

Submissions accepted for poster presentation at STI 2024

Open and overlooked: the penalties for preprint open access papers and translated journals in citation analysis.

Paul Donner ([Deutsches Zentrum für Hochschul- und Wissenschaftsforschung](#)).

Abstract. The citations to open access preprint versions of papers and citations to papers in journals translated to English are not regularly counted in major proprietary citation index databases or in ordinary bibliometric research assessment even though they arguably reflect a true part of a work's scientific impact. Here we explore the extent of these phenomena using Web of Science data.

Investigation of the external validity of the 2004 German Science Foundation author contribution calculation recommendation for medical schools' performance-based funding systems.

Paul Donner ([Deutsches Zentrum für Hochschul- und Wissenschaftsforschung](#)).

Abstract. This study examines how well an idiosyncratic authorship counting rule for co-authored publications recommended by the German Science Foundation (DFG) for medical schools and widely used in performance-based funding systems aligns with the empirical evidence. The DFG rule and two other co-author credit rules are compared with empirical data of percentage contribution statements of authors of co-authored papers in medicine.

Are peer review duration and publication delay research quality signals?

Paul Donner ([Deutsches Zentrum für Hochschul- und Wissenschaftsforschung](#)).

Abstract. Here we study how the lengths of the periods from submission to acceptance (review duration) and from acceptance to publication (publication delay) relate to research quality as operationalized by F1000Prime recommendations for a large dataset of publications from the life and health sciences. We find a statistically detectable relationship between shorter peer review duration and recommendations but its effect size is negligibly small.

Leveraging Openness in Digital Technologies to Boost the Structural Robustness of Traditional Industries.

Jiajie Wang ([School of Information Management, Nanjing University](#)), Zheng Ran ([School of Economics and Management, Southeast University](#)), Lele Kang ([School of Information Management, Nanjing University](#)) and Xiaoling Cheng ([School of Information Management, Nanjing University](#)).

Abstract. In the era of industrial digital transformation and intensified national competition, maintaining the structural robustness of innovation networks within traditional industries is essential for economic progress and national security. Utilizing the PATSTAT global patent database, this study quantifies the coupling of digital technologies in 123 Chinese traditional manufacturing industries over the last two decades, focusing on overlap (DTO) and diversity (DTD). A regression model was developed to assess the impact of digital technology coupling on the structural robustness of these innovation networks. Our results uncover a nuanced, inverted U-shaped relationship between digital technology coupling and the structural robustness of traditional industries. Offering critical insights for policymakers and business leaders, this study emphasizes the pivotal role of open digital technologies in enhancing the structural robustness of traditional industries' innovation networks amidst digital integration challenges.

Measuring and visualising the drivers of innovation performance: a new web-based tool.

Jürgen Janger ([WIFO](#)), Elisabeth Arnold ([WIFO](#)), Alexandra Mazak-Huemer ([FORWIT Austrian Council for Research Science Innovation and Technology](#)), Peter Reschenhofer ([WIFO](#)), Tim Slickers ([WIFO](#)) and Martin Wagner ([FORWIT Austrian Council for Research Science Innovation and Technology](#)).

Abstract. Innovation is crucial for economic development and tackling societal challenges. Yet is a complex phenomenon driven by many different factors. Efforts at comparing innovation performance and its drivers internationally often have to limit the information they present. Ease of communication is prioritised over details on the drivers of differences in performance. A standardised set of indicators leaves no room for country-specific issues. We develop a unique web-based tool to tackle all three challenges – easy to understand, but comprehensive information on innovation, which can be tailored to specific country contexts. It does not just show which country achieves high innovation performance, but also where performance differences reside, contributing to an evidence-base which can be used as a starting point for further analyses or reforms to boost innovation. We also look at directional innovation activities, with a view to the importance of transformative innovation policy.

The Challenging Search for Research on the Environmental Impacts of Artificial Intelligence.

Alan Porter ([search technology](#)).

Abstract. We present our search for research related to artificial intelligence's negative environmental impacts (AI-EI) with two aims. First, we present our multifaceted search to inform others who study this research domain of particularly difficult confounding with research on AI's positive environmental roles. Second, we present tradeoffs in uneven sampling of multidisciplinary contributions and combining Boolean and snowball searching, demanding manual assessment of each candidate abstract record to determine inclusion or not. Analysts beware!

Utilising structural causal models to improve the study of science.

Thomas Klebel ([Know-Center GmbH](#)) and Vincent Traag ([Centre for Science and Technology Studies \(CWTS\), Leiden University](#)).

Abstract. Sound causal inference is crucial for advancing the study of science, but many publications in science studies lack appropriate methods to substantiate their causal claims. Using the example of Open Science, our poster provides an overview of structural causal models and how they allow researchers to make their causal assumptions transparent, providing a foundation for causal inference in quantitative science studies.

Using missing data patterns to detect incorrectly assigned articles in bibliographic datasets.

Simon Willemin ([ETH Library, ETH Zurich](#)).

Abstract. The DORA declaration and CoARA call for the use of bibliometric indicators based on open data. However, established scholarly metadata datasets are closed, and the quality of open datasets has not yet been thoroughly examined. In this paper, I present a method to detect errors in a dataset using missing data patterns. As an example, the method is applied to the affiliation metadata of publications associated with ETH Zurich. This allows me to identify a series of incorrectly affiliated papers. The method introduced in this paper is not specifically designed for affiliation data and can also be used to detect errors in other types of data. It could lead to corrections which will hopefully benefit providers as well as users of data.

The Impact of Knowledge Recombination on Technology Team Disruptive Innovation from an Open Science Perspective.

Tao Wang ([School of Information Management, Nanjing University, No. 163 Xianlin Avenue, Nanjing, China](#)), Jiajie Wang ([School of Information Management, Nanjing University, No. 163 Xianlin Avenue, Nanjing, China](#)), Jing Shi ([School of Information Management, Nanjing University, No. 163 Xianlin Avenue, Nanjing, China](#)), Keye Wu ([School of Information Management, Nanjing University, No. 163 Xianlin Avenue, Nanjing, China](#)) and Jianjun Sun ([School of Information Management, Nanjing University, No. 163 Xianlin Avenue, Nanjing, China](#)).

Abstract. Knowledge recombination is considered an important way for teams to gain an innovative advantage in the era of big science. However, few empirical studies have revealed the role of differential knowledge recombination behaviors in disruptive innovation in technology teams. This study examined the differential impacts of exploratory and exploitative knowledge recombination on disruptive innovation within technology teams, analyzed biopharmaceutical patents from 2000 to 2019 sourced from PATSTAT and PCS databases. Results indicate that while exploratory recombination positively influences disruptive innovation, exploitative recombination exhibits a negative correlation. Moreover, open science enhances the positive effects of exploratory recombination but negatively moderates the impact of exploitative strategies on innovation. These findings suggest that successful disruptive innovation requires teams to align their knowledge recombination behaviors with organizational capabilities and leverage the supportive role of open science.

Open Innovation and Inventor Mobility: Harnessing Knowledge Complementarity and Substitutability in Team Dual Innovation.

Jiajie Wang (School of Information Management, Nanjing University), Tao Wang (School of Information Management, Nanjing University), Jianjun Sun (School of Information Management, Nanjing University), Li Zhang (School of Information Management, Nanjing University) and Xinyi Xiao (Taizhou Institute of Sci.&Tech.,NJUST).

Abstract. This study delves into the impact of inventor mobility on team innovation within the framework of knowledge coupling and open science, which emphasizes how the mobility of inventors across teams fosters the creation of diverse knowledge networks. Analyzing 108,468 instances of inventor mobility from the PATSTAT database, we uncover a nuanced relationship between knowledge dynamics and team dual innovation. Specifically, we find that knowledge complementarity significantly boosts teams' exploratory innovation, whereas knowledge substitutability is more aligned with teams' exploitative innovation. By spotlighting the intersection of open innovation practices with inventor mobility, our findings offer valuable insights for fostering collaborative environments and shaping effective innovation policies. This paper contributes to the broader discourse on open science by elucidating the dual influence of openness on the innovation trajectory of inventors and teams.

A comparison of the Real Influence and Journal Impact Factor indicators: a study with Open Access journals in Library and Information Science.

Antonio Perianes-Rodríguez (Universidad Carlos III de Madrid), Daniel Martínez-Ávila (Universidad de León), Bianca Savegnago de Mira (Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP)) and Maria Cláudia Cabrini Grácio (Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP)).

Abstract. In this study we compare the characteristics of Real Influence, a new indicator based on the distribution of percentiles, and the Journal Impact Factor to assess the influence of scientific journals and publications. For the comparison, we analyzed the performance of open access journals in the Library Science and Information Science category.

Assessing Innovation Quality of Regional Leading Industries from Patent Navigation Perspective.

Xiaoyu Wang (National Science Library (Chengdu), Chinese Academy of Sciences), Xian Zhang (National Science Library (Chengdu), Chinese Academy of Sciences; University of Chinese Academy of Sciences), Yi Xu (National Science Library (Chengdu), Chinese Academy of Sciences; University of Chinese Academy of Sciences) and Shuying Li (National Science Library (Chengdu), Chinese Academy of Sciences).

Abstract. The construction of the China's Chengdu-Chongqing economic circle is a major measure to build a new development pattern dominated by the China's domestic cycle and mutually reinforcing domestic and international dual cycles. Chengdu High-tech Industrial Development Zone and Chongqing High-tech Industrial Development Zone are the "vanguards" in the construction of the Chengdu-Chongqing economic circle. Introducing the concept of patent navigation into regional industrial innovation evaluation, this paper constructs a progressive approach for industrial innovation quality research which consists of "innovation fundamentals judgment, input-output benefit measurement, innovation quality evaluation, and innovation path research". The methodology include an evaluation index system of industrial innovation quality, and a dynamic coordination analysis model of the innovation system.

The development of an open research intelligence tool for rare disease research in the Netherlands.

Rik Iping (Erasmus MC), Ilse Nederveen (Erasmus MC), Bijan Ranjbar-Sahraei (MyDataExpert), Hosein Azarbondy (Elsevier), Max Dumoulin (Elsevier), Georgios Tsatsaronis (Elsevier) and Irene Mathijssen (Erasmus MC).

Abstract. This article describes the process of the development of a research intelligence tool to analyse rare disease research in the Netherlands through a partnership by NFU (Dutch Federation of University Medical Centers) and Elsevier. To the best of our knowledge, this is the first tool that can surface and organise scientific output on rare diseases using established annotation and natural language processing mechanisms. We focus on the track leading up to the development, including strategic motivation and user needs, the development of a proof-of-concept tool, upscaling the idea to a national collaboration project, the development of the final tool and a usability evaluation and subsequent fine-tuning. Special attention is devoted to open science aspects of this process and reflections on the partnership between academic institutions and a publishing company.

An analysis of the effects of sharing research data, code, and preprints on citations.

Giovanni Colavizza (University of Bologna), Lauren Cadwallader (PLOS), Marcel LaFlamme (PLOS) and Iain Hrynaszkiewicz (PLOS).

Abstract. Open science practices include sharing results before peer review, via preprints; releasing data and code to make results reproducible and facilitate their extension in future work. We investigate whether following one or more open science practices correlates with a citation advantage. We use the Open Science Indicators dataset produced by PLOS and DataSeer, including all PLOS publications from 2018 to 2023, and a comparison dataset sampled from the PMC Open Access Subset. We analyze circa 122'000 publications and find that early release of a publication as a preprint correlates with a significant positive citation advantage of about 19.6% (± 7) on average and that sharing data in an online repository correlates with a positive citation advantage of 4.5% (± 8) on average. We do not find a significant citation advantage for sharing code. This article is an abridged version of a full-length preprint, which will be submitted to arXiv in 2024.

Looking for evidence of independent researchers in bibliographic records: an exploration.

Eline Vandewalle (University of Antwerp, Centre for Research & Development Monitoring (ECOOM)) and Camilla Lindelöw (University of Borås, Swedish School of Library and Information Science).

Abstract. Independent researchers or scholars have always (co-)existed with academic professionals. The term independent researcher has been used to refer to various phenomena at different times - from the historical researchers pursuing their research interests independently to today's researchers struggling to find permanent positions or funding. Bibliographical data sources offer a possibility to learn more about these researchers, but they do not provide a full picture. In this exploratory study, we compare three different data sources: Web of Science, Scopus and OpenAlex. All three sources show an increase in records associated with independent researchers, and the amount of records varies. We use OpenAlex to further explore publications by independent researchers active in the Social Sciences and Humanities (SSH). We provide an overview of the topics and the forms of open access publishing. We also explore different career trajectories based on the full publication history of independent researchers.

Ordovician scientometrics: a methodological approach.

Alysson Mazoni (Institute of Geosciences - University of Campinas), Carolina Zabini (Institute of Geosciences - University of Campinas) and João Maricato (University of Brasília).

Abstract. We apply a recent attempt at research field classification based on direct citation as a methodology over a specific subfield of palaeontology, namely Ordovician studies. The classification creates clusters of publications using direct citation with the Leiden Algorithm. Besides choosing to redo it using a smaller dataset and more specific field, we have considered describing the cluster using only the most central of the most cited publications, creating a more meaningful label for the clusters using a Large Language Model. Also, we study productivity of the cluster across time in an attempt to describe predominance of topics. The results indicate that the methodology is successful in specific areas and can help scientometric studies.

A new approach for collecting academic profession data: What can(not) ChatGPT yield?

Pinar Eldemir (Università della Svizzera italiana), Benedetto Lepori (Università della Svizzera italiana) and Marek Kwiek (Adam Mickiewicz University).

Abstract. This paper examines the possible usage of generative artificial intelligence (AI, and specifically of ChatGPT), in gathering the academic affiliation data of faculty members. By applying a comparative analysis using manually collected data for 100 faculty members with publicly available academic profession details, we seek to test whether ChatGPT is efficient for data collection regarding the academic affiliations of the faculty members by comparing the manually collected data and the data generated by ChatGPT.

Sizing the Movement: The trajectory of research culture in the UK.

Silvia Dobre (Elsevier) and Andrew Plume (Elsevier).

Abstract. This poster explores the initiatives, stakeholders, and contributions shaping the research culture discourse in the UK, driven by the redesigned national research assessment exercise and its emphasis on rewarding positive research environments. While related articles and events emerged seven years ago, their depth and variety have increased substantially in recent years. The study reveals a diverse array of actors engaged in research culture discussions and examines trends in research culture topics alongside the higher education sector's response: job postings, teams' size and profile. The analysis highlights which are the themes that universities are focusing on, what initiatives, policies, activities and events are at the core of the research culture and how open are these discussions. While the rise of the research culture in UK is parallel to and linked with the rise of the open research agenda, the emerging evaluating indicators are signalling a broader shift in research assessment practices.

Berlin Science Survey - Bringing the Scientists' Perspectives into Research Evaluation.

Jens Ambrasat (Robert K. Merton Center for Science Studies, Humboldt University of Berlin), Denise Lüdtke (Robert K. Merton Center for Science Studies, Humboldt University of Berlin), Yoanna Yankova (Robert K. Merton Center for Science Studies, Humboldt University of Berlin) and Josef Cutler (Robert K. Merton Center for Science Studies, Humboldt University of Berlin).

Abstract. The Berlin Science Survey (BSS) is a scientific trend study to monitor changing research cultures in the Berlin area. It represents a participatory approach that aims to make the experiences and assessments of researchers fruitful for research evaluation. The poster presents the latest results of the 2024 survey, which focus on the relationship between research environment, work cultures and research quality.

A quantitative assessment of CSC scholarship in the context of the home and host countries.

Qianqian Xie (CWTS, Leiden university).

Abstract. Our work assesses the effectiveness of CSC program through the research performance of CSC recipients and compare it to that of their home and host countries' counterparts. We contextualized CSC awardees' performance benchmarking against their home and host countries' counterparts, by using normalized mean citation score (MNCS) and the proportion of highly cited papers (PP(top 10%)) and the proportion of open access papers (PP_OA). Our work reveals CSC-funded papers overall consistently demonstrate superior scientific research and open access performance compared to Chinese researchers of same period. Additionally, within Physical Sciences and Engineering and Mathematics & Computer Science, CSC awardees exceeded than their hosting countries with high MNCS and PP (top 10%), but in some countries CSC awardees (e.g. the US, Canada, Australia et al) have lower open access rates. Conversely, in Biomedical and Health Sciences, CSC awardees show inferior performance but a higher open access percentage compared to their counterparts.

Citation impact: How Switzerland, the UK and the EU benefit from Horizon Europe and collaborations.

Roland Suri (ETH Library, ETH Zurich, Switzerland), David Johann (ETH Library, ETH Zurich, Switzerland) and Julian Dederke (ETH Library, ETH Zurich, Switzerland).

Abstract. Researchers working in Switzerland (CH) and the United Kingdom (UK) were initially excluded from Horizon Europe programs offered by the European Commission (EC) and the European Research Council (ERC). The question arises as to whether an exclusion from Horizon Europe reduces scientific success of researchers working in CH, the UK, and the European Union (EU) in terms of citation impact. To answer this question, we evaluate the field-normalized citation rates of journal articles published in recent years (citation impact) and examine how international cooperation between these countries and funding by specific funding agencies, respectively, are related to citation impact. Our results suggest that a lower level of CH-EU or UK-EU cooperation would lead to a loss of citation impact among researchers in these countries, with the EU losing more by not collaborating with CH and UK than CH or UK would lose by not collaborating with the EU.

Matching reviewers to applications based on research expertise.

Sandra Schluttenhofer (Novo Nordisk Foundation), Raquel Roses (Novo Nordisk Foundation) and Rasmus Jensen (Novo Nordisk Foundation).

Abstract. We introduce a modular recommender system to enhance the Novo Nordisk Foundation's application review process. By leveraging advanced analytics (NLP, topic modelling etc.) and Dimensions.ai, the system matches applications with the most suitable reviewers, addressing challenges of bias, workload distribution, and skills matching. The goal is to make the review process more efficient, fair, and transparent, ensuring merit-based evaluations. Its development supports the Foundation's mission of fostering impactful and innovative research.

Research on the Layout and Association Characteristics of Independently-set Interdisciplines in China.

Zenghui Yue (School of Medical Information Engineering, Jining Medical University), Guoting Yuan (School of Foreign Languages, Jining Medical University) and Haiyun Xu (Business School, Shandong University of Technology).

Abstract. Intersection and integration of disciplines is an important feature of the science and technology development, and a key source for the emergence of new disciplines. With the list of interdisciplines set up independently by colleges and universities in China as the research object, the quantitative distribution and association features of independently-set interdisciplines and their supporting disciplines are systematically analyzed by means of statistical analysis, social network analysis, etc. The findings are as follows. Management Science and Engineering and Computer Science and Technology are the two most important source disciplines for independently-set interdisciplines in China, and Engineering Science is the core force in promoting the development of them; there are prominent cohesion effects of closely related first-level disciplines that supports independently-set interdisciplines; the level of interdisciplines needs further improvements; the mediating roles of different disciplines and their impact on intersection and integration of knowledge indicate certain differences.

Where do Chinese scholars move to: an open-source investigation.

Wei Quan (Educational Science Institute, Hunan University, China), Huilin Ge (Centre for Science and Technology Studies (CWTS), Leiden University, Netherlands) and Rodrigo Costas (Centre for Science and Technology Studies (CWTS), Leiden University, Netherlands).

Abstract. This study presents the overview of Chinese scholars' international mobility based on bibliometrics data from Dimension. We identify 2,446,785 individual researchers affiliated with China from the 2000-2022 period. Based on those data, we find that 2,381,665 researchers are not moving in their academic careers, and 65,120 researchers have international mobile footprints. Furthermore, after distinguishing China as an origin country and destination country, we find that China has been losing researchers since 2000, with the United States being the main destination for those who move internationally. What's more, we find that when scholars move, they generally do not change their research fields on a large scale, but some do change their fields, particularly in the social sciences. Our study illustrates the landscape of Chinese researchers' international mobility and highlights the flow patterns.

Mapping academic portfolios: A comprehensive analysis of Spanish ORCID profiles.

Wenceslao Arroyo-Machado (School of Public Affairs, Arizona State University, Phoenix, AZ 85004, USA), Benjamín Vargas-Quesada (Unit for Computational Humanities and Social Sciences (U-CHASS), University of Granada, Granada, Spain), Teresa Muñoz-Écija (Independent researcher, Granada, Spain) and Zaida Chinchilla-Rodríguez (Institute of Public Goods and Policies (IPP), CSIC, Madrid, Spain).

Abstract. This research-in-progress paper explores scope and challenges of the ORCID' adoption by Spanish individuals. A sample of 182.457 records has been retrieved from ORCID. The preliminary results highlight a significant adoption of ORCID in Spain, specifically in Spanish researchers, as the overlap with the OpenAlex database reveals a strong overlap. However, the completeness of ORCID metadata fields varies, indicating uneven usage. Our findings suggest that the development of targeted educational programs and the integration of interoperability systems, which enable automatic updating of metadata, are needed. This improvement would optimise the utility of ORCID in supporting transparent and accurate academic profiling, thereby enriching the global research ecosystem.

Structure of academic publishing system: journal name signaling.

Angelika Tsvinskaya (Center for Institutional Analysis of Science & Education (European University at St. Petersburg)).

Abstract. This study examines whether journal name change signal shifts towards new markets, impacting indicators like author diversity and citation rates. We investigate this phenomenon by analyzing bibliometric data to assess if name change serves as a signal for audience transformation, potentially broadening readership and attracting new authors. Our focus extends to university journals, often altering names to distance from exclusivity perceptions. Results indicate that such journals tend to have lower author h-index, higher concentration of authors from a single organization, and shorter papers. This research contributes to understanding how journal identity impacts scholarly communication dynamics and may offer insights applicable beyond specific cases.

Gender and career progression in academia: European evidence.

Lucio Morettini (National Research Council) and Massimiliano Tani (University of New South Wales).

Abstract. This article presents a study focusing on career analyses of researchers in Europe, with a particular emphasis on the factors influencing the speed of career progression. Special attention is given to gender comparison, as the examination of gender disparities in career timelines remains an underexplored topic in the academic literature. The analysis is based on data collected within the framework of the MORE project (Mobility Survey of the Higher Education Sector), a longitudinal database that gathers survey responses from over 10,000 university researchers across Europe. The findings reveal that although women have lower probabilities of advancement, those who do succeed in progressing exhibit a faster pace of career development compared to their male counterparts at equivalent career levels. This faster progression among women is influenced by greater female presence in academic environments. These findings contribute to a deeper understanding of the dynamics career progression among researchers from a gender perspective.

Quantitative Identification of Breakthrough Inventions Targeting Non-novel Technical Issues.

Ying Huang (School of Information Management, Wuhan University), Dongmei Ye (School of Information Management, Wuhan University), Jia Yuan (School of Information Management, Wuhan University) and Chongjun Xi (National Science Library, Chinese Academy of Sciences).

Abstract. Exploring technological breakthroughs is of great theoretical and practical significance. Existing technological breakthrough research focuses on the novelty and impact assessment of technologies, while generally ignoring the potential breakthrough progress that can arise from the upgrading of technologies that are not novel. Technological improvements toward non-novel technical issues will largely involve longstanding technical challenges and are therefore daunting. Overcoming these challenges is, in essence, a process of technological breakthrough, as is the creation of something new. In this study, we first advocates that inventions aiming to overcome longstanding technical challenges should be recognized as breakthroughs if they have generated widespread attention within the domain and spurred a series of technical endeavors. Thus, our definition of a technological breakthrough expands the conventional understanding of technological breakthrough, which focuses on "novelty" or "impact", or a comprehensive consideration of both. Furthermore, we propose an operational methodology and process for identifying these breakthrough inventions.

Equity in Scholarly Visibility: Bridging the Gap for Journals using Open Journal Systems in OpenAlex.

Diego Chavarro (ScholCommLab & Public Knowledge Project, Simon Fraser University, Canada) and Juan Pablo Alperín (ScholCommLab & Public Knowledge Project, Simon Fraser University, Canada).

Abstract. OJS is a manuscript management and publishing platform used by thousands of journals, many of which are published by scholars and institutions in the Global South. A recent analysis using ISSNs estimated that only 64% of the journals using OJS were included in the OpenAlex database, despite this source's inclusive indexing policies. This study scrutinizes the integration of journals using OJS in OpenAlex by focusing on a more manageable and verified list of 471 Canadian journals. Our findings reveal a coverage of 74%, which is higher than the global average. Yet, 26% of Canadian journals remain uncovered, prompting an investigation into the underlying causes. We advocate for a revision of OpenAlex's indexing practices to better identify and incorporate journals published by smaller publishers that are distributed around the world, such as those using OJS. Doing so would help OpenAlex champion a scholarly environment that is truly representative and equitable.

New data and code for customised research evaluation.

Jeroen Bosman (Utrecht University) and Bianca Kramer (Sesame Open Science).

Abstract. There are continuing calls to adapt or even redesign research evaluation. These calls are based on goals that are part of the transitions towards open science and fairer recognition and rewards. While most calls for changes in research evaluation critique the application of crude metrics, they still see a role for (quantitative and qualitative) evidence to inform and balance narratives used in assessment. This poster matches ongoing changes at the supply side of data (sharing platforms, registries, aggregators, service providers) with specific tenets on the demand side (open science practices, bibliodiversity, inclusivity, team science, formative assessment, academic governance and more). It includes promising examples of open source and collaborative code already available or under development and suggests next steps for the research intelligence community in facilitating this development towards supporting customized research evaluations.

Task Division in Research Collaborations between High and Low-Income Countries.

Annika Ralfs (Lund University), Vinicius Muraro (Lund University), Alysson Mazoni (University of Campinas) and Pauline Mattsson (Lund University).

Abstract. In a science system characterised by persistent inequalities within and between countries, research collaboration can either be a way to bridge disparities of scientific capital or contribute to the perpetuation of inequality, for instance, manifesting in the division of tasks. The increasingly widespread assessment of contributorship (CRediT) allows the study of task allocation in more large-scale quantitative terms than before. Based on 1,454 articles published in PLoS journals, we employ exploratory factor and logistic regression analyses to investigate if unequal scientific capital between researchers in high and low-income countries manifests in the division of tasks in their collaborations. We find that data tends to be collected in low-income countries, and analyzed and written up for publication in high-income countries. Employing new contributorship data that aims to enhance transparency allows us to explore task allocation as one facet of openness in science and potentially highlight global disparities in science.

Connecting health research efforts and social attention: A dual analysis of local and international perspectives on Wikipedia and OpenAlex.

Wenceslao Arroyo-Machado (School of Public Affairs, Arizona State University, Phoenix, AZ 85004, USA), Rodrigo Costas (Centre for Science and Technology Studies (CWTS), Leiden University, the Netherlands) and Adrián A. Díaz-Faes (INGENIO (CSIC-UPV), Universitat Politècnica de València, Camino de Vera s/n, 46022 Valencia, Spain).

Abstract. This research-in-progress paper examines the alignment between public interest, as evidenced by Wikipedia page views, and the distribution of academic resources across various health conditions. Utilising data from Wikipedia, Wikidata, and OpenAlex, the study reveals both relevant geographical correlations and notable gaps in how diseases are addressed in academic research compared to their visibility in social media. Moreover, discrepancies in content quality on Wikipedia pages indicate potential biases in the global research agenda. These findings underscore the importance of considering both social and academic metrics to address misalignments and advocate for a more equitable distribution of research resources in the biomedical sciences.

Measuring Credibility in Science.

Deyun Yin (Harbin Institute of Technology (Shenzhen), School of Economics and Management, Shenzhen), Jiaoyang Chen (Harbin Institute of Technology (Shenzhen), School of Economics and Management, Shenzhen), Shibayama Sotaro (Lund University, School of Economics and Management, Lund, Sweden) and Zhao Wu (Harbin Institute of Technology (Shenzhen), School of Economics and Management, Shenzhen).

Abstract. Scientific credibility is key for science's advancement as well as science-related policymaking. However, this concept has rarely been quantified or predicated. This paper intends to measure and predicate the credibility of scientific documents based on full-text data and citation data. Through sentiment analysis of scientific documents' research findings as well as citations to the focal paper, this paper measures both a paper's authors' expressed credibility towards their findings and its perceived credibility by other scholars. Correlation analysis with survey data shows that our constructed measure would capture the credibility of scientific documents well.

Mapping the UN Second World Ocean Assessment: Challenges and opportunities.

Poppy Riddle (Dalhousie University), Rémi Toupin (Dalhousie University), Geoff Krause (Dalhousie University), Madelaine Hare (University of Ottawa) and Philippe Mongeon (Dalhousie University and Université du Québec à Montréal).

Abstract. Our project aims to use the reports from the United Nations Second World Ocean Assessment (WOA II) to build a global corpus of ocean research literature using citation and search-based information retrieval approaches. In this first step towards this larger goal, we extracted references from the WOA II, collected their identifiers with Crossref and OpenAlex, and used VosViewer and Gephi to create and visualize citation-based networks of the literature mobilized in the reports. Our preliminary analysis shows that 76% of references had DOIs, with a significant portion lacking adequate metadata, highlighting the need for metadata enrichment, especially for chapters with references lacking this information. Despite these challenges, the maps show promise for reflecting the structure of the WOA II, identifying clusters, and developing search strategies to retrieve a more comprehensive set of literature on these topics.

Understanding Public Use of Open Access Research: Evidence from the Harvard DASH Repository .

Ameet Doshi (Princeton University).

Abstract. Understanding the context of open science use remains a challenge. Non-researcher use of scholarly information is particularly difficult to capture given the dearth of metrics and metadata needed to structure an empirical inquiry. The "Your Story Matters" program at the Harvard DASH repository is a rare systematic effort to monitor use of OA. The site captures anecdotes about the impact that OA has on those outside of the US academy. For this project, the data consist of 3,548 user comments (e.g. DASH "stories") from 2012 to 2018. The proposed poster describes the nature of this OA use, with particular attention paid to public users. The methodological tools deployed involve classification via supervised machine learning and N-grams. I find that Economic research is of greatest interest among the general public, and non-US international use is also predominant. The research has implications for how to measure contextual impact of Open Science.

Untangling the complex pattern of international talent mobility in science.

Meijun Liu (Fudan University), Alex Jie Yang (Nanjing University), Yi Bu (Peking University), Yifan Tian (Peking University) and Liying Guo (Xi'an Jiaotong University).

Abstract. This paper presents a comprehensive analysis of global talent mobility networks spanning from 1950 to 2020, utilizing data encompassing country-level, city-level, and institutional-level networks. Leveraging network science methodologies, we investigate both Small-world and Scale-Free attributes within these networks, shedding light on their structural complexities and dynamic patterns over time. Our findings reveal increasing interconnectedness and efficiency in talent mobility, as evidenced by rising average clustering coefficients and decreasing average path lengths. Additionally, we identify Scale-Free patterns characterized by heterogeneous distributions of node degrees, highlighting the presence of influential hubs within the mobility networks. These insights offer valuable perspectives on the evolving landscape of global talent exchange and collaboration within the scientific community.