Closing in on open science :

a few thoughts on crossing the borders between science* and society, and on the role of national borders as well

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* : « science » (in this talk !) = essentially academic research performed in universities and public or private non-profit organisations

What's happening at borders ?

"Although we have a tendency to consider borders essentially as lines of exclusion, the word border, here, reveals the unity of a double identity, which is at the same time distinction and belonging. The border is both opening and closing. It is at the border that distinction arises as well as contact with the environment. Any border, including the membrane of living beings, including the border between nations, is, at the same time as a barrier, the locus of communication and exchange. The border is the position of dissociation and association, of separation and articulation. The border is the filter, which both pushes away and allows passage. The border is that by which osmotic currents are established and that which prevents homogeneity."

Edgar Morin, in "The Method, volume 1. The Nature of Nature," Editions du Seuil, Paris (1977)

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Societal participation : opening a border ?

- Scientific research is a complex professional activity, requiring years of training and specialised expertise. Why shouldn't it be "preserved" from "outside interference" by maintaining the "inner border" between the "scientific community" and the "rest of society" ?

- A few reasons for "opening the border" to societal participation :
  - it may actually be helpful (to gather data, for example)
  - for public research, taxpayers are financing, so it might be relevant to associate them in one way or another
  - "society" as a whole is providing the "licence to operate" for the scientific endeavour (not only funding, but also legal and regulatory environments, etc.) : can scientific research be totally "isolated" from the rest of democratic society in this context ?

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Debate : can societal participation go too far ?

- Co-operation : minimal or passive participation (access to Web searches, personal data, …)
  - free data, with scientists in control. Why not ?
- Collaboration : active participation (amateur astronomers, bird watchers, …)
  - free labour, with scientists in control. Why not ?
- Co-production : participation not only in collection but in analysis of data
  - shared activity, with scientists and non-scientists both contributing. Might be ok ?
- Co-design : participation in policy, programmes, research agendas and projects
  - shared decision-making on what to explore (and how to do it !). Isn't this dangerous ?
  - professional scientific expertise and judgement is not "democratic" : we need a border !!

Frederking, Angelika et al. (2016) : "Citizen science auf dem Weg in den Wissenschaftsalltag", iit perspektive 26, 1-9, cited in the document "The Rationales of Open Science : Digitalisation and Democratisation in Research", Science Europe High-Level Workshop, Berlin, 14 September 2017

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Why are national borders present in science ?

- Science is international and knows no borders. True academic freedom creates universal public goods to the benefit of all nations around the world. Why should national borders have anything to do with this activity ? Shouldn't scientific research benefit from a "status of exception" and be totally exempt of any national accountability ? Can't scientific communities simply be "self-governed" ?

- There are reasons to recognise national borders and authority :
  - public funding is mostly provided by national funders, located in recognised nation states, with national laws : some national accountability is legitimate

- But national borders are certainly not total barriers :
  - digitalisation (and rapid information flow) is "hollowing out" the nation state
  - private funding (by multinational foundations) is far from negligible !!

- Nevertheless, in a globalised world, national regulations (and international law !!) do provide useful safeguards to prevent "outlawed" or "unethical" activities …

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Science “across” borders : what do we need ?

- Borders exist and are inevitable, but crossing borders is even more important !!
- What do we need to enhance the quality and value of scientific research ACROSS national borders, and BETWEEN the scientific community and legitimate societal stakeholders (citizens, policy makers, business, …) ?

- Science Europe recommends :
  - support for the Open Science agenda and pro-active leverage of the opportunities offered by digitalisation
  - safeguards for mobility and cross-border collaboration, in the face of political instability, e. g. Brexit
  - facilitation of geographical mobility and international career development, e. g. through family-friendly policies and suitable pension schemes
  - insistence on “smart” regulations to foster scientific exchange, e. g. appropriate copyright legislation and means for text and data mining
  - promotion of increased PUBLIC research funding as a LONG-TERM investment with long-term value for society (being mindful to avoid the “short-term-impact” trap)
  - attention to education at all levels and, in particular, to widespread science literacy

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