IAU Horizons

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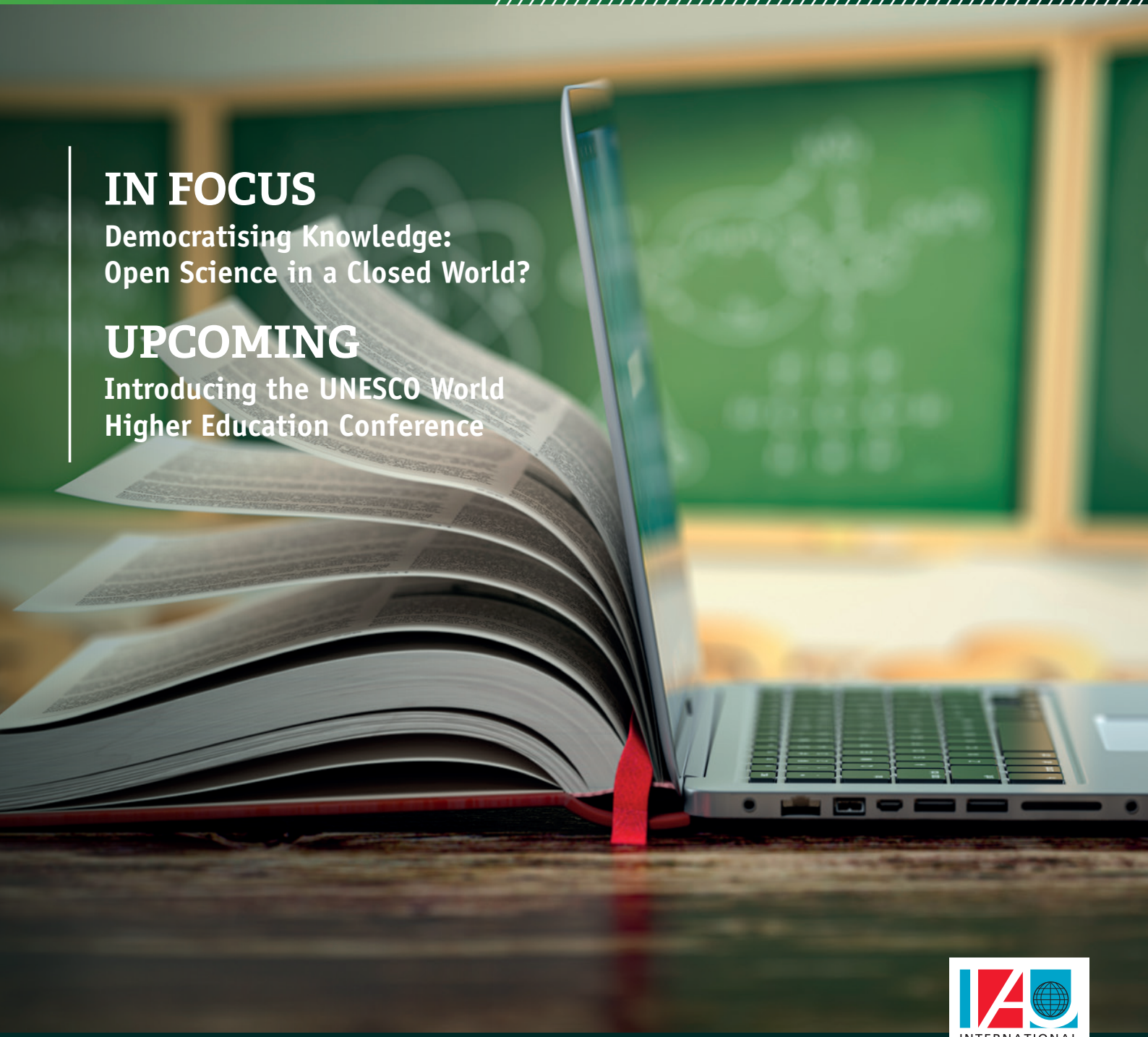
International Association of Universities (IAU), founded in 1950, is the leading global association of higher education institutions and university associations. It has over 600 Member Institutions and 30 organisations in some 130 countries that come together for reflection and action on common concerns.

IAU partners with UNESCO and other international, regional and national bodies active in higher education **and serves as the Global Voice of Higher Education.**



IN FOCUS

Democratising Knowledge: Open Science in a Closed World?

UPCOMING

Introducing the UNESCO World Higher Education Conference

INTERNATIONAL ASSOCIATION OF UNIVERSITIES
INTERNATIONAL UNIVERSITIES BUREAU

MESSAGE FROM THE SECRETARY-GENERAL

Dear Members of the IAU,
Dear Members of the broader higher education community,

More than one year into the pandemic, we start to see some of the long lasting effects of the health, socio economic and cultural crisis on the higher education sector, in particular on the digital transformation, the internationalisation, sustainable development and on HE leadership.

The digital transformation has advanced as never before. Online and blended learning are improving in quality, at least in some parts of the world and is gaining momentum in others. Yet much reform and investment are still required to make online learning a reality, accessible for the many, and of good quality in all parts of the world. Indeed, pivoting online was easier for some than for others and the inequality between countries and regions and even between institutions is too often resulting in time-to-study loss, even months or a year without education or research opportunities and too often no return to university to be envisaged post pandemic due to a complex set of economic and social reasons. Yet universities have been incredibly active and resilient, and multiply efforts in these challenging times.

Unprecedented and numerous opportunities to attend online lectures, webinars, pod casts, workshops, conferences around the world are now available. These opportunities are appreciated and some are probably here to stay in the future as people may hesitate before undertaking long journeys to take part in events. Yet online fatigue is also real and we miss the opportunity to meet face to face, to deepen conversations over coffee and to interact beyond the chat function. Conference attendance offer very valuable opportunities to engage with colleagues and host universities, to develop new cooperation and partnerships and to immerse oneself in host country's culture. The pandemic has also accelerated the call for increased access to research outcomes, especially in the field of health sciences, but not only. This issue of *IAU Horizons* presents a series of thought-provoking papers debating Open Science, including Open Access.

Internationalization, when and where possible, also pivoted online. Students are now often studying abroad… from home. The online version of internationalization has its advantages even if nothing can replace the transformative experience of a true international exposure. Being forced outside one's comfort zone to meet the other and connect realities is a key component of development and real chance to advance and progress. A blended form of internationalization however will probably remain and will continue to allow many more students and staff to benefit from such exposure and opportunities in the future.

IAU has been monitoring and debating the transformations underway. The IAU Surveys on the impact of COVID 19 on higher education (with a second iteration open from March to June 2021) capture the transformative dynamics at play. Similarly the weekly webinars organized as part of the *IAU Webinar Series on the Future of Higher Education* allow to debate issues on HE agendas and to share opportunities and examples of actions undertaken with colleagues from all continents. Personalised meetings online also increased. The IAU Global Meetings of Associations, which did take place once every second year, now bring HE Associations' representatives from around the world together regularly to exchange, learn and debate the future of the sector.

Last but not least, the IAU engages in multilateral projects and events, including the *UNESCO World on Education for Sustainable Development and the UN HLPF 2021*, and we prepare for the upcoming *UNESCO World Higher Education Conference*, where we will present the outcomes of a series of international collaboratives projects on topics shaping the future of higher education. We also contribute to events and debates to advance strong and inclusive HE around the world.

Learn more about the various activities of IAU. I look forward to welcoming you on board.

Hilligje van't Land

IAU Horizons 26.1 – Contents

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IAU EVENTS

IAU STRATEGIC PRIORITIES

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IN FOCUS

Democratising knowledge: Open Science in a Closed World?

By **Trine Jensen**, Manager, HE & Digital Transformation, Publication and Events

This year UNESCO is preparing a *Recommendation on Open Science* tabled for adoption by its 193 Member States at its General Conference in November 2021. This normative instrument represents a global commitment towards Open Science and contributes to creating a common understanding of what it implies. It is the result of an extensive multistakeholder consultation across the different world regions and it is crafted in the context of a pandemic that has certainly underlined the need for science and international collaboration to develop solutions to the challenges of our time – whether the current health crisis or redressing the unsustainable dimensions and modes of living of contemporary society – to mention but a few.

Within this context, this In Focus section explores the current state of Open Science from the perspective of the universities. Are we at an opportune moment of time to unlock access to science, data and knowledge? What are the current practices around the world and the opportunities to be leveraged? At the same time what are the major barriers, pitfalls and tensions that prevent progress and perpetuate closed structures? These questions are addressed in the 27 articles covering various perspectives and dimensions of Open Science framed under the broader question: ***Democratising knowledge: Open Science in a Closed World?***

As several of the authors state, Open Science is not new, but rather an inherent principle of the foundation of science, a wish to share and discuss discoveries, further build on and develop solutions in a continuous quest for inquiry, discovery and knowledge.

What makes a great difference in the current context is the development of digital technologies that provides new opportunities and tools in terms of how we generate, store, share and disseminate research data and findings. Yet, rethinking the entire ecosystem of science is a complex process as underlined by many of the authors. It is a process that takes time as it requires a culture change in operations and bringing multiple actors together, often with different perspectives and interests within the ecosystem. Several authors point to the current dysfunctional commercial publishing system and research rewards systems that are perpetuating a closed circle of scholarly research accessible to those who can afford it and structured around exclusive rather than inclusive practices.

Despite the challenges, the articles also demonstrates that this movement is finding breeding ground around the world. However, a world already composed of complex asymmetries among and within countries that must be addressed to ensure that the Open Science movement meets its ideals rather than perpetuating inequalities.

Although the road ahead is far from simple to build, and it will be subject to various transformations along the way, the authors propose different solutions, share their experiences and display a common ambition of making access to knowledge a human right as well as recognising knowledge as a common good - underpinned by a shared set of principles for collaboration. This requires at the same time top-down support at the policy level - nationally, regionally and internationally - as well as bottom-up solutions proposed by the researchers, universities and other stakeholders - respecting diversity in knowledge systems, multilingualism and multicultural contexts. Many authors also question latent practices, such as *Publish or Perish* that shape science by adapting to the structures of commercial journals rather than to the actual interest of research and its potential contribution to societal development and human capital.

A warm thank you goes out to all the authors who have contributed to this important discussion. The collection of articles will take you on a tour around the world, and you will notice that many of the opportunities as well as obstacles are quite similar in the different contexts. The pandemic has forced us to rethink many practices and processes. Maybe now is an opportune time to reflect on the power that universities hold to contribute to democratising knowledge and hopefully opening doors in a world that remains too closed.

GLOBAL PERSPECTIVES

AFRICA

ASIA & THE PACIFIC

EUROPE

LATIN AMERICA AND THE CARRIBEAN

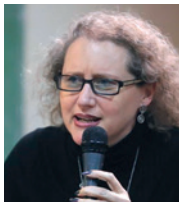
NORTH AMERICA

professional, or technical communities—to foster and sustain broader civic processes of conceptual inquiry or problem solving (Albagi, 2019).

An important lesson from the responses to COVID globally, and particularly relevant in Latin America, is that the value of research should not be decoupled from the public trustworthiness of the scientists and the institutions involved in the research process. Sustained processes of research utilisation are as important for the specific scientific communities as for the societies that support them. Better incentives for research usability require us to consider the socio-cultural ecologies of relationships, where competing motives, conflicting ideological interests, and distinct time frames influence the understanding of RDULA.

In highly polarised and politicised contexts, the biggest challenge to develop a more effective RDULA is not to produce more or better data (we are already doing that), but for regional scientific communities to collaborate in sustained efforts to confront those who by ignoring the Latin American scientific production are implementing ineffective science policies and to expose those who manipulate scholarship for ideological and/or economic gains. It's time to move away from the simplistic publish or perish productivity model and begin implementing research usability.

23 Open science with closed research assessment systems?



by **Fernanda Beigel**, *Principal Researcher at CONICET, Head Professor at National University of Cuyo, Mendoza-Argentina and Chair of the Advisory Committee for Open Science at UNESCO*

An increasingly digital world gives us an unprecedented opportunity to harness the scientific potential inherent to all countries and academic communities. The internet made it possible for scientists on opposite sides of the Earth to collaborate without meeting face to face. The trend towards international co-authorship is picking up speed, in hegemonic and non-hegemonic countries. Scientists can now share their research data by making them freely available online, under terms that enable this research to be re-used, reproduced, redistributed and credited. The open access movement has gradually evolved into an open science movement that seeks to make the entire scientific process more accessible and transparent by sharing data, protocols, software and infrastructure (Persic, Beigel, Hodson & Oti-Boateng, 2021). However, daily life at universities and research centres presents performance pressures that counteract these opportunities and slow down the drive for openness, traditionally in the nature of scientific culture.

> **"The continuous reproduction for more than 50 years of a publishing system based on journals (only accessible through expensive suscriptions), concentrated recognition in hegemonic academic institutions, even at the expense of creativity."**

Several studies show that research assessment has been increasingly restricted to publishing performance, measurable through a unique pattern based on citation of mainstream journals: the Impact Factor. Boosted by university rankings and funding agencies, this reoriented the evaluative cultures at universities, where tenure and promotion have led to uses and abuses of impact factors (Gingras, 2016) which has concerned scholars and institutions for the social relevance of science. The continuous reproduction for more than 50 years of a publishing system based on journals (only accessible through expensive suscriptions), concentrated recognition in hegemonic academic institutions, even at the expense of creativity. Eventually, the hypercentrality of these mainstream databases in academic evaluations marginalised alternative circuits of circulation, pushing backwards bibliodiversity and multilingualism. For non-hegemonic countries, this asymmetry was reinforced by unequal access to specific training required for academic writing in English. However, several alternative publishing circuits have co-existed and some of them became particularly relevant: the Latin American publishing circuit is a great example of an open access environment with non-commercial journals managed by the academic community, mostly edited by public universities.

The limitations of the research assessment systems that are tied to performance in the mainstream databases are particularly visible when observing the small share of the production of peripheral and semi-peripheral regions represented. This narrowness particularly affects the social sciences and humanities because it reflects 50% of the output of these disciplines in the North, while in the South the share is significantly lower. There is also extensive evidence of the reproduction of gender asymmetries that have been intensified during the COVID-19 pandemic. Accordingly, the mainstream databases represent an increasingly endogenous environment not refeclective of the multiple language fluxes, formats and circuits of circulation at work today. Additionally, several authors have pointed out that the Impact Factor and journal rankings are not useful to determine the scientific value of an academic contribution. Moreover, it has been broadly noxious to assess the social relevance of a given research project.

This debate is nowadays present in most countries around the globe because more and more researchers are expressing a general discomfort with the evaluation indicators used by the institutions. But what changes and which new indicators can contribute to Open Science at the same time achieving an equilibrium between global standards and local needs? Ràfols (2019) argues that indicators must be *contextualised*, building them according to their pertinence for the assessment space

(country/institution). A critical suggested change is to reduce the amount of evaluation procedures to give priority to in-depth evaluations, with less bureaucratic exigences and more formative features. A *pluralisation* of evaluation criteria is also required because scientific research involves diverse academic practices according to the methodological design, the institution involved, interdisciplinarity and nexus with society. A *diversification* of the social profile of the evaluators is finally critical to boost participatory science and advance towards the assessment of social relevance against purely academicist evaluations.

There is a certain amount of consent among experts in scientific policies that the most effective path to produce changes in the production and circulation of research is to change the rewards system. Of course, implementing this shift and adopting localised criteria depends on the existence of a certain degree of governance autonomy at the level of the institutions. Accordingly, a "new deal" between global, national and local standards should be pushed. The Recommendation on Open Science in progress within UNESCO precisely addresses these tensions and seeks to pave the road.

24 To foster Open Science we need a new system to protect intellectual creation

by **Gregory Randall**, *Professor in the School of Engineering, Universidad de la República, Uruguay*

Humanity is facing enormous challenges, many of them produced by human action itself: climate change, health crises, social problems generated by an increasingly populated, degraded and unequal world. Understanding these complex problems requires the collaboration of all the capabilities that humanity has developed. This includes diverse knowledge systems, research capacities, technologies, and forms of organisation.

The complexity of these problems, as well as the growing dimension of scientific research systems in the world, drives the need for open science. Free circulation of knowledge and collaboration contribute decisively to the advancement of science. Thus, increasingly dense circuits of exchange between researchers from all over the world have been formed: scientific publications, conferences, joint projects, cross-training, etc. The scientific community itself has realised that open science is the most efficient way to address the problems we face. Open science means breaking down borders: between researchers, disciplines, countries, approaches, cultures. Open science also means breaking down boundaries between academia and society in its many facets.

Science has developed in an extraordinary way over the last several hundred years and has become a central aspect of society. Today we speak of a knowledge society. In this context, science is becoming an increasingly powerful factor. From this stems the multiform attempt to appropriate science: to set the agenda and channel major resources to certain problems (to the detriment of others), to direct the results of scientific research to solve the problems of part of society, to exploit discoveries for some economic or military purposes, and so on.

Open science is a movement with growing strength, driven by researchers themselves who know from experience the power of collaboration and by institutions that realise that breaking down barriers has great benefits. But there are important difficulties in its development. One is the belief that it goes against the "intellectual property" framework and therefore could become a negative incentive to further scientific development.

The so called "intellectual property" system is the main legal tool to guaranteeing the appropriation of knowledge. It is based on secrecy and on asserting the monopoly of the use of certain knowledge by the owners of patents and similar instruments. The current "intellectual property" framework prioritises the appropriation by a few in detriment of collective benefit and makes the free collaboration necessary for the advancement of science more difficult.

It is often said that the intellectual property system protects the rights of scientists for their scientific production and is therefore a necessary incentive for promoting research. This is a fallacy. In universities, where much of the research takes place, we are fuelled by curiosity, love, a sense of duty to our fellow humans, or vanity, among other reasons. The idea that the results of research can be converted into a product that generates economic profit is a recent phenomenon and rather alien to most researchers. In many institutions a specific effort must be made to change their academics' naturally open attitude to a sort of "intellectual property friendly" approach to research, which gives greater importance to closeness.

On the other hand, in a world characterised by the dominance of a few over a large part of humanity, many rightfully fear that without proper regulation open science may facilitate the predatory behavior of the powerful.

> **"In order to strengthen the necessary movement towards open science, it is of utmost importance that we create a true system of protection of intellectual creation (no longer intellectual property, words matter), which asserts authorship recognition and truly promotes collaboration and openness instead of private appropriation and secrecy."**

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IAU **HORIZONS editors: Hilligje van't Land**, Secretary General /// **Trine Jensen**, Manager, HE and Digital Transformation, Publication and Events.


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IAU International Association of Universities, UNESCO House, 1, rue Miollis – F-75732, Paris Cedex 15 – France
Tel: + 33 1 45 68 48 00 – Fax: + 33 1 47 34 76 05 – E-mail: iau@iau-aiu.net – Internet: www.iau-aiu.net

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