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REVIEW

Towards a New Scientific Revolution for a Human Science: The Linguistic Criterion in the Universally Modified Occam's Razor

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ABSTRACT

Although William of Occam's early epistemological quote "Entities must not be multiplied beyond necessity" attempted to put an end to the uncontrollable ontological confusion of his time, Occam's Razor as its modern epistemological version considers as unscientific any non-measurable entity. However, words such as "immaterial", "spirit" and "free will" have never ceased to exist in everyday human communication. According to Linguistics every word that has not historically ceased to be used by the total of people (or most of their societies) corresponds to a commonly accepted entity for which its users generally recognize the same distinguishable characteristics. A new, revised and complete–in the standards of the universal human communication–epistemological criterion is required fully now adapted in the linguistic criterion–the language people commonly communicate and use.

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1. Introduction

Although William of Occam's early epistemological note (William of Ockham, 1963, 1287–1347) about not multiplying entities without necessity intended to pause the uncontrolled methodological-ontological confusion of its time, where the Divine and immaterial constituted axiomatic facts, the later adaptation of Occam's Razor (e.g., Charalampous, 2013; Bontly, 2005; Pryor, 2001; Thornburn, 1918; Walsh, 1979) as the most prevalent epistemological approach is an interpretation of it that a priori considers as unscientific any non-measurable entity.

Numerous important philosophical as well as scientific approaches intervened, the sense of which, in their great majority, is significantly difficult to categorize or classify as one-sided (Iannone, 2014). The term "positivism" as empirical observation subject to mathematical control was introduced by Comte (2010). However, in his work "A general view of positivism" he does not mention mathematical evidence as the only criterion of scientific research; instead, he mentions "anthropology, or the true science of man, as the upper gradation in the great hierarchy of abstract science." The term "epistemology" is attributed to Ferrier (2010) as the first systematic attempt to distinguish what can constitute scientific knowledge (gnosiology) and what can't ("agniology"). Wittgenstein (2021) interpretation on Occam's Razor was a quite important contribution to the modern mathematically unilateral epistemological approach. In his work Tractatus Logico-Philosophicus (3.328) he mentions: "When a point is not used, then it is meaningless. This is the meaning of Occam's principle." Hence, he emphasizes the use of a sign-term as the basic epistemological criterion for the existence of its meaning. Moreover, he emphasizes this importance in his very next sentence where, in a parenthesis that he lists in the same sentence (3.328), he underlines the use as the main criterion in Occam's principle: "(If everything behaves as if a point had importance, then this point has a meaning)". That is, he identifies the implication between the use of a sign-a term and its meaning; the use as the criterion for matching a sign to its signified meaning.

However, the modern mathematically one-sided epistemological criterion is based more on the last sentences of his Tractatus Logico-Philosophicus, where (6.53) Wittgenstein (2021) states: "The correct

method in philosophy would actually be this: To say nothing but what can be said, that is, propositions of the natural sciences..." even while admitting himself the one-sidedness of his approach which in essence constitutes its confutation: "... -that is, something that has nothing to do with philosophy- (...) but this would be the only strictly correct method". ("something that has nothing to do with philosophy"). Thus, through the adherence of the modern epistemological approach to Wittgenstein's suggestion "to say nothing except what can be said" and indeed "that is, propositions of the natural sciences", while though "that is, something that has nothing to do with philosophy", his remark on the use as the criterion for the existence of the meaning of a sign was sidelined.

In the same time, the important historical milestones of the 1st, 2nd, 3rd and emerging 4th technological revolutions (Caselli, 1999; Kuhn, 2012; Perez, 2004), and the capitalist context in the cultural-social frame of which modern science is situated, contributed a significant role in its current unilaterally materialistic epistemological approach (Perez, 2003).

Thus, through the Vienna cycle (Kraft, 1953), placed in a chronological period where the ideological overthrow of Nazism was a major, parallel political motivation demanding the focus in mathematical evidence, the modern science and epistemology was led to the neo-positivism stream of 1950 (Iannone, 2014; Kraft, 1953) with the standard of the natural–mathematical sciences, which is officially set as the starting point of its current course (Wójcik, 2015).

2. Falsifiability in the Modern Version of Occam's Razor

As an outcome of the current historical development in epistemology, the mathematical evidence–measurement is set as prerequisite of the falsifiability of a theory (Conee & Feldman, 2004; Fumerton, 2009; Pryor, 2001; Walsh, 1979). However, the necessity of mathematical control as (the only) reliable criterion has already been put in dispute (Trafimow, 2013; Wójcik, 2015). The main reason lies in concepts–terms whose nature is by definition not subject to direct mathematical testing (Gallagher, 2006; Smart, 2009). Consciousness is a typical example, a term whose research would be a dead end not to be recognized as scientific (Chalmers, 1997; Stubenberg, 1998). Yet, given the difficulty of a theory providing a comprehensive full explanation for a non-completely measurable entity, although many theories have been suggested within the current epistemological–mathematically measurable–approach, the question (e.g., of a full explaining definition of consciousness) remains (Baars, 1993; Gallagher, 2006). Consequently, with the plentyness of entities not subject to direct mathematical measurement remaining a puzzle for the current science, the modern epistemological approach is being put in more and more dispute (Chomsky, 2013; Phillips, 2012; Smart, 2009; Trafimow, 2013; Wójcik, 2015).

3. Dead-Ends in the Modern Occam's Razor

The oxymoron of modern epistemology leads to a science beyond and far from the human it is being called to serve (Chomsky, 2013; Popper, 2002; Rogers, 1961). Even terms-concepts prominent in everyday communication, such as the term "mind", are only scientifically accepted as a possible research object exclusively in the extent that they are subject to mathematical measurement (Gallagher, 2006; Robinson, 2019).

Thus, science is isolated from its society, as concepts-terms that people daily and systematically use, become a blind spot for its gnoseological criterion.

4. The Linguistic Criterion

Since the use frequency of terms-concepts in human communication, promote their evolution as a living part of human activity (Morton, 1979; Pagel *et al*., 2007), modern science promotes its materialistically-mathematically measurable-one-sidedness to the people whom it's called to serve–no longer as a servant, but as a formal ruler (Chomsky, 2013; Fowler *et al*., 1979; Neiva, 2002).

The impasse of modern epistemology as well as its impending solution is emphatically mandated by the science of Linguistics: The use of words by the sum of people for millenniums proves the commonly accepted entities to which they correspond (Fowler *et al*., 1979; Pagel *et al*., 2007; Piaget, 1955; Vihman & McCune, 1994). Consequently, words that currently consist a blind spot for the formal science (e.g., self, free will, spirit, soul, immaterial) are integrated into the modern epistemological criterion. Science is restored as still universal and essentially human, through the linguistically proven and indisputable way in which people communicate.

4.1. Dead Words

4.1.1. The "Homunculus" Paradigm

The word "Homunculus" was used in the context of a theory mainly during the centuries of 1960s and 70s (Margolis, 1980) which proposed that inside the human brain there is a "Homunculus", a tiny human that decides for its actions. The destiny of this word was inevitable: the term disappeared except from the frame of its unproved theory. It is the same end as this of the word "engram", a term suggested in order to explain the representation of an object in the human brain (Thompson, 1976), the word of a theory that was never proved. Consequently, the result was identical: The words disappear, with the sole exception of their historical record, exclusively in the context of their theories that were never confirmed.

4.1.2. The "Aboui" Paradigm

If you do not know how to pronounce it, it's completely normal. This word does not exist. I invented it as an example of a word–a symbol–that does not correspond to any meaning at all. Therefore, inevitably, it will not get used. It has neither present nor future, because it has no meaning. It is a dead word, because it is an empty word. Even if it was used, it would only be in order to express the example to which it corresponds, the example of an empty word, as this could only be its meaning. Predictably, it will disappear in the infallible, living language's criterion.

A word without meaning is damned to extinct. Since language, as a living organism, will automatically reject what does not serve its function.

4.1.3. Zombie Words or Phrases

Latin is often referred as a "dead language" (Risselada, 1993). This is not completely true; it is rather a way to explain that the Latin language is not any more itself merely used. In this sense, I use the expression zombie words or phrases in order to refer to words or phrases such as "a priori", "de facto", "Pacta sunt servanda" that remain functional, yet cannot be used in other, new or evolutionary contexts. Between the two boundaries of dead and live words, there is a category of zombie words and phrases that remain functional by themselves but cannot evolve in taking part in new contexts–meanings.

4.1.4. Words' Successful Inclusion and Use

"Vegans", "Vegetarians", "Influencers" and so on ...

According to Mostafa (2013) "New words are created in our society every day for several reasons". No matter what the purpose in any of these cases, the words that will eventually survive are those that correspond to a new meaning, i.e., a new procedure, trend or fashion, such as the words "vegan", "vegetarian", "influencer", etc., the creation of which comes to fill in the gap of a new entity–a new category or concept (Lehrer, 2003). Thus, for example, it is much easier for all of us to call vegetarians "the category of all those people who, by choice, do not consume meat".

Meaningful words are immediately integrated into the living, human vocabulary, in the same way that empty words are automatically discarded.

Human language has never ceased to be a physical, infallible criterion.

5. The Universally Modified Occam's Razor

Since a word is being used, this means, as a reflected meaning, it exists (Bontly, 2005; Fowler *et al*., 1979; Pagel *et al*., 2007; Piaget, 1955; Vihman & McCune, 1994). Thus, Occam's Razor, in its strictly mathematical version, collapses. Therefore, a renewed version of it is required in case it remains as a useful epistemological criterion. Although the modification of the prevalent version of Occam's Razor has been pointed out (Phillips, 2012), the linguistic criterion implies its universality, in the sense of adapting the field of modern science and epistemology to the sum of human activity and communication.

Thus, science is restored to its primary function and purpose, ceasing its distance from people's everyday life and activity. Through the new, more accurate and holistic–linguistically universal–modification in Occam's Razor, it is re-emerged as a living human activity. Its subject is rendered universally human, accessible and attractive to anyone who wills to investigate more precisely the concepts he/she communicates.

Conflict of Interest

The author declares that there is no conflict of interest.

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