

Directions:

Read the following text carefully and then translate the underlined segments into Chinese. Write your answers on the ANSWER SHEET. (10 points)

It was only after I started to write a weekly column about the medical journals, and began to read scientific papers from beginning to end, that I realised just how bad much of the medical literature frequently was. I came to recognise various signs of a bad paper: the kind of paper that purports to show that people who eat more than one kilo of broccoli a week were 1.17 times more likely than those who eat less to suffer late in life from pernicious anaemia. (46)There is a great deal of this kind of nonsense in the medical journals which, when taken up by broadcasters and the lay press, generates both health scares and short-lived dietary enthusiasms.

Why is so much bad science published? A recent paper, titled "The Natural Selection of Bad Science", published on the Royal Society's open science website, attempts to answer this intriguing and important question. It says that the problem is not merely that people do bad science, but that our current system of career advancement positively encourages it. What is important is not truth, but publication, which has become almost an end in itself. There has been a kind of inflationary process at work: (47)nowadays anyone applying for a research post has to have published twice the number of papers that would have been required for the same post only 10 years ago. Never mind the quality, then, count the number.

(48)Attempts have been made to curb this tendency, for example, by trying to incorporate some measure of quality as well as quantity into the assessment of an applicant's papers. This is the famed citation index, that is to say the number of times a paper has been quoted elsewhere in the scientific literature, the assumption being that an important paper will be cited more often than one of small account. (49)This would be reasonable if it were not for the fact that scientists can easily arrange to cite themselves in their future publications, or get associates to do so for them in return for similar favours.

Boiling down an individual's output to simple metrics, such as number of publications or journal impacts, entails considerable savings in time, energy and ambiguity. Unfortunately, the long-term costs of using simple quantitative metrics to assess researcher merit are likely to be quite great. (50)If we are serious about ensuring that our science is both meaningful and reproducible, we must ensure that our institutions encourage that kind of science.