



Lies, Forgeries and Integrity in Scientific Research

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Abstract: Some thoughts are presented on fraud in sciences and on the need for it to be punished in an exemplary way since the academic delinquent infects the body of scientific knowledge with a parasitic behavior.

Keywords: Forgeries, plagiarism, Ptolemy, Newton, Library of Alexandria, public University, social parasites, research misconduct.

Definitions.

We have adopted the definitions used by the Office of Research Integrity¹. From its website we have copied the following concepts.

Research misconduct means fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

- (a) **Fabrication** is making up data or results and recording or reporting them.
- (b) **Falsification** is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
- (c) **Plagiarism** is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
- (d) Research misconduct does not include honest error or differences of opinion.

The astronomer Claudius Ptolemy (second century) was the last relevant representative of Greek astronomy. He developed his observational activity in the temple of Serapis in Canopus, near Alexandria (Ptolemy was working and researching in the famous Library of Alexandria). There was a time when it was admitted that his proposal for a geocentric system predicting the position of the planets was entirely his doing. However, the difference in latitude between Alexandria and the island of Rhodes allowed us to discover that Ptolemy's observations corresponded to those obtained at the latitude of the Greek island and not at that of Alexandria, so it is now accepted that he used the data obtained by Hipparchus of Nicaea (Hipparchus of Rhodes). Hipparchus would have in turn copied from some Babylonian manuscripts he had obtained. Apparently copying works without citing the author and without attributing the work was seen as a form of recognition. Today that is not the case, and copying other works without citing the author or authors is labelled plagiarism as defined by ORI.

The brilliant German philosopher, polymath, theologian, logician, and mathematician Wilhelm von Leibniz discovered calculus independently of Newton and published his discoveries in due form. By modern standards, von Leibniz would have had all the credit for that invention and Newton none (Newton is the greatest physicist of all time: he is a handful of Einstein put together). The problem arose when Leibniz petitioned the Royal Society of London for the Advancement of Natural Science (the Royal Society, the oldest scientific society in the United Kingdom was formally founded in 1662) to form a committee to prepare an impartial report on its involvement in the invention of calculus.

Newton filled the committee with his cronies, authored the report himself, and drafted a favorable anonymous review of the report. No more, no less. And, worse, when he was elected president of the Royal Society he devoted himself to promoting the careers of his friends, cronies, and hand-kissers. The "Godfather" of English science of the time. This was when European science was just beginning to be structured in the way we know it today. Today the same is true in many parts of the world to varying degrees.

Modern times have seen the transformation of some scientific research groups into true knowledge-producing machines. That is very laudable to the extent that that knowledge is true and reproducible by any scientist who wishes to do so. The usual cycle to generate scientific knowledge in its simplest form is observe and generate a problem belonging to the class of scientific problems, generate a scientific hypothesis that eventually solves the problem posed and use it to make one or more scientific predictions, carry out the necessary actions (experiments) to verify whether the prediction or predictions are true or false, Analyze the results, review, or declare the hypothesis true. This new knowledge (if the hypothesis turned out to be true) will be incorporated into the body of scientific knowledge from which new problems will be raised. It is true that at the highest stage of scientific work (the generation of scientific theories), as Lee McIntyre puts it, "it is *an often-messy process involving serendipity, failure, dead ends, anguish, tenacious determination, and the occasional stroke of luck.*"² The same author tells us that "***it is not the way in which scientific theories are found that gives them so much credibility, it is the process by which they can be logically justified***". This shows what is the gravity of pouring poison (false knowledge) into the body of scientific knowledge.

Reflections on this serious problem and how to deal with it.

We have started this text with some examples so that the reader appreciates that plagiarism is not something new. But the great development of scientific research, the struggle for competitive funds, the formation of vast groups of researchers, some ego problems, the pressure to publish and perhaps some other things that I forget, have led many researchers to introduce **lies** in the publications of their results. This growing number of people (I am reluctant to call them researchers) engaged in research misconduct in research are creating what can perfectly be called 'an infection'.

This is because they can be seen as pathogens infecting the body of scientific knowledge with their 'toxins' (the faked research). The reaction to this infection must be the same as the one against pathogens infecting a human body: the 'termination' of the infecting agent. But 'termination' must be understood in the case of research misconduct as 'isolation' and 'separation.'

In scientific research, research misconduct is the *crimen publicum* par excellence for the reasons just exposed. And the penalty for those who commit this 'scientific crime' should be exemplary: the 'scientific death', which consists of the fact that the perpetrator must abandon research in the state-funded centers (State Universities and similar centers) forever. Punishing him by requiring that his work receive the imprimatur of some commission for a given time does not guarantee that, after that period of time has elapsed, the perpetrator will reoffend (cases are well known). The recipients of his lies are the scientific community, the State (in the case of management of funds from that origin and / or belonging to a state university) and the community of the people who hope that many of these scientific advances will finally be reflected in an improvement in their quality of life. This whole group has the right to expect that the scientific researcher is neither a liar nor a forger.

More laws are needed to prevent such intellectual excesses. Naturally, he should be barred from all research funds in which the State has a say in its generation and/or distribution. If the funds used to generate the article with falsehoods are state funds, generated with citizens' taxes, the main culprit of the falsehoods should be prosecuted for defrauding the state and misusing public funds. In addition, he must be required to reinstate all misused funds and must be compulsorily liable with his personal assets if necessary. And the institution that was unable to detect falsehoods at an early stage must be punished harshly.

In this area, recidivism cannot be allowed because, if they occur within the same institution, which means that it is the institution itself that has problems that it must detect and solve (nepotism, cronyism, and other kinds of corruption). And scientific articles should be removed from journals and not patched.

Why is what has just been said so harsh and drastic? Because the deceiver consciously inserts mistaken information into the body of the true results of scientific research. In its essence, scientific research builds its conceptual buildings (theories and laws) based on propositions that are true and the introduction of false information is like using mud for a pillar that must be made of concrete, which will fall sooner or later and drag all those who have taken shelter under it (including all those who did not know about the retouching of images, falsification or invention of data but who, having read, reviewed and understood the article in which they appeared, agreed to appear as co-authors). And let us remember that *all* authors bear the same responsibility because it is supposed that all of them read and approved of the article.

Let us return to the subject of the forger. The first thing we must be clear about is that he acts with malice, in the sense of having one or more hidden designs that make him say something to the detriment of others (e.g. false texts, invented data or adulterated images that infect the corpus of scientific knowledge) and / or own benefit (obtain new funds for research, fame, etc.). The causes of this scientific malice can be varied. The conscious intention in the mind of the perpetrator is then to falsify all or part of his research. The malefactor must want to make everyone take for true a text, figures, numbers, tables, equations, graphs, etc., which the liar knows is not true. The most annoying thing is that his act is conducted behind the backs of all or almost all the co-authors of the scientific article having the poison, showing absolute contempt for them and, what is worse, knowing for some reason, that they will not notice.

That is why this drastic way of punishing these actions is necessary, which should be mandatorily included in the internal legal body of each University, especially those that receive funds from the state or that belong to it. This is due to the growing scientific-criminal activity that is appreciated in the world these days. What must be clearly understood is that most of these types of specimens end up transforming into social parasites and that their mere stay within a body of researchers begins to ‘infect’ the whole structure.

We must strongly criticize many academic publishers for having the Authors-Editor-Referee-Editor-in-Chief chain so poorly constituted that their journals are riddled with articles having falsehoods. It seems that in some cases monetary gain is more important than a strict control over what they publish. An ironic comment: I wait for a journal that says: ‘publication expenses are not refunded if the article is withdrawn.’

Scientific research is a beacon of light in the face of the darkness of pseudoscience, vaccine conspiracy theories, flat earthers, miracle cures, gullibility in general, and all the ignominious substitutes for scientific explanation. And for the record, I am not an adept of scientism. Below there are some interesting books about this topic³⁻¹³.

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