



# Truth and Science

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*The title raises a fundamental question, and here the authors summarise the thesis of their recent book, reviewed by Claudia Nielsen in the last issue.*

In 1858, French symbolist poet and novelist, Remy de Gourmont said:

“Science is the only truth and it is the great lie. It knows nothing, and people think it knows everything. It is misrepresented. People think that science is electricity, automobilism, and dirigible balloons. It is something very different. It is life devouring itself. It is the sensibility transformed into intelligence. It is the need to know stifling the need to live. It is the genius of knowledge vivisectioning the vital genius.”

De Gourmont’s words may be read on many levels, however it is important to recognise that the notion of misrepresentation is vital; it stands at the very core of the antithesis projected from within science itself.

But what exactly is Science? And how is Science related to Truth?

The widespread belief remains that there is a Truth for which the natural sciences are predominantly responsible, and that this truth can be somehow attained by the scientific method. Indeed, this conviction of searching for Truth has been considerably reinforced by the previous successes enjoyed by the natural sciences. In turn, and through a self-referential process that feeds off itself, these successes have greatly influenced and supported the assumptions underpinning the search for Truth. However, it is not only the search for Truth as advocated by the proponents of objectivity that is problematic, but also the belief that their method for approaching that Truth is true in itself. How ironic that a method responsible only for generating distinctions, is described by many, in the case of science, as having a single and standalone utility: the utility of the discovery of Truth.

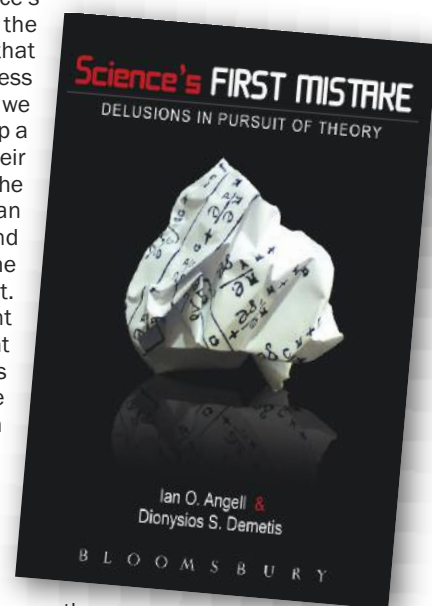
The side effects are numerous. First of all, natural sciences are allowed to superimpose their status above that of all social sciences. This turns into a projected superiority of the natural sciences over the social sciences, which is reflected in how government funding is allocated for both. Even worse, the delusion is maintained that Truth and Science are propelled by *objectivity*. But there is no such thing: objectivity is the false assumption that the observer has been abstracted away from observations.

The fallacy is immediately exposed when we consider how the concepts of Science and Truth are structurally coupled. As Feyerabend clearly states science ‘may be a single word – but there is no single entity that corresponds to that word’.

Science, as a single connecting word, acts as an umbrella term to represent the utility of the search for Truth, while at the same time, there is no ontological unity, there cannot be, behind this word. Scientific disciplines become differentiated as subsystems within the projected unity of the system of science, and further differentiation occurs on the basis of different theories that are introduced in each domain. That there are both competing as well as contrasting descriptions of facts by different theories, and that even more importantly the same so-called facts can be represented by, and accounted for, in different theories, points towards a non-unitary cosmos in the fabric of science. Just as no single theory agrees with all the so-called facts in its problem area, there can be no single entity that corresponds to the umbrella term that we call science. What is Science then? Is it not the umbrella term that is associated with the utility of the search for Truth? However, since no ontological unity exists behind the word science, no correspondence can exist in the projected utility of science itself? Hence there is no Truth to be extracted.

In our book entitled ‘Science’s First Mistake’, we trace the paradoxes and delusions that are constructed in any process of knowledge discovery and we use systems theory to develop a theoretical formulation for their foundation. This effort uses the concept of delusion as an epistemological position and not as a derogatory term. The emphasis is very different. Truth is seen as a contingent convention that is dependent on the shared assumptions of different observers. The foundational communication structure of the natural sciences (i.e. mathematics) is treated as being submerged into inescapable paradoxes that are woven into its different abstract constructs. Mathematics becomes the nucleus of paradoxes that infects other disciplines.

Nobel-prize winner, Physicist Richard Feynman made this point clearly: ‘mathematics is not a science from our point of



view, in the sense that it is not a natural science...the test of its validity is not experiment'. Nobel laureates, Eugene Wigner and Albert Einstein, were both deeply troubled by the implications of the relationship between mathematics and its representation of physical reality. This relationship creates a fundamental *epistemological* paradox, whereby sciences are constructed upon a non-science. And that is only part of the problem. Every field that claims to produce knowledge suffers from the same contingency. While it may not be immediately clear how these paradoxes are formed and sustained, one thing is certain: they are a product of *categorization* and *abstraction* ... they are a product of observation.

Each domain of knowledge, each self-referential cocoon, 'swells up like a balloon at the slightest puff of this power of knowing' (to use Nietzsche's expression) and becomes a transient carrier of instabilities that are replaced by new ones.

Within each domain, one form of attained Truth is replaced by another and one state of objectivity for a different one, albeit that too is seen as another 'objective' state. Science is dressed up in its all-too-familiar 'Keep Calm and Carry On' shirt, while the structure of malleable realities is constantly changing faces in the midst of an epistemological and ontological hurricane. At each given point in time, the belief that Reality is accurately represented, and that Truth is at hand, permeates scientific efforts. The intellect tricks the human mind into developing and sustaining this delusion - comfort is almost at hand. But this cerebral addiction of the human mind to the concept of Truth, and its perception that Science accumulates the delicate fabric of concepts (and equations) to attain it, remains startling.

The sad news is that it will never come to pass. There is no such thing as a clearing in the forest. We construct the forest as we evolve in our descriptions and invent new ways of describing and categorising the world around us. There is no 'out' from Plato's cave. The intellect is the light that creates the shadow onto itself. We are trapped. The symbols that we use to

communicate and describe (e.g. language, mathematics, art), are all supported by their own intrinsic assumptions which appear grand only because their paradoxes are kept out of sight. They are all self-referential systems.

Nietzsche frames this wonderfully: "...there was a star upon which clever beasts invented knowing. That was the most arrogant and mendacious minute of "world history," but nevertheless, it was only a minute. After nature had drawn a few breaths, the star cooled and congealed, and the clever beasts had to die. One might invent such a fable, and yet he still would not have adequately illustrated how miserable, how shadowy and transient, how aimless and arbitrary the human intellect looks within nature. There were eternities during which it did not exist. And when it is all over with the human intellect, nothing will have happened. For this intellect has no additional mission which would lead it beyond human life. Rather, it is human, and only its possessor and begetter takes it so solemnly-as though the world's axis turned within it..."

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