

Reflections on indicators and methods for evaluating excellence

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What do we mean by research excellence?

- Individual vs institutional excellence
- Excellence “in itself” or excellence “for a purpose”?
- “Portfolio” issues
- Scale aspects – local, national, European, global
- Promise vs performance
- Conventional excellence or creative brilliance
- Disciplinary differences

The research measurement industry



- Standard metrics available for article, journals individuals, institutions...
- Bases are well-defined but model dependent (impact, performance)
- Development in metrics coupled with trends in organisation of research, evolution of the web, open access.
- Effects can be seen on individual and institutional behaviour and the relations between them
- Difficulties with:
 - è social sciences/humanities
 - è non-standard career profiles
 - è Non-standard research trajectories (high risk/new disciplinary conjunctions...)
 - è Economic and (particularly) social outcomes of research activity



The peer review industry

- Metrics are increasingly used to complement (but not yet replace) peer review
- Benefits:
 - è “intelligent” application of general criteria
 - è Accommodation of non-standard profiles (careers, science)
 - è “Social” functions – contribution to community-building and learning
- Problems:
 - è Resource intensity
 - è Individual and institutional interests (cronyism)
 - è Conservatism
- Strong pressures (globalisation of science, economy of resources) towards “collective” peer review



Excellence - a static or dynamic quality?



- “Static” testing of excellence has limited value
- Some “dynamic” effects of rewarding excellence:
 - è Incentives to improvement from competition (individual and structural)
 - è Nurturing improvement by providing resources (financial, infrastructural...)
 - è Building institutional excellence from individual excellence
- The technical (criteria) and process aspects of excellence measurement are closely intertwined (eg management of peer review)





UK Research Assessment Exercise

- Periodic exercise (1992, 96, 2001, 08..), covering all UK universities; quality standards define funding levels, using (to date) peer review process
- Highly resource intensive:
 - è Many panels/sub panels
 - è Significant effort to create input
 - è Deep investigation at researcher level (with panel specific differences)
- A major issue for universities, with strong behavioural impacts and subject to intensive debate on methodology
- In the present: concern to better “profile” institutions (detect smaller “pockets of excellence”)
- For the future:
 - è “Metrics” to be substituted for science, technology, engineering and medicine
 - è Peer review to remain for social sciences, humanities





The ERC Advanced Grant (AdG)

- The ERC's credo: project selection on "the sole criterion of excellence"
- ERC covers all EU countries and associated states, and all fields of enquiry – the challenge is to identify "the best of the best"
- High-level Panels are the core of the peer review process
- The excellence criterion applies to "people" and "project"
- Key considerations in peer review:
 - è Leadership profile
 - è Track record



Possible indicators of “leadership profile”

- Content and impact of the major scientific or scholarly contributions of the applicant to his or her own research field and/or neighbouring research fields and, if applicable, their wider societal impact;
- The international recognition and diffusion that these major contributions have received from others (publications or appropriate equivalents/additional funding/ students/international prizes and awards/ institution-building/other);
- Ability to productively change research fields and/or to establish new interdisciplinary approaches

Possible indicators of “track record”

- **Senior author publications in major peer-reviewed multi-disciplinary scientific journals** and/or in the **leading peer-reviewed journals** of their respective research fields
- **Monographs and any translations of monographs** (if applicable).
- **Granted patents** (if applicable).
- **Invited presentations into peer-reviewed, internationally established conferences** and/or **international advanced schools** (if applicable)
- **Expeditions** that the applicant has led (if applicable).
- **International conferences** in the field of the applicant that have been organised (member of the steering and/or organising committee) by him/her (if applicable)
- **International Prizes/Awards/Academy memberships** (if applicable)





Some conclusions

- Measurement is increasingly pervasive; strong pressures exist to increase quality (discrimination) and reduce costs
- Peer review, applying relatively general criteria, will remain central with efforts to “save it from its defects”
- Greater use of metrics in assessment is inevitable
- Important to understand “ideological” aspects (individual versus institution, implied relations between inputs and outputs...)
- Peer review will also be subject to more “collective” activities, over regional and even global scale
- It is vital to maintain diversity and plurality in the face of pressures towards standardisation.



Excellence measurement will remain a “core competence”

