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Statistics and Hypotheses

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It is suggested in a recent investigation that the productivity of the scientific publications would have increased significantly in Romania, and in Eastern Europe, over the last 10 years. Such an increase is correlated with a continuous decline in funding the scientific research in Romania, and this correlation is recorded as surprising. There are several misconceptions here that prompted me to clarify the matter. The analysis of the underlying hypotheses of this investigation reveals in fact no surprise, but just the concurrence of several political and social elements. First, the scientific research in Romania has been aggressively underfunded indeed over the last 10 years. Secondly, the little money for research in Romania has overwhelmingly been directed towards funding non-scientists and non-scientific publications. It is the number of such non-scientific publications and their productivity that have increased in Romania, and elsewhere, in the last 10 years (as well as before). Unfortunately, non-scientists and non-scientific publications are usually called scientific researchers, scientists and, respectively, scientific publications, precisely as a consequence of their non-scientific nature. Non-scientists and non-scientific publications proliferate by their own nature, but in Romania the number of researchers has been drastically diminished in the last 10 years, which may contribute toward an increased productivity of publications. In addition, a systematic selection has been conducted in Romania over this time of the most productive non-scientific researchers, who, motivated by money, are currently producing a large number of non-scientific publications.

Some of the features above are general. Everywhere in the world people are attracted to science, by curiosity, by the desire of elevating their soul, by still a highly-esteemed profession and a relatively high social standing. The world population increases, so the number of such people is more increasing. They call themselves scientific researchers, scientists, professors, say that they are doing scientific research, science, scientific education, and the output of this activity is what they call scientific publications. Such publications increase tremendously in number and productivity nowadays with the advent of the computers and by the technological development. The technical means today may measure a lot of things, and anything measured is instantly written on a computer and published in media which call themselves scientific journals, books, conference proceedings, etc. Any complex computation is run quickly on a computer and becomes instantly a theoretical publication. Any large compilation is done in no time on a computer and get published. Such publications being so numerous, people are no more interested in their contents, but they are interested only in the number of these publications. The so-called scientific publications today are one continuous multiplicity, recorded in slices, bundles, bunches and batches. Non-scientific publications generate non-scientific publications; they are multi-chain-like, or tree-like, corrected, since they are permanently wrong indeed, annotated, because they need continuous clarifications, continued, as they are never complete. The increase in number of non-scientific researchers and

publications as well as the increase in productivity of the latter is a general social phenomenon, caused by the scientific and technological development and a related cultural trend.

Such publications are publications which many deem as being scientific. What many deem however is usually incorrect, i.e. inconsistent, so the publications called scientific are usually non-scientific. An unanimous approval in scientific matters is certainly incorrect, and its only relevance is for non-scientific matters in fact. Such publications are the output of a specific activity, called scientific research, which is not necessarily related with science. On the contrary, when they are produced by many they are very likely non-scientific. And when they are acclaimed by many, they are just acclaimed then, but very likely not properly appraised. The scientific research is not necessarily science, and does not produce necessarily science. Very often, the scientific research produces publications which are non-scientific, and the more developed is the scientific research the more numerous are such non-scientific publications and their productivity. So, the increase is expected in the productivity of the non-scientific publications in countries where the scientific research is cultivated.

The scientific research as described above is a widespread social phenomenon. What distinguishes Romania from other countries in this respect is a continuous misconduct in science policy, by which the funds are drastically reduced, the number of researchers is considerably diminished, and the little money is directed by non-professionals toward non-scientific activity. Such a policy was pursued by Romania both in the past and in the more recent time. It explains both the increase in the productivity of the non-scientific publications and the demolition of the science in Romania, as well as the actual inconsistency of such a policy, which prompts reactions like mine herein.

Scientific research is a dissipative social phenomenon, resembling a heat engine. It dissipates a lot of efforts, makes many feel good, and, in general, it is a harmless and peaceful activity. As such, it should, in principle, be cultivated. On the other side however, like a genuine engine, beside its main dissipative character, and precisely through it in fact, it may produce science. Science, and the derived technology make people comfortable and really happy, set them free to look aloft, open our way toward God. Genuinely, science is from God, but the only modern way we know to produce it socially is through scientific research. The accurate mechanism through which science may be produced from scientific research is very well known, and it consists in providing the scientists with funds for scientific research. Wherever and whenever scientific research produces science these two elements are united, namely science professionals and appropriate funds. The reasonability of such an approach, as well as its documented success, recommend it. The destructive results of the misconduct in the Romanian science policy may now become more apparent, as precisely the opposite path was always taken in Romania, and precisely the opposite course is stubbornly followed in Romania at every moment.

Several slogans prevail nowadays in the Romanian scientific research: high productivity of publications, high number of citations (impact coefficient), ISI (Institute of Scientific Information-Philadelphia) publications, programmes and projects of research, international collaboration, European integration, excellence, etc. None bears relevance upon science. They are only promoted in the name of the scientific research to get personal money without doing research in fact. A high productivity of publications favours non-scientific publications. A publication is cited often because it is wrong, or incorrect, or incomplete, so that anyone can say anything about it. ISI publications are acclaimed by many, so they are largely non-scientific. Research programmes and projects dissipate funds and increase bureaucracy. International cooperation means extending the non-scientific activities in the name of the scientific research. Integration into European Union

will only be attained when the Romanian level will be comparable with the European level; and it will become comparable only by developing Romania from inside. Excellence in scientific research is not given, nor awarded, nor recognized, nor anything: it can only be attained. etc.

A frequently asked question is how one would recognize science and scientists (money is more easily recognizable). The answer is that only those who know know that they know, while those who do not know do not know that they do not know. Science is the consistent understanding and scientists are those who succeed in doing science. Only those who are scientists themselves do recognize science and other scientists. The output of the science is science itself. The consistent understanding includes the understanding of the limits, and the scientists do understand the limits. As such, they are both scientific researchers and professors, or teachers. Those who have only a limited knowledge act usually as professors, teachers, scientific researchers, scientists, but their part is inconsistent. They are not what they claim to be, they only act inconsistently the part of the former.

Science is for everybody, as we all have inside the reason, i.e. the consistent perception of things. This is the ontological argument, proving that God exists and we all are His children. The difference resides in interests, whose multiplicity however leads usually to inconsistency. There is a scientific way both for making politics, money or science; only that there is a distinction between such activities, and the failure of perceiving such a distinction is the cause of confusion, misconceptions and the failure itself.