



September 28, 2011

SCHOOL of MATHEMATICS

The Rt. Hon. David Willetts MP,
Minister of State for Universities and Science

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Dear Mr Willetts,

EPSRC's relationship with the UK science community

I am writing, following the initiative of my colleagues in the mathematical sciences in the UK, to express my grave concerns about recent developments at the EPSRC.

This is not about the cuts. Nor is it just about the mathematical sciences, though as a mathematician and former head of school at the University of Edinburgh, EPSRC's approach to the mathematical sciences is what I know the most about.

I understand that in giving evidence to the Science and Technology Committee on 14 September 2011 you stated:

'I do agree that Research Councils are institutions which emerge from research communities. They are servants of the research community in the same way as I see myself as a servant of the science and research community. I would not like us to get into a position where it was thought that there was a kind of bureaucracy in Swindon detached from the concerns of the mainstream science community.'

The first two sentences are an admirable statement of how the research councils should be working with the research community and government. My clear view, however, is that the undesirable position you warn against in the third sentence has already been reached in relation to EPSRC. This applies both at the day-to-day operational level, where funding decisions are being made without robust scientific advice, and also at the strategic level in the development of overall funding policy.

Let me provide some evidence for this.

First of all, EPSRC has declared that it is now in the business of 'sponsoring' rather than 'funding' research. This means that EPSRC will try to pick winners on its own, without adequate advice from the community. This process has already begun. Applicants for programme grants (which are a favoured mechanism for offering relatively large chunks of funding for a substantial project over a period of up to 6 years) have first to submit an outline proposal to EPSRC. The outline is assessed and, if satisfactory, EPSRC will invite the applicant to develop a full proposal. In my experience, at the outline stage, EPSRC seeks no external opinion

about the quality of the science. The discussion with EPSRC is entirely about such things as management, risks, and leadership. The decision whether or not to give the go-ahead for a full proposal is made entirely by the EPSRC bureaucracy, without scientific peer review. This means that EPSRC has, and has exercised, an unaccountable veto on programme grant applications, without seeking any robust scientific advice.

Clearly EPSRC needs to be satisfied that the substantial resources allocated in a programme grant will be properly managed, but it would be far more rational to seek external advice on the science at an early stage; if it seems exciting enough, then they should work with the applicant to ensure that appropriate leadership and risk management mechanisms are in place.

A second example is the ‘Dream Fellowship’ programme. Intended to encourage outstandingly creative and pioneering research, the scandal about this programme is that potential applicants are identified by EPSRC’s programme teams: this is not an open competition aimed at finding the best. Since EPSRC policy is to ensure that the civil servants on these teams do not have discipline-specific background knowledge, it is clear that they cannot have the expertise, knowledge and judgement necessary for this task. The various SAT committees are invited to advise, but this is not a job for which these committees are appropriately constituted. I should make it clear that there is nothing wrong with high-prestige fellowships aimed at supporting outstandingly creative individuals: it is the selection procedure which is entirely inappropriate in a body that is charged with the distribution of public funds.

Other initiatives recently introduced by EPSRC do not enjoy the support of the mainstream science community. These include the drive to award a smaller number of ‘larger, longer grants’ and the doctoral training centres. I have seen no evidence at all that DTC’s will be of medium or long-term benefit to the UK economy or research base.

This letter contains my own opinions about EPSRC’s current policies. These opinions are, I believe, widely shared. However, in the mathematical sciences in particular, there is independent evidence which can be considered in relation to these issues, in the form of the International Review of the Mathematical Sciences (IRMS) commissioned by EPSRC. The review panel visited the UK in December 2010 and reported in early 2011.

This review involved input from every mathematics department in the land, and a significant organisational effort on the part of EPSRC and the Universities which hosted the review panel. It also involved a huge effort on the part of the panel members themselves. The top two high-level recommendations from the executive summary of that report are:

- Preserving and strengthening the present excellence of the UK’s mathematical sciences research through a variety of funding programmes suited to the diversity and distributedness of the mathematical sciences research community.
- Creating a new structure for enhancing communication between EPSRC and the mathematical sciences community.

It is quite clear that the move towards DTC’s, larger, longer grants, and ‘sponsorship’ generally will all act against the first of these recommendations. These policies will tend to concentrate resources in a smaller number of institutions (particularly in the context of general funding cuts) rather than distributing them so as to support the diversity of the community. The second recommendation was made in the context of the finding of the report (F-6, page 6) that

‘Communication between the mathematical sciences community and EPSRC is less open and clear than it should be, especially in the light of the likely future funding environment’.

This is reinforced by recommendation R-2:

‘Open, frank and timely communication between EPSRC and the mathematical sciences community is extremely important. In light of Finding F-6, the Panel strongly recommends the establishment, as soon as possible, of a new structure for communication between EPSRC and the mathematical sciences community. A joint effort between EPSRC and leadership of the learned societies is an obvious way to begin to define such a structure.’

I am extremely disappointed that EPSRC has paid such little attention to these crucial recommendations. I am also extremely angry that, by failing to act with urgency on these recommendations, they have shown a contemptuous disregard for the review process, the influential international members of the review panel, and indeed the many members of the community who worked hard to engage with the review. The treatment of the IRMS by EPSRC stands a very good chance of jeopardising the international reputation of EPSRC, at least as far as the mathematical sciences are concerned.

I hope I have provided some solid evidence in this letter that EPSRC’s direction of travel is contrary to impartial, independent advice, and is indeed becoming ‘detached from the interests of the mainstream science community’. I urge you to take immediate steps to ensure that EPSRC starts to involve the science community in a much more fundamental, open and transparent way at all levels in its decision-making.

Yours sincerely,

A handwritten signature in black ink that reads "Michael A. Singer". The signature is written in a cursive style with a long, sweeping flourish at the end of the name.

Michael Singer
Professor of Mathematics

cc: The Hon. Andrew Miller MP, Chair, Science and Technology Committee
The Hon. Gavin Barwell MP, Science and Technology Committee
The Hon. Gregg McClymont MP, Science and Technology Committee
The Hon. Stephen McPartland MP, Science and Technology Committee
The Hon. Stephen Metcalfe MP, Science and Technology Committee
The Hon. David Morris MP, Science and Technology Committee
The Hon. Stephen Mosley MP, Science and Technology Committee
The Hon. Pamela Nash MP, Science and Technology Committee
The Hon. Jonathan Reynolds MP, Science and Technology Committee
The Hon. Graham Stringer MP, Science and Technology Committee
The Rt Hon. Roger Williams MP, Science and Technology Committee
The Hon. Therese Coffey MP PhD
The Hon. Julian Huppert MP PhD
Sir Adrian Smith FRS, Director General, Knowledge and Innovation, BIS
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Professor Frank Kelly FRS, Chair, Council for the Mathematical Sciences