

## **Ideas in Progress**

**Paper Number 22**

### **Who is an expert?**

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The series constitute 'ideas in progress' after the notion described by I.J. Good in 'The Scientist Speculates.' Good also describes ideas about ideas as 'partly baked ideas' believing that "... it is often better to be stimulating and wrong than boring and right." While these papers do not take this tenet as an excuse for licence at the expense of rigour, they are exploratory and the ideas may change as a theme is developed over time.



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## Who is an expert?

In any discussion of expert opinion and how it is elicited, the above question is, perhaps, the first that needs to be examined, though often it is not asked at all. The question is nothing to do with identifying people with expertise and how expert they are, but is that lofty inquiry implying doubt about the whole idea of expert opinion and its relevance or place in the modern world. In recent times more than at any other, expert opinion has become like Janus's head being seen simultaneously as highly desirable and greatly mistrusted. The result in foresight studies (or in any form of study or advice giving) is a paradoxical. The response to the lofty inquiry may well be that expert opinion 'of course' can be sought but it is not to be given any particular value by comparison with everyday experience by the public at large (this manifests itself in ways that will be discussed later). If this view is voiced by powerful voices early in the development of a either a public or in-company foresight study or any other form of study, then the organisers must take careful account of it in their plans. The existence of valuable expert opinion, that needs to be drawn upon by some process, is often taken for granted, but in the real world the Janus like nature of how such opinions are regarded should not be forgotten.

Advisors and advisory committees have long been a feature of business and government. Some advice is formal and public; on other occasions it is neither of these things whether they are desirable or not. Appointments of advisors and to advisory committees is mostly not a transparent process, cloaking the level of expertise inherent in both in mystery as far as the polity is concerned. Ought this situation to continue? There can be little doubt now that the world is in the era of *trans-science* described by Weinberg<sup>1</sup> in 1972, where the polity may pose questions to science only to find that science cannot answer them due to their complexity. Much later in 1993 Funtowicz & Ravetz<sup>2</sup> described this situation as *post-normal* science, involving matters the polity required guidance on urgently from science, but where science was only able to give responses that are embody highly qualified uncertainty.

Here we run up against the common feature of advisory committees. They are composed of people for whom expertise is claimed but unknown to the polity. They are mostly from the discipline or disciplines considered 'relevant.' Because of this, they are unfamiliar, though they plead otherwise, with the need to give advice to the polity that involves integrating many streams of knowledge to meet situations that are urgent and have the characteristics of *trans-science*. The later possibility that legal proceedings may arise from the advice given places advisors or advisory committees under further pressure. Advisors may be appointed on the basis of trust<sup>3</sup> rather than established expertise; demonstrating expertise that can be turned into expert opinion can be an uncomfortable procedure for both the committee appointor and the potential appointee, but how might the it be done?

There is a considerable literature on the assessment of subjective opinion and human judgement; rarely is it used or its methods applied. To assist in the selection of advisors and members of advisory committees there are some simple and transparent rules exist, while more complicated but

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<sup>1</sup> Weinberg, A.

<sup>2</sup> Funtowicz, S. & Ravetz, J.

<sup>3</sup> The notion of *trust* is explored by Giddens in

easily comprehended processes exist to begin to identify those people who are believed by others to possess valuable expertise. Used together or even singly use of the methods I indicate below could make the appointment of advisors transparent to the polity, while simultaneously establishing the credentials of each potential advisor.

Bearing in mind that all advice concerns the future, the characteristics of an ‘expert advisor’ are threefold; he or she must have<sup>4</sup>:

1. Substantive knowledge in their chosen spheres of interest
2. Assessing ability to relate how their sphere may evolve in the future
3. Imagination as this lies behind how the advisor extends his or her substantive knowledge into the future and subsequently assesses it

Calibration tests exist for these characteristics which ‘measure’ essentially 1 and 2; 3 cannot be assessed directly. However, it is also important that the potential advisor assesses his own level of expertise according to some simple but well defined rules<sup>4</sup> as a further part of the procedure.

### **Self-evaluation criteria: guidance to self-ranking of expertise**

1. You are *unfamiliar* with the subject if the mention of it encounters a veritable blank in your memory or if you have heard of the subject yet are unable to say anything meaningful about it.
2. You are *casually acquainted* with the subject matter if you at least know what the issue is about, have read something on the subject, and/or have heard a debate about it on a major TV or radio network or on an educational channel such as the UK’s Open University.
3. You are *familiar* with the subject matter if you know most of the arguments advanced for and against some of the controversial issues surrounding the subject, have read a substantial amount about it, and have formed some opinions about it. However, if someone tried to pin you down and have you explain the subject in more depth, you would soon have to admit that your knowledge was inadequate.
4. You are *knowledgeable* with the subject matter if you were an expert some time ago but feel somewhat rusty now because other assignments have intervened (even though because of previous interest, you have kept reasonably abreast of current developments in the field); if you are in the process of becoming an expert but still have some way to go to achieve mastery of the subject; or if your concern is with integrating detailed developments in the area, thus trading breadth of understanding for depth of specialisation.
5. You should consider yourself an *expert* if you belong to that small community of people who currently study, work on and dedicate themselves to the subject matter. Typically, you know the literature of your country and probably the foreign literature; you attend conferences and seminars on the subject, sometimes reading a paper and sometimes chairing the sessions; you most likely have written up and/or published the results of your work. If any of the UK’s major scientific or technical institutions or any similar organisation were to convene a seminar on this subject, you would expect to be invited or, in your opinion, you should be invited. Other experts in this field may disagree with your views but invariably respect your judgement; comments such as ‘this is an excellent person on this subject’ would be typical when enquiring about you.

The guidance for potential advisors for self-evaluation of their expertise has been used extensively by

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<sup>4</sup> See Lipinski, A.J. & Loveridge, D.J. “How we forecast: the IFTF’s study of the UK,” Futures,

their authors and were also used in a modified form, to take account of spheres outside science and technology, in the 1994-95 UK Technology Foresight programme. The five criteria are not threatening, can be completed quickly, while their simplicity and clarity generally ensures that potential advisors take them seriously; experience, though largely anecdotal in the case of the UK Technology Foresight Programme, shows that they do.

Given the possibility of understanding much more can be known about the potential advisor's claims to expertise, there remains the need to find the potential advisors in the first place. Tradition leads towards networks of established figures, but does not reach down and outwards toward wider participation from people of equal claim. Is this acceptable in modern society? If not then an alternative procedure, one that has a strong claim to attention because of its independence and rigour, is to use the co-nomination procedure. It is essentially a survey that enables an initial group of 'experts' to nominate others under strict rules. The second group then repeat the process and as the iterations grow so does the tendency for some people to be nominated more than once and by different people - this is the co-nomination. With sufficient iterations the sample may exhibit closure, but long before that a large number of people are recognised by others as having valuable expertise to contribute to a particular field. These people can then go through the first two procedures to provide a well characterised set of possible advisors. No more personal recommendation among established figures? I wonder?