

Proposals to strengthen research in France and call for the creation of a dedicated national secretariat.

Thematic contribution presented by the Montrouge Chapter (92)

Public research in France suffers from many problems, but none is more important than the issue of funding. The latter is critical today and suffers from comparison with equivalent countries. This state of affairs is described in the socialist counter-project to the law on the multi-year programming of research. It should be noted, however, that this state of affairs is presented in a macro-economic way, and hides a real disparity between the conditions of research in engineering schools and institutes, where conditions are more or less comparable at the international level, and the conditions of research in universities, which are worrying today.

This thematic contribution presents some avenues for further reflection on the counter-project to the law on research programming. The rapidly technical aspect of research issues allows us to recall the importance of preparing ourselves to conduct an ambitious research policy in the event of a change of government.

The creation of a national secretariat for higher education and research, or at least an ad hoc commission on this subject seems to us extremely relevant less than two years before the presidential elections.

1. Limiting the negative impact of private research funding

Faced with the lack of direct funding for laboratories, French researchers are spending an increasing amount of their time looking for external funding. While a certain part of its funding comes from the ANR (French National Research Agency), most of the rest is financed by the private sector.

Private sector funding of public research brings many benefits, allowing public research to be focused on issues with high added value for companies. It also carries risks, the main one being to influence public decision making when it is based on research in a particular field.

The scientific standard can indeed be biased by the source of funding when the majority of funding comes from the private sector; either because researchers discard some of their results or simply orient their presentation in such a way as to satisfy their funders, or because the subjects are approached from a certain angle, which becomes the "right" way to study the question. This is the case for the tests on the toxicity of cigarette additives by Phillip Moris, directly financed by the cigarette manufacturer, or for the studies on Roundup, which focus on the harmfulness of a molecule rather than that of the product itself .

These negative influences on private sector research funding are not always desired or necessarily understood by the players in the sector. When Orange decides to fund research on the effectiveness of a new competitor's entry into telecoms, is it seeking to influence regulators or to learn about the potential impacts it will face?

Proposal 1: *Make public all current and past private contracts of researchers paid with public money (amounts, subjects and conditions). This information must be easily accessible to all, and must include all contracts, not just research contracts.*

Informing the reader of the origin of the funding that made it possible to produce the research seems to be the minimum to fight against private influences, but unfortunately this is not always the case. i

Proposal 2: *Create an intermediary between private funding and researchers who will verify that the research project has no hidden lobbying vocation. The intermediary institution will take care of selecting the researchers associated with the research project through a call for tenders. The management committees of this intermediary must of course be independent of private interests.*

The main interest of this intermediary is to act as a "valve" between researchers and private funding, in order to reduce the risks of self-censorship, since the funders are not the ones who decide to whom the money is allocated. This mission can be fully integrated into the ANR (Agence nationale de la recherche), which would thus be given a new mission as an interface between public research and the private sector.

2. Fighting the monopoly power of scientific journals

Today the scientific publication system works in a very particular way. States/universities fund researchers who produce scientific work. The latter are sent to journals, which forward them to other researchers for evaluation of the quality of the submitted work. ii The researchers, always paid by the states/universities, provide their evaluation free of charge to the scientific journals. The journals resell the research to the states/universities. This market is now worth billions of dollars, while digitalization has made the work of publishing extremely simple. iii

Proposal 3: *Create a body for negotiations between scientific journals and public research organizations. The organization will negotiate for all research organizations and each researcher will have access to the entire French catalog. In the event that negotiations are not successful, allow researchers to find and share the resources they need by other means.*

This proposal aims to reduce the cost associated with subscribing to peer-reviewed journals for universities, schools and public research institutes in France. To allow researchers to access bibliographic resources by other means in case of non

The successful conclusion of negotiations (i.e., decriminalizing piracy of private journals) allows the organization to ensure that the balance of power in the negotiations is not on the side of the private sector. If necessary, a clause requiring journals to be paid above their operating costs may help to offset this advantage, particularly with respect to smaller journals.

Proposal 4: *Create an organization to publish working papers by researchers working for public research organizations. All research papers should be published in the organization. Create an internal rating system. All working papers will be accessible by all researchers working in a public research organization.*

The creation of this organization pursues a long-term objective, which is to transform the system of scientific publications, by eliminating a private intermediary (journals) which is no longer needed today. Digitalization has indeed simplified the work of formatting to the extreme.

The internal grading system, which can be multi-criteria, and adapted to each discipline, aims to allow a better evaluation of the researcher's work with a grading by article rather than by journal.^{iv} It also aims to encourage the diversity of research work.^v Finally, the main advantage of this system is that it is complementary to the current research evaluation system. It is then possible to evaluate the system, particularly on the issue of journal ratings, and evolve it based on feedback.

Conclusion

The objective of this thematic contribution is to propose some specific avenues for improving the research system that are complementary to the socialist counter-project to the research programming law. All the problems of the subject are far from having been addressed.

This is the case with the question of the duality of the French research system between Grandes Ecoles and universities, and the inequalities it engenders. It is also the case of the question of industrial research, straddling the line between fundamental research and innovation, as well as the question of the patents that result from it. It is also the case of the adequacy between higher education and research, a major issue at all levels of education (bachelor - master - doctorate).

All these questions require strong but fine solutions, which do not increase the administrative mille-feuille but which on the contrary liberate the energies of those who do French research, the researchers.

In order to be effective, these solutions require a great deal of thought upstream, in coordination with the world of research. With a view to a victory of the left in the presidential election in less than two years, which we hope and pray for, it seems essential to us that the Socialist Party should set up a national secretariat for higher education and research, or at least an ad hoc commission on this subject.

ⁱ While scientific journals generally request the publication of funding related to a particular project, there is no way of knowing whether the researchers working on it have received past funding from companies interested in that topic, or are currently receiving other funding related to that topic. Thus a researcher who receives a consulting contract on the effect of the regulation of cell phone offers on consumers and who then publishes a study on the subject will not have to make a declaration of interest because the research project has not benefited from its funding.

ⁱⁱ Historically, one of the objectives of journals was to anonymize research. In the age of the Internet, where all research work has pre-versions published online, this anonymization has only a very theoretical value.

ⁱⁱⁱ The issue of privatization of the market for scientific publications was addressed in the law of October 7, 2016 for a digital republic. The Monitoring Committee for Scientific Publishing, responsible for evaluating the law on scientific publishing issues, issued its report in December 2019. The objectives of the law are not achieved (https://cache.media.enseignementsup-recherche.gouv.fr/file/Edition_scientifique/86/8/Rapport_CSES_12_2019_1226868.pdf).

^{iv} Currently, each research work is characterized by the journal in which it is published, with each journal being ranked according to the number of citations it receives.

^v In the current system, both types of work are undervalued : works that are too original, which are generally little cited because they do not belong to the "canon" of research on a given question (or are cited many years later, when developments in the field highlight the interest of the approach), and works of generalization, which are generally difficult and offer few citations, since it is then difficult to go further on the same subject. Both types of work are crucial for our understanding of the world.