Research Evaluation
– The current situation in Spain –

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Research evaluation – State Agencies (1/2)

Agencia Estatal de Investigación
(Research State Agency)

- Ministerio de Ciencia, Innovación y Universidades
- Est. 2015 (aggregating previous agencies and ministerial depts.)
- 19 areas, covering all domains. Bio (37%), STEM (33%) Arts (30%). Area “TIC” inside STEM includes MNF, TCO, INF

- Financing Agency for all Spanish R&D promotion policies and activities

Activities:
- **Issue calls** targeted to funding R&D activities, all in competitive concurrence
- **Evaluation, Selection, Funding, Management, and Monitoring** of
  - Research Projects
  - HR grants (Ramon y Cajal, Juan de La Cierva, FPI)
  - Large Infrastructures
- **Evaluation** of Research Projects, HR, and infrastructures, upon request from Regional Governments, Universities and other institutions (e.g., Ministries, Foundations, etc.)
ANECA: Agencia Nacional de Evaluación de la Calidad y Acreditación

- Ministerio de Ciencia, Innovación y Universidades

- Created to contribute to the improvement of the Higher Education system quality through the guidance, evaluation, certification and accreditation of degrees, teaching staff, and institutions

Activities:

- **Evaluation, Certification and Accreditation** of
  - Spanish official Higher Education (degrees, masters, PhDs)
  - Higher Education Institutions
  - University Teaching staff (PEP and ACADEMIA programs)
- **Evaluation** of researchers (CNEAI)
  - Research activity and Technology transfer (“sexenios”)
Other research evaluation bodies/actors in Spain

- **Regional Evaluation Agencies**
  - Several Spanish regions have their own Research Evaluation Agencies (e.g., Catalonia or Andalucía)

- **Carlos III Health Institute**
  - Medical and Bio Research only

- **Other units of the Ministry of Science, Innovation and Education**
  - Some HR grants that involve teaching
    - “Beatriz Galindo” (postdoc) – Similar to AEI’s “Ramon y Cajal”
    - FPU (predoc) – Similar to AEI’s FPI

- **University Departments**
  - Evaluation of researchers for hiring (tenured and untenured)
Some specificities of the Spanish evaluation system

- **CNEAI “sexenios” (1989-) meant a turning point in Spanish research activities**
  - Even when they only ask for a minimum level of research every 6 years
  - Based on bibliometric information of publication venue (JCR quartiles)
  - Additional “Transference sexenios” launched in 2018 to evaluate technology transfer

- **Evaluation normally performed by panels**
  - Evaluation of researchers carried out by panels (either *ad hoc*, or permanent)
  - Project evaluation carried out by panels + external reviewers (good base of reviewers)

- **Until recently, evaluation was performed mostly based on bibliometric information**
  - Considering *only* journals, and based on the journal IF (not the individual paper)
  - **Quantity** over quality (*imbalance between CS subareas that publish at different rates!*)
  - Other activities and acknowledgements considered of marginal value (tech. transfer, software and tools, patents, downloads, awards, cites, etc.)
  - Leadership mainly evaluated by number of projects as PI (causing artificial fragmentation of research projects)
Recent changes in the Spanish evaluation system

1. **Before** the GGS conference rating system was adopted in 2017 by all CS Societies:
   - 😞 Spanish researchers had *stopped attending* international conferences
   - 😞 *Difficulties* convincing the rest of the research areas (Maths, Chemistry, Physics, etc.) that conferences in Informatics were *as important as journals*
   - 😞 Problems derived from using *several ratings* (sometimes inconsistent) : CORE, Scimago, Google Scholar, Microsoft Academic, etc. – used by researchers on their own benefit

2. The main Spanish Evaluation agencies decided to **adopt the GGS rating** in their evaluation of Informatics research!
   - ✓ Conferences and journals mostly equated in current evaluations
   - ✓ Major CS conferences being attended again by Spanish researchers
   - ✓ Convincing argument for the rest of the research areas to acknowledge conference papers

3. We can see a **progressive change** in how panels **evaluate research now**
   - ✓ High-quality conferences considered at the same level as high-quality journals
   - ✓ Selection of the contributions from the last 5 years, or the best five publications (saturation)
   - ✓ Number of cites and h-index also count (as indicators of impact)
   - ✓ Awards, invited talks and other community service activities considered too
Current challenges and opportunities in Spain (well, some of them 😊)

Challenges

😊 Evaluation of publications still based on the Impact Factor of the venue (journal or conference), not on the merits of the individual publications (cites, downloads,...)
  ▪ See, e.g., the San Francisco Declaration on Research Assessment (DORA)

😊 Budget dedicated to Research Evaluation is scarce (<0.5% of total research budget)
  ▪ Supplemented by personal efforts from a motivated (but rather exhausted) community

Opportunities

✅ Spanish Informatics Societies (and in particular SCIE) can play a key leading role for maintaining the consensus, harmony and consistency in the evaluation criteria used in Informatics in Spain, and promoting changes in Informatics research evaluation

✅ Major Evaluation Agencies are receptive and sympathetic towards implementing changes

✅ The experience with the GGS conference rating has been very positive

✅ There is a general demand for improving the research evaluation system
Current challenges and opportunities (for all European countries)

Challenges

😊 Evaluation highly dependent on **external sources**, mainly in **private hands**
  - E.g., Clarivate’s **JCR**
  - Independence, transparency, reproducibility, open access to the sources cannot be guaranteed

😊 **Access to citation data** is becoming difficult or impossible (due to, e.g., data protection laws)
  - E.g., Google Scholar has recently severely **limited the automated access** to its citation data
  - This represents a threat for independent analyses tools (e.g., for the GGS rating!)

😊 Some initiatives may represent drastic changes to our current model, with uncertain effects
  - E.g., **Plan S** for publishing only in Platinum Open Journals from 2021 onwards
  - The role and effects of **Alt-metrics** and other new quality indicators is **unpredictable**

😊 Harmonization in Research Evaluation across Europe may not happen
  - EU countries not able to agree on concrete mechanisms and artifacts (e.g., a conference rating!)

Opportunities

✔ Informatics Europe can play a leading role in harmonizing evaluation, and promoting changes
  - Reusing successful experiences at national/international level
  - Similar guides and criteria adopted by Evaluating Agencies, Institutions and Centers across Europe
  - A national/transnational initiative might be built (e.g., around a EU project proposal)
  - It may involve not only national societies but also Agencies and Data Providers (e.g. Google Scholar)

✔ The new initiatives (Open Access) and “the JCR crisis” could be used to leverage the change
Summary

1. Research evaluation **started to improve** in Spain with the new Agencies
2. The official adoption of the GGS rating has been a very **positive experience**
3. Key **leading role** of SCIE for aligning and harmonizing efforts, and of the Evaluation Agencies for positively implementing the new requirements
4. Without **one** common conference rating system it was impossible to equate conferences to journals
5. Still many **challenges** to address (JCR-dependence, lack of concrete measures and actions agreed in EU, uncertain changes ahead,...)
6. Some **opportunities** now (good momentum to adopt changes, appropriate supporting infrastructure, success stories to build upon, ...)
7. Finally...
   - Whatever we decide, it will **directly guide and influence** the efforts of our researchers in the next few years, and hence their results
   - No matter what we decide, **it will be vitiated** in less than 10 years, and we will need to invent new research evaluation methods...
Additional slides
Two recent initiatives

1. San Francisco Declaration on Research Assessment (DORA)
   - “Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist’s contributions, or in hiring, promotion, or funding decisions.”
   - https://sfdora.org/

2. Plan S
   - “With effect from 2021*, all scholarly publications on the results from research funded by public or private grants provided by national, regional, and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo.”
   - I.e., it won’t be possible to publish in most of our current journals, only in Platinum Open Access ones! †

These initiatives will force us to change the way in which we publish our research and, therefore, in how we have to evaluate it!

(*) It was aimed at being implemented in 2020 when Plan S was announced in 2018, but this has been recently postponed to 2021.
(†) https://www.nature.com/articles/d41586-018-06178-7