Review of: "Further Chaos and Dysfunction in the Brickyard and the Systems That Support It"

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“What then is time? Provided that no one asks me, I know. If I want to explain it to an inquirer, I do not know” (St Augustine). ‘Science’ seems to suffer from the same problem of how to define it – together with many other concepts we commonly use. Let’s leave this huge issue aside, however – as Robergs does –, and begin by supposing that we all understand what the author has in mind when he talks about science. His text is a clear ‘bill of indictment’ against the current system of performing and financing scientific research... where exactly? The reader gets the impression that Robergs targets the whole world, but perhaps he is only acquainted with the western part of it – or with only some Anglo-Saxon countries, I dare say. In fact, in his metaphor he seems to suggest that the rest of the world is cut off from ‘science production’. I am not sure that this is accurate and tend to think that Robergs’s metaphor correponds to an idea of how science is performed nowadays that he has probably got from his personal experience more than on how things actually stand, but let’s leave this point aside as well and delve into his text.

In the introduction, Robergs informs the reader that in his 1963 manuscript Bernard Forscher claims that quality science needs time, adding that it suffices to think of Thomas Kuhn’s “account of the extensive time delays (30 to 50 years, or longer) between paradigm shifts in the history of the physical sciences to the early 1960’s to realize that Forscher’s views were well-founded”. While it is not straightforward that Forscher refers to paradigm shifts in his text, which are something more comprehensive than ‘just’ producing new theories or performing experiments, should we rely on Kuhn to realize that Forscher’s views on science are well founded? Logic is obviously the base for any serious argumentation, especially in science or in talks about science – and in philosophy in general. Here Robergs seems to fall prey to the logical fallacy of ipse dixit. We are all aware of the importance of Kuhn’s work for our understading of science and its methods, but claiming that Forscher’s opinion that good science needs time is well founded because Kuhn ackowledges extensive time delays between paradigm shifts in the history of the physical sciences is an ill-formed argument, that a man of science should not put forward – with all due respect to Thomas Kuhn, one of the most respected philosophers of the 20th century, one might just reply “so what?”. Scientist rely on data, not on opinions. Not to mention that Kuhn’s views on how science develops are not a dogma and other perspectives are possible (and exist).

After the introduction, Robergs presents an extension of the metaphor that Forscher put forward in a short letter to the journal *Science* in 1963. Robergs admits it made such a huge impression on him when he first read it in 2018 (why informing us of the exact date?) that he decided to update Forsher’s text “to the then current time of 2018”. With not much success, though, we learn, for it has been rejected by numerous journals. Robergs then revised his version of the metaphor earlier this year and targeted also “the questionable practice of editorial triage” and “the deterioration of peer

review". But why expressing his view on the current status of science with a metaphor and not with a straight letter/essay? A few days ago another commentator suggested that the issue of the quality of scientific production could have been addressed taking Forscher's article as a starting point, but not limiting to a mere metaphor. I agree and share the feeling that Robergs *entrapped himself* in the web of his own tale.

The use of metaphors is problematic, for they can be used to convey the opposite message more often than their authors realize. But the main point here is: with no data to support the story told (and not a single datum is offered), it is just a tale. Does it correspond to reality? Do we have to trust the author on that? Not a very scientific way of argumenting...

Worse than that, reading Robergs's text one is left with the unpleasant aftertaste of a search for revenge. "The sad reality of that decision...", "the editors (...) didn't know enough about their flawed conduct to realize what their decision meant...", "editorial triage prevailed..." are inelegant expressions to say the least. "The content that follows is a revised version of my original 2018 efforts, with three meaningful changes that involve an extension of the metaphor to now include, 1) the questionable practice of editorial triage, 2) the deterioration of peer review..." sounds as a revenge-seeking declaration of intent.

Robergs is a scientists, author of many publications, he is well aware of the importance of data and of statistics in science – and in life in general. A series of rejections should raise a red flag. If no journal has accepted his paper, that should mean something. Or is there a global plot (another one!) against his metaphor?

"No one pretends that democracy is perfect or all-wise. Indeed it has been said that democracy is the worst form of Government except for all those other forms that have been tried from time to time.…". Churchill's well-known (but not original) quote can be applied to editorial triage too. It might not be the best practice possible, but what would be the alternative? No selection at all so that any paper is published? On the internet quality papers and 'rubbish' are on a par. How many people, not only the poorly educated, sometimes do not distinguish between them, as with genuine news and fake news? Is that what we want? Sure Robergs does not. But he is too involved in his polemic tale to put forward a positive proposal aimed at replacing editorial triage and peer review with something better; or at least at improving them.

Provided it is possible, though, because "as the master builders aged, with many eventually succumbing to their life's clock, the true purpose of building construction gradually vanished from the education of brickmakers and their transition to builders". The golden age of science has gone and so has the golden age of peer reviewing. Still, with all due respect to Dr Robergs, I too would reject his text, for it is not scientific and gives no contribution to the enterprise of knowledge construction.