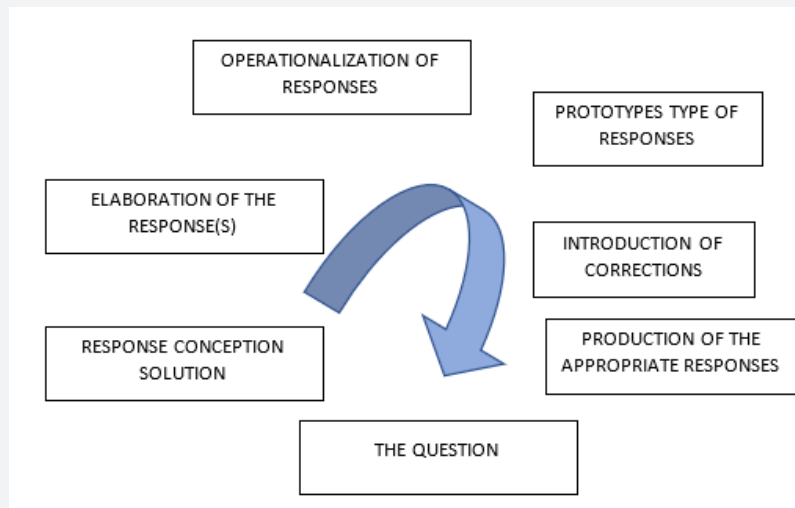


Figure 1: A short cycle in any sector.

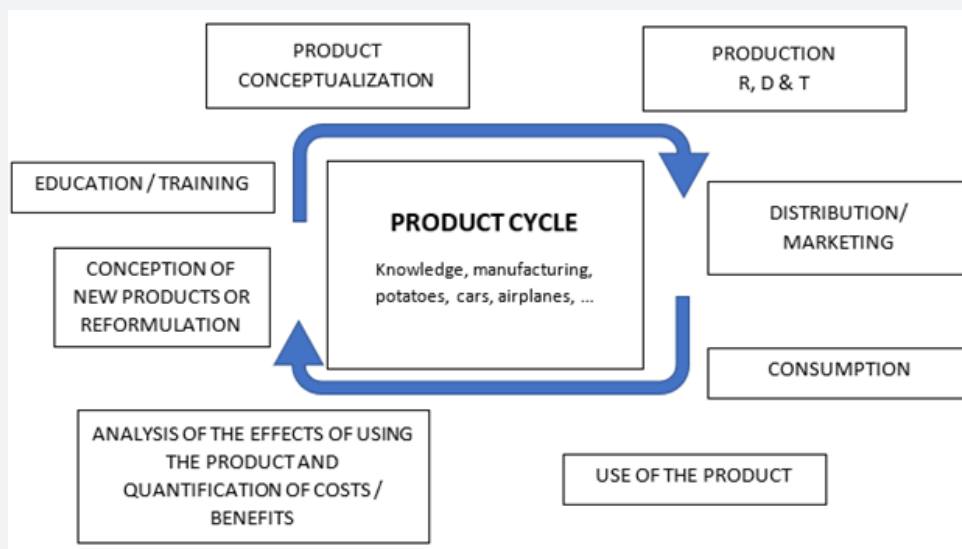


Figure 2: A long cycle involving all sectors.

Alternatives? Certainly exist. The problem is in finding them, defining them (doing the necessary research and getting it to succeed) and, perhaps above all, implementing them. Next, we point out proposals for responding to the problems we have

raised. However, we believe that it is an important and serious problem that justifies investments in terms of the enormous damage it causes to the development of science and, even more, to the fantastic effects that science can have on the lives of men and

societies, so we will not only continue to engage in research on the topic, as well as we propose that there must be a coordinated action of the many positions that strive in this same direction.

A Restricted Vision: Advantages And Disadvantages

Parts help us to conceive the whole, given the limitations of the means (the tools) that we built in a process of millions of years in which, successively, we were responding to the problems we have faced and the adaptive capacities that we have (which were also being developed). The dialectics, fundamental in this whole process, cannot be overlooked, but the capacities we have compel us to constitute a conception of the global based on specific aspects (almost in an impressionistic context) in which, from specific stimuli, we compose an image of the whole, what passes, naturally, for sets of sensations, which give meaning to the multiple individual stimuli, for an interpretation strategy and for decision making that integrate a perception of the global (personalized, no doubt, but similar at least to those of us that are close... culturally) that have allowed us to survive and overcome difficulties for millions of years.

However, today we have undergone profound transformations in the context in which we are integrated and of which we are a part, transformations that are widely spoken, but little identified in their specifications and, even less, in the effects and implications that they have on our (individuals and societies) lives. Vision, one of the senses that most marked the development of man, is a good model of this whole process. Being a way of recording different stimuli, such as through rods (sensitive to light in general) and cones (sensitive to different rays that allow us to distinguish colors), which work in very specific ranges of stimuli, through a set of operations that optimize the detection of situations in different conditions (magnifications, low light, excess light, types of light, ...), giving rise to a perception that allows us a sense of the situation in which we are located, in order to be able to adapt our strategies to the solutions we need to find. It is, therefore, from the contribution of specific actions that we build the globality of our (particular) world, in a stratagem in which we start from punctual for the whole, the global, in the way we see it, in a process that is the opposite of what science did when looking to be more incisive in that it went from the whole to the specific, dividing into areas of knowledge, in analysis / synthesis processes, in deductions / inductions, etc.. Processes that can be complementary if, in science, we do not forget the final objective, which is globality, and that the isolations we make are useful as tools, instruments of an integration process that allows us to serve man... in an efficient way.

Resisting the temptation to stick to partial goals is, therefore, fundamental. This is because the search for truth is not the function of science (for a long time, although it is still ignored), what we are looking for are coherences. Coherences that seen at the local level may not be contradictory but at broader levels they become more evident, because the restrictions increase, and

the dialectics gain lives that they would not otherwise have. The concretization, the execution of a work, is, therefore, a good way to test the consistency of a conjecture, because if in "laboratory" the isolation of variables can be done and can even be productive, when we move to application situations, models are confronted with the "globalities" of situations and validations that could otherwise be omitted (it is the leap that is taken when we move, in I, R & D, from a model to a prototype, before we even have to face the challenges of setting up industrial production lines...).

The Importance Of Understanding The Structure Of Knowledge

Knowledge, as we have argued above, faces the challenge of globality. Tasks can be distributed, roles assigned. We can (should we?) form teams, define strategies, set goals, make efforts, ... But all of this is justified in the sense that there is global coherence. Otherwise, the effort may be useless, or even counterproductive. The teams do not work, the strategies are meaningless, the tasks and functions are pointless. The tools that are essential for the realization of a work (conceptual or material) are no longer efficient. Knowledge, that is a tool, a tool and nothing more, to understand and explain phenomena, sense because the practical efficiency it offers has global. Everything that revolves around it, researchers, consumers of knowledge, distributors, and disseminators of knowledge, no longer makes sense. At least at the levels of the (huge) investment that exists. It is a whole space of development that disappears, unless, unguarded, we do not realize that the change must take place and we continue, automatically, to make the usual gestures, comply with habits and "live in second-hand". And sometimes worsening everything. But there are solutions.

A Proposal

Assumptions

1) When water come to be some local events

- a) Fountains
- b) Streams and rivers
- c) Home consumption
- d) Small industry
- e) ...

2) To a notion of a WATER CYCLE:

- a) Ocean evaporates
- b) Clouds transport
- c) Streams and rivers lead
- d) Consumption
- e)...

There was another conception not only of water and its availability, but of the world itself, which went from local and static to global and dynamic. Due to this change we have evolved and today we begin to ask ourselves about: groundwater; ocean and ocean dynamics; origin of water in space, in the terrestrial nucleus, in the formation of the Earth, ... - ANOTHER WORLD VISION IS PREPARED Figures 1&2.

The Proposal

Assumptions

a) With the integration of R, D & T (Research, Development & Technology), although still done imperfectly and partially, there was a great evolution and transformation in terms of resource profitability.

b) If the integration of the different fields of human production ceased to be seen in local terms and changed to a global view, would we not have similar gains? But much greater because the capital at stake increases and the resulting income has a much larger base.

c) In a simplified and succinct way, we have in the development of any product Figures 1 & 2:

We assume that

a) The current trend is for the debate to be held at the SECTOR level (production, distribution, consumption, ...), if not at the SUBSECTOR level (research, development, technology, ...);

b) The big problems (big not only in size and effects, but mainly because they are ignored) occur in the articulation of the sectors;

Examples:

a) If education does not consider production, distribution and consumption, it can hardly be integrated understand, globally;

b) If production does not pay attention to distribution / marketing, and consumption no longer meets needs and has no

meaning;

c) If planning does not consider the potential of education / training, as well as consumption, it will not be able to profit from the resources that will be available and the objectives that it should seek.

d) The debate that is taking place today in some think-thanks, in some universities, in some political spheres and little else.

Knowledge is one of the great products (due to the dimensions it reaches, the multiplier effects it has, the investments (human, financial, time, etc.), which should be very concerned with the integration of the so, it different fields it seeks to serve, where it operates and of where it should (which it does not) gather the means it needs to develop and progress, it is certainly from the most unstructured fields and less coordinated with other areas of production, living closed in on itself and in a rapid process of increasing isolation (q.e.d).

Conclusion

The debate is urgent, and the identification of problems requires the collaboration of those interested in different areas of knowledge (basically all because knowledge all involves). Once the problem has been identified (as we know it well in research, in science) the solutions will be found and the articulations, in their own merit, will not fail to be established. Until then, ambiguities will prevail (which apparently may interest some, who certainly for lack of confidence in themselves to escape the dialogue). There will always be those who win with try any process, but distributing miseries does not favor anyone, especially when wealth is the alternative. To be an expert in this time of change is to be the one who knows best the flaws that can be committed and, therefore, is able to identify, evaluate and promote the safeguards to avoid them. It is not necessary to be in an ideal world, even utopian, to understand that the change will happen and, as any surfer will easily understand, it is necessary to know how to take advantage of the good waves.



This work is licensed under Creative Commons Attribution 4.0 License
DOI: [10.19080/JPFMTS.2021.08.555749](https://doi.org/10.19080/JPFMTS.2021.08.555749)

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
(Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission
<https://juniperpublishers.com/online-submission.php>