The Multiversatory: Fostering Diversity and Inclusion in Research Information by Means of a Multiple-Perspective Observatory

Ismael Rafols, Rodrigo Costas, Louise Bezuidenhout & André Brasil
CWTS, Leiden University
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Abstract

For science and technology to contribute to social justice, scientometrics analyses need to be able to produce descriptions that are appropriate to specific contexts and values. Given that the participation of stakeholders in the analyses is crucial for these perspectives to be realized, this requires research information analyses that are "open". In this essay, we propose that this "openness" in research information concerns several dimensions. In the first place, research information should be open in the sense of being *transparent and accessible*. Second, research information should be open in the sense of being *inclusive and diverse*, which includes two dimensions: that stakeholders can actually use it, and that the contents include different types of knowledge. Third, the research information should be provided in forms that *empower interrogation* by stakeholders, so that they can retrieve and construct the descriptions of science and technology that are more appropriate for their context. This last step implies efforts to make visible many scientific contributions from the global south which are currently invisible. We call this vision "the multiversatory": an approach to the observation of science that facilitates pluralistic analyses of the knowledge created across a variety of places and contexts, the pluriverse.

Keywords: observatory, research information, monitoring, diversity, inclusion

Introduction

Scholarly knowledge has been and remains a key component for colonial and contemporary societies, including how they create and extract wealth and resources from some territories and social groups (Harding, 2008). Social and territorial inequalities are partly explained by the privileged access of some groups to this scholarly knowledge and associated technologies, which allow these groups to keep their hegemonic positions. Nevertheless, not just access, but also the type of knowledge that is produced,

reproduced and made visible in academia is responsible for how societies remain unequal. Some forms of knowledge might foster more equal societies than others.

For example, in health sciences, new knowledge on prevention or health systems management are more likely to have equitable outcomes than discoveries leading to therapeutic approaches.

How can research information help in making scholarship a force for social justice? The answer is not going to be just about library and information infrastructures that facilitate a more democratic access to knowledge – this is important, but it is not enough. Also needed are library and information infrastructures that include types of knowledge, in particular those types of knowledge that are more conducive to social justice, as well as retrieval and analytical processes that make equally visible different (but legitimate) scholarly or scientific perspectives: for example that low-tech solutions (such as some herbal medicines or insecticide nets) can be sometimes more effective than highly sophisticated technologies (such as expensive pharmaceutical drugs).

In this contribution, we will explore these aspects in the case of research information infrastructures. By research information infrastructures we refer to the databases, digital platforms, analytical tools such as indicators or visualisation devices, etcetera, that are used by academic and policy organisations to inform decisions on research evaluation, management and policies. The essay is organised as follows. First, we describe the problem lack of diversity, given the marginalisation of some forms of knowledge, particularly those related to place-based knowledge in non-hegemonic spaces. Second, we discuss the relevance of epistemic diversity in the face of a changing goals of science in society. Third, we show how cognitive biases can be addressed with more inclusive and diverse research information infrastructure. Fourth, we propose an analytical framework for pluralising research information.

The essay finishes with a proposal of a multi-perspective observatory, *the multiversatory*, that weaves the insights discussed in a specific combination of research information infrastructure and participatory process. The multiversatory is a vision of an observatory of science and technology that allows multiple perspectives on the research that is observed through the active engagement of users. In doing so, the multiversatory would ideally be a means to bring to make visible the research topics that matter for social justice from the particular standpoints of marginalised populations, in contrast to the conventional indicators and descriptions.

Research problem and objectives

The key question that this essay aims to address is: how can research information infrastructures be designed so that they make diverse knowledge more publicly accessible and visible?

This aim depends on three related issues:

- The plurality of knowledge available for a given issue.
- The context of the knowledge, so that the user can choose those relevant for them, given their particular places and values.
- The types of knowledge that can support social justice, which may often be invisible or marginalised

A new understanding of the relationship between research and society is emerging, with more emphasis on the social missions and outcomes of science. This understanding poses new demands in terms of how and what type of research information is needed, in particular for research to be a public good. A recent initiative, the *Barcelona Declaration on Research Assessment* (2024)[1] highlights the need of research information infrastructures to be "open", in the sense of transparency and accessibility. We propose, as suggested also by *Declaration*, that Open Research Infrastructures also need to be inclusive and diverse – i.e. encompass knowledge from various disciplines and territories, and that this is best achieved with decentralised and federated infrastructures (Babini et al., 2024).

In this context, our objective is to address the need for analytical tools that are pluralistic and contextualised in the type of outputs produced (indicators, visualisations) (Rafols & Stirling, 2021). There is evidence that inappropriate use of technologies due to poor contextualisation is a major problem; retrieval and indicators that foster appropriate contextualisation might improve the impact of locally relevant knowledge (Moscona & Sastri, 2021). Social justice is best served by developing research information infrastructures that allow a plurality of perspectives regarding relevant knowledge (Leach et al., 2010). Given that the relationship between knowledge and social justice is complex, often unexpected and not necessarily linear, it is important to provide plural perspectives and make efforts to visualise the type and the sources of knowledge that are marginalised in mainstream infrastructures. We call a 'Multiversatory' the approach that mobilises research information infrastructures to provid a plurality of perspectives, and then through engagement with users, it allows to co-create indicators and descriptions of science that are appropriate for specific contexts and goals.

[1] https://barcelona-declaration.org/

Review: the changing understanding of science and its relation to society

The understanding and the expectations on how research can contribute to society have significantly changed in the last decades (Gibbons, 1999). In the postwar, the dominant science policy model assumed that scientific knowledge would trickle down to technology, that technology would lead to innovation and then, that innovation would transform into well-being. The emergence of countries such as Japan or South Korea, that developed high technological capabilities without having excellent research systems challenged this perception (Schot & Steinmueller, 2018). Instead, it was realised that positive interactions between academic, industrial and social actors in the 'innovation system' were crucial for knowledge to translate into innovation (Fagerberg, 2004).

However, successful 'innovation systems' were not sufficient for innovation to lead to well-being, since many innovations actually had unexpected effects with problematic consequences for health, the environment, social equality or lifestyles. As a result, in the last 10-20 years, new models of science policy have been proposed that not only take into account the importance of interactions between academic and non-academic actors, but that also explicitly consider the social and environmental effects of research choices (Schot & Steinmueller, 2018). The effects of research and innovation on inequalities and social justice are one of the key factors to be considered when engaging in scientific endeavours with potential innovation outcomes, as discussed in the framework of 'inclusive innovation systems' (Arocena et al., 2018).

These changes on the understanding of the relationship between science and society and on the expectations of research impact should be translated into a change in how the research system is analysed, measured and assessed. In the case of innovation, when the OECD changed its policy models from the linear to the innovation systems, it also changed its measurement from the Frascati Manual, developed in the 1960s based on an input-output framework, to the Oslo Manual, developed in the 1990s with collaborations with firms in the centre (Smith, 2004). A similar shift is needed now, in terms of how scholarly knowledge is retrieved and described – but in terms of awareness of the implications of research for the social and territorial contexts, especially in relation to marginalised places and populations.

Given the importance of interactions between academic and non-academic actors, the description of science should aim at capturing these interactions: not only the products of research, but also the processes through which knowledge is translated and used. While this is challenging, there are some new possibilities, such as the use of social media (Wouters et al., 2019). Since languages are key in the communication of scholarly knowledge to

policy and social actors, publications in national languages should be considered and duly valued (Pölönen et al., 2021).

Also, given that the contributions of research are not equally positive in terms of the social or environmental benefits (either realised or expected), the function of measuring and assessing science should shift towards learning. What matters is not if there is more or less knowledge produced, but whether the knowledge is appropriate for the problem societal actors want to address.
Take for example, the case of *podoconiosis,* an inflammation and progressive swelling of the limbs caused by exposure of bare feet to alkalic clay in Ethiopia and Cameroon. There can be research in a variety of disciplines (genetic, immunology, geology, etc.), but some not all are equally helpful in terms of the producing solutions:

> Since there is some degree of genetic susceptibility, there is genetic research into podoconiosis. However, people would not contract podoconiosis if they had shoes to wear in areas of irritant soil, and 'footwear remains an unaffordable luxury for residents of most affected areas in the tropics' (…). For want of shoes, genetic research can seem a peculiar approach to pursue. This peculiarity is not well addressed by a framework that emphasises only a misalignment between research supply and societal needs. That framework would suggest more targeted research, whereas the issue in fact relates to the kinds of research (or non-research) approaches brought to bear upon the problem. (Coburn et al., 2022)

In short, research in genetics of podoconiosis might be of interest to scientists, but in order to improve podoconiosis, one needs to understand this problem in its social and environmental context. The research information provided should sufficiently comprehensive and diverse so that broader place-based issues can be taken into account when considering the science that is needed to address a problem.

This need for context is shown, for example, when looking into the research that is potentially related to the Sustainable Development Goals (SDGs): a variety of analyses have made evident that publications cannot be univocally assigned to SDGs, as revealed by the lack of agreement across various commercial providers on the assignations of papers to SDGs (Armitage et al., 2020; Purnell, 2022). Instead, the assignation of publications to SDG should be made by stakeholders in particular places with specific values who can understand whether the knowledge in the publications is relevant in those contexts (Rafols et al., 2022).

In summary, there is an ongoing change in the relationship between science and society, and this is reflected in science policy models (Schot & Steinmueller, 2018). Such changes involve accessibility and visibility of knowledge, but also participatory processes so that citizens (including marginalised communities) can shape the plurality of ways in which science can contribute to our collective futures (Stirling, 2024).

Towards open as well as inclusive and diverse research information

Last April saw the launch of the *Barcelona Declaration on Open Research Information* (2024) as a commitment to the use of Open Information Sources by a list of renowned institutions, such as Sorbonne University in Paris, Spanish National Research Council (CSIC), the French and Dutch Funding Agencies (ANR and NWO) and the Latin American Council of Sciences (CLACSO). Its main aim is improving the free access and transparency of the scientific information used by public research organisations and universities to make strategic decisions and evaluation.

Research organisations and administration who become signatories of the *Barcelona Declaration* make commitments to use and produce *open* research information, as well as to support *open* infrastructures that facilitate it. This is a step in the direction suggested by the UNESCO Recommendation for Open Science (UNESCO, 2021, p. 34): that the monitoring of science be "supported by open non-proprietary and transparent infrastructures".

The central motivation of the *Barcelona Declaration* is transparency in assessment and decision-making: "Open research information enables science policy decisions to be made based on transparent evidence and inclusive data. It enables information used in research evaluations to be accessible and auditable by those being assessed. And it enables the global movement toward open science to be supported by information that is fully open and transparent."

But the *Barcelona Declaration* also emphasizes inclusiveness. This includes two aspects: that information can be accessed in ways that stakeholders can use it (the democratization of access) and that the contents of the information is pluralistic.

First, the democratisation of access implies that stakeholders can use the information with their resources and capabilities. Currently OpenAlex is technically accessible, but the database is so large (~1TB) that many organisations (including some governmental agencies in middle income countries) do not have the technical capabilities to use them. Intermediary interfaces have to be developed for this open access to be realised.

Second, the research information sources currently most widely used (Web of Science and Scopus), not only are behind paywalls but also have serious problems of coverage, especially in many countries of the global south. Therefore, alternative open infrastructures are also important in terms of achieving greater inclusion and diversity of information, as a step towards epistemic justice.

Previous studies have shown that mainstream research information services have a lower coverage in most countries in the global south (Chavarro, 2017; Vessuri et al., 2014). However, perhaps more importantly, it has been shown that this lower coverage also concerns languages (e.g. in Latin America, see (Brasil, 2021)) as well as research topics that are most relevant in developing contexts (Rafols et al., 2015, 2023).

As a result of these biases in the mainstream databases, some of the knowledge generated in the global south has lower visibility and prestige. This has implications in terms of the knowledge that is used – for example, it may be one of the factors why Africa and Asia often use more inappropriate technologies in agriculture according to some estimates (Moscona & Sastry, 2021).

Following these observations, Research Information Sources should not be only “open” in the sense of being accessible. They also need to be “open” in the sense of being inclusive and diverse in their epistemic contents. The bibliographic database OpenAlex[2], which is currently the main “open” alternative to the mainstream databases, has indeed a much wider coverage than mainstream (Visser et al., 2021), as shown in Figure 1. However, OpenAlex has important gaps, for example for countries with lower usage of DOIs – a fact that is sometimes related to lack of resources in local journals (as in Argentina) as well as broader geopolitical factors such as economic sanctions, as in Cuba (Bezuidenhout et al., 2019).

[2] https://openalex.org/

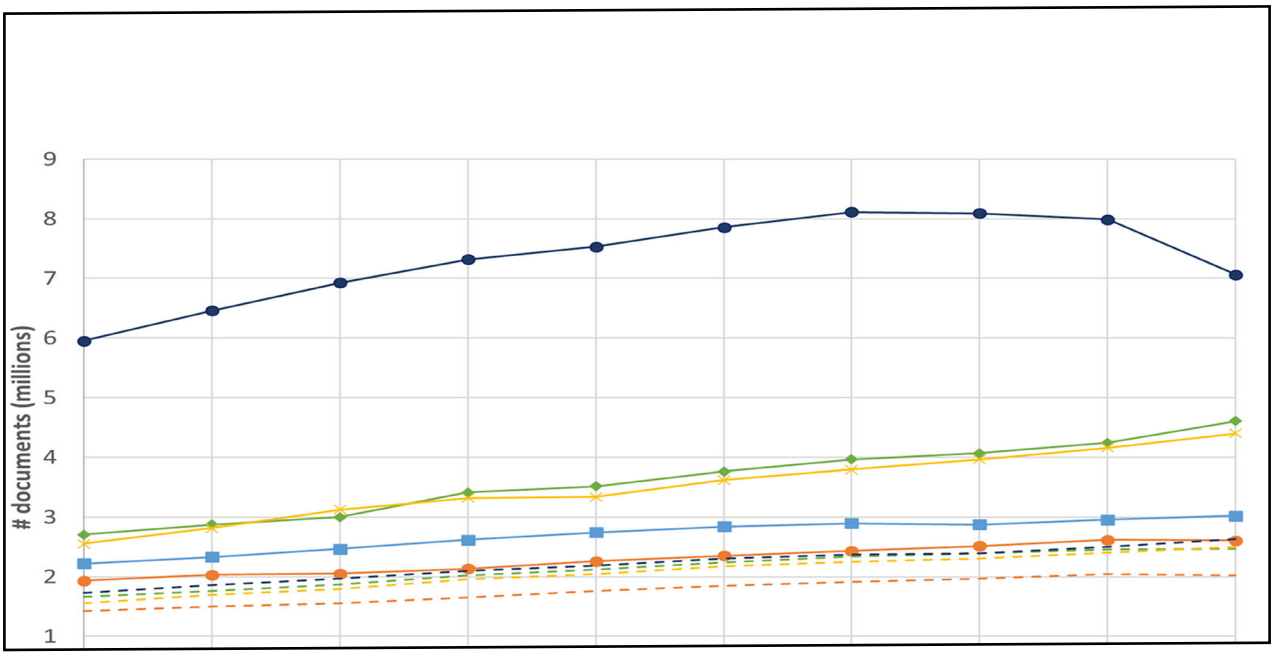

Figure 1. Number of publications per year by data source. Breakdown by publication year for all documents in each data source (solid line) and for the overlap with Scopus (dashed line). OpenAlex builds on the discontinued database Microsoft Academic. Source: Visser et al. (2021).

Therefore, we propose that alternatives to the commercial services should aim at decentralised and federated infrastructures for Research Information Sources as illustrated in Figure 2, including efforts such as OpenAlex, but also regional efforts such as Redalyc and Scielo in Latin America or AJOL (African Journal OnLine).

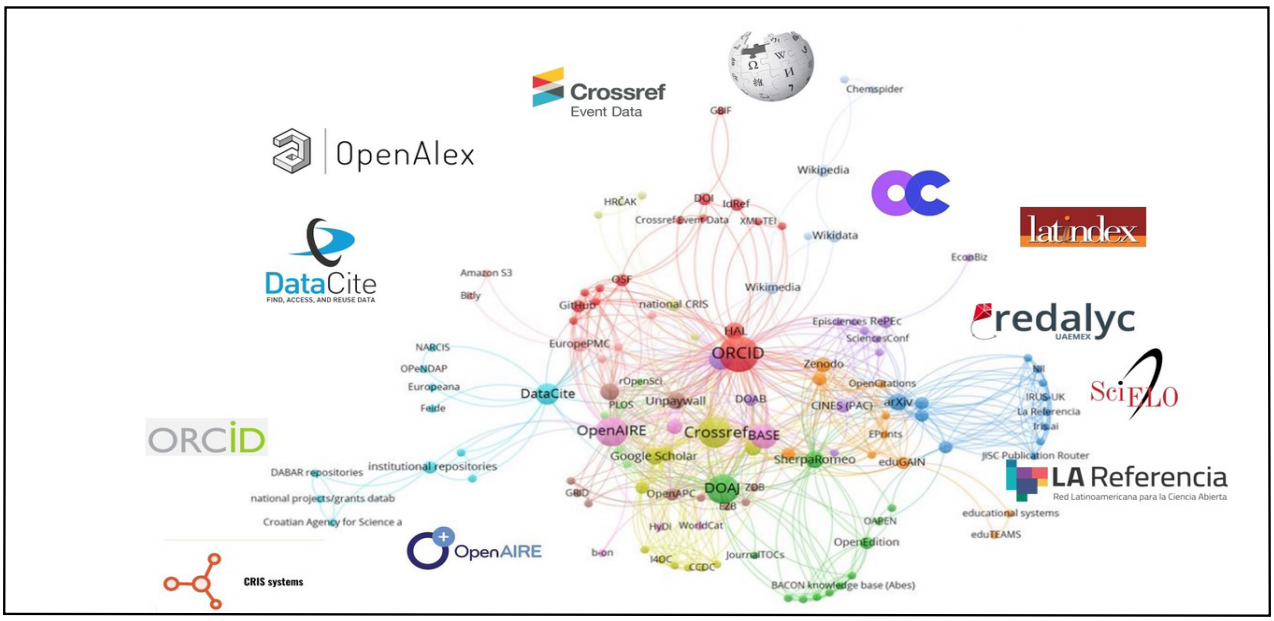

Figure 2. An illustration of a potential federation of open research information sources, with some prominent open research information sources. Based on Ficarra et al. (2020).

The federation of infrastructures have several advantages (Babini et al., 2024). In the first place, federation allows the capture of scientific outputs that are registered by regional databases in the global south and not covered in mainstream databases. Second, metadata of regional databases may in some cases be deeper and more attuned to specific regional contexts. Third, decentralised infrastructures allow more epistemic pluralism, thus avoiding the danger that the choices of larger or dominant scientific groups are adopted by default (e.g. in classifications).

The challenge of decentralised and federated infrastructures is the complexity of combining them to conduct analysis. Federative platforms need to be developed for the integration to benefit users of bibliometrics.
In a recent blogpost, we illustrated how such federation and democratization could be achieved in an open and collaborative manner (Mazoni & Costas, 2024). In the context of the project InSySPo[3], developed at the University of Campinas (Brazil) using cloud computing technology (Google BigQuery (GBQ)), we demonstrated how it is possible to publicly make available a whole range of open data sources, including but not restricted to OpenAlex, SciELO, ORCID or Brazilian CAPES data. These data sources combined in this platform are freely available to anybody with a GMAIL account. They can be accessed through the following link: https://console.cloud.google.com/bigquery?project=insyspo.

This “Campinas experience” offered valuable insights into the importance on how the democratization of access to open research information systems can be achieved. A key lesson is the importance of making open data not only available but also accessible and usable to broader communities, a point usually overlooked in open science debates, that typically focus on the “open” component of data and infrastructures, but then overlook the communities that need or would benefit the most from such infrastructures (e.g. policy makers, science journalists or research managers).

The project demonstrated that cloud-based solutions like Google BigQuery could significantly lower the barriers to accessing and working with large, complex datasets, which require advanced technical skills and infrastructure. The Campinas experience also showed how it is possible to avoid resource-intensive (and expensive) processes of setting up physical servers, by enabling quicker deployment and easier access, especially for those with limited resources. Additionally, the possibility of making datasets publicly available through platforms like Google BigQuery highlighted the potential for widespread collaboration and data reuse across diverse user groups.
The experience also called attention to the need for training and capacity building to

[3] https://www.ige.unicamp.br/insyspo/

empower users with the necessary skills to work effectively with open data, ensuring that a broader range of stakeholders can benefit. Our experience also emphasized the need for sustainability and collective action, advocating for collaborative efforts in sharing costs, platforms and data contributions, and developing common standards to ensure the long-term viability and expansion of open research information systems.

In the evolving landscape of open research information systems, broadening the scope of inputs and integrating a wider array of data sources is essential. By incorporating diverse bibliographic databases, such as regional platforms like SciELO or Redalyc, alongside global platforms like OpenAlex, we enrich the ecosystem of open research data. This inclusion of regional databases allows for a more comprehensive understanding of scientific activities, especially in regions that are underrepresented in centralized databases. The federation of multiple data sources further enhances this inclusivity by integrating various systems, each contributing unique perspectives and types of data richness.

Such a federated approach not only contributes to the democratized access to research information, but it also encourages wider participation, ensuring the data landscape is more representative of global research outputs and activities. Moreover, relying on a variety of data sources contributes to richer metadata, offering a detailed and nuanced view of research activities. For example, integrating data from Wikipedia or social media platforms can provide insights into the societal impact of research, while linking funding information can reveal the financial dynamics behind research initiatives. Each new form of data, whether from social media, Wikipedia, or funding sources, adds valuable perspectives that deepen our understanding of the research ecosystem.

However, this expanding landscape of open research data must overcome major challenges. One significant challenge is the potential for big data to narrow rather than broaden the scope of research. While big data holds promise, its vastness can overshadow smaller, localized datasets that offer critical insights into specific contexts. The focus on big data can sometimes prioritize mainstream perspectives, potentially silencing the diversity of perspectives that smaller, more specialized datasets can provide. Thus, it is crucial to balance the richness and diversity of data with the need for integration and accessibility. By federating databases and linking various types of data, we can build a more comprehensive and democratic open research information system that remains inclusive in both its content and its accessibility. Ensuring that big data empowers rather than constrains our understanding will be key to fostering a truly open and diverse research landscape.

Multiple perspectives for contextualising and valuing information on science and technology

Making research information more comprehensive and inclusive is necessary but it is not enough in order for knowledge to contribute to social justice. A few more steps are needed. Knowledge that is relevant but is not highly visible because it is not mainstream should be made visible. Both quantitative and qualitative methods should be developed for fostering appropriate contextualisation. The knowledge should be shown to users and beneficiaries in ways that allow exploration and querying of the data, so that they can tell which descriptions or indicators are relevant according to their contexts and values (places, spaces, preferences, worldviews).

This can be achieved with the help of research metrics and indicators, but indicators need to be created and used in ways that differ from current conventional practices. While the use of indicators is generally associated with a reduction of diversity and lack of contextualisation that effectively closes down debate, one can argue that:

> "…indicators can also be used to help support more plural evaluation and foster more productively critical debate. In order to achieve this shift, it is necessary equally to change understandings, forms and uses of indicators in decision making. These shifts involve, first, broadening out the range of 'inputs' taken into account; and second, opening up the 'outputs', in the sense of developing methodologies for indicator-based analyses to help in considering plural perspectives. In practice, this means a move towards more situated and participatory use of quantitative evidence in evaluation, a shift from universal *indicators* to contextualised *indicating."* (Rafols & Stirling, 2021)

In other words: on the side of input data, having fully accessible and more inclusive data that allow more analytical dimensions is necessary in order to be able to portray research in a more pluralistic and contextualised way, as seen in the previous sections. But, as shown in Figure 3a, if this information is then crunched into composite indicators (i.e. unidimensional indicators), there might not be a gain in pluralism. For research information to lead to more pluralistic insights, one has to consider the effect of the outputs of analyses in decision-making. Do the outputs of the analyses allow consideration of a variety of perspectives? What is the degree of contextualisation of the data? Is the method participatory? Are stakeholders empowered to contrast the different data sources or analytical approaches to adapt the analyses to their contexts, preferences and values? If the answer is positive, the analysis is helping in 'opening up' the appraisal process, helping the analysis shift towards the right in Figure 3b. Since the issues and the perspectives of marginalised territories or communities are most often invisible or less visible, issues of social justice related to

research are expected to benefit from these analytical practices that allow contextualisation.

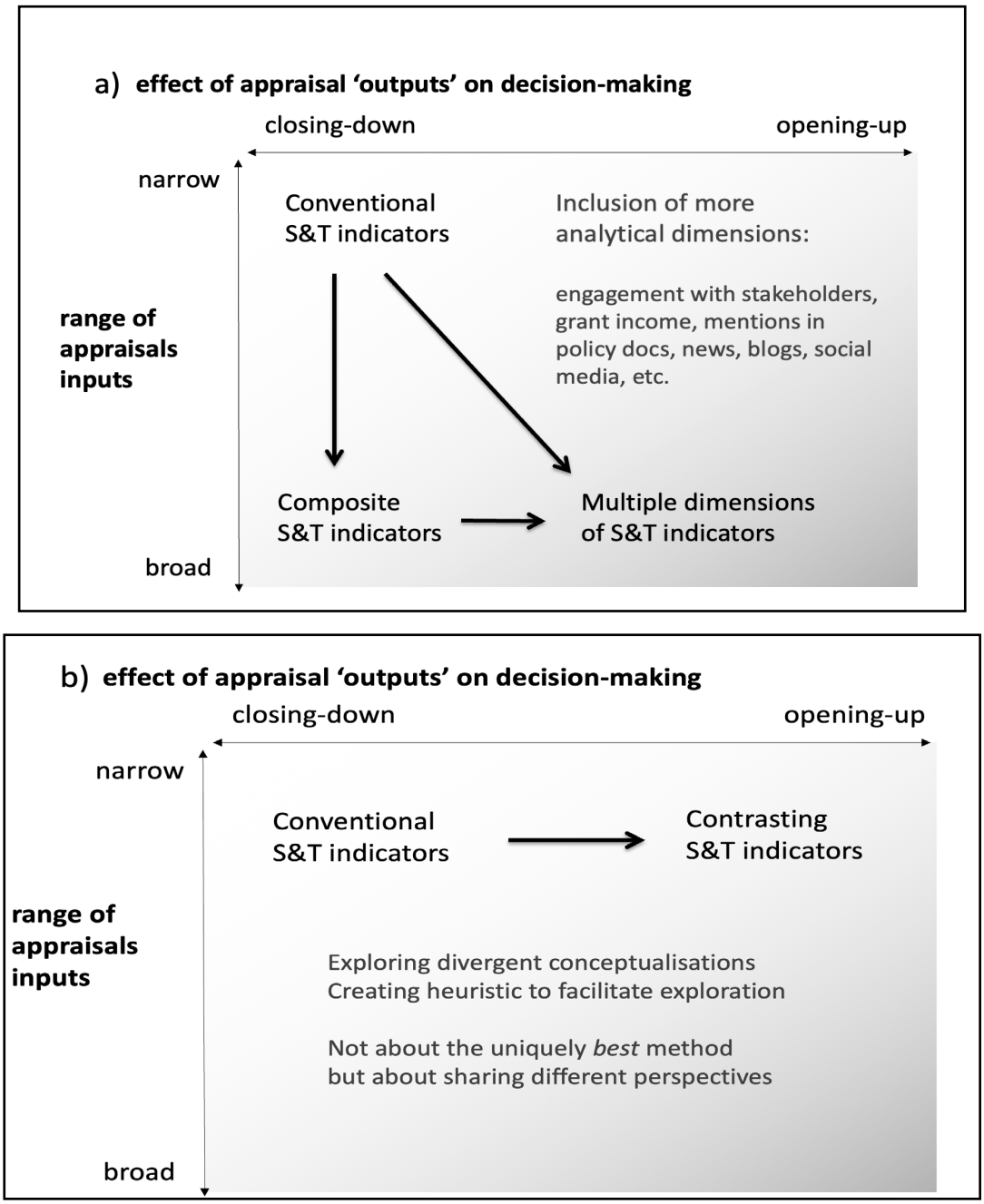

Figure 3. Schematic representation of the type of shifts towards more plural use of research indicators

a) Inclusion of more inputs, covering different analytical dimensions, broadens the scope of information used. This leads to a pluralisation of perspectives (an 'opening up') when these different dimensions are shown explicitly. However, this does not lead to significant 'opening up' when this is followed by aggregative techniques such as composite indicators. b) Another route to 'opening up' is to create contrasting indicators of the same analytical dimension under consideration, e.g. according to degree of contextualisation, of which convergence or divergence of insights can be discussed. Source: Figure 3 in Rafols & Stirling (2021).

An example of this is the role of SDGs in research. As mentioned before, the relationship between research and SDGs is complex, uncertain and often ambiguous: in some contexts, a scientific contribution may foster a certain goal such as water management, but this knowledge may not apply in other contexts, or according to different values. This often happen in issues such as water or agriculture that differ even across small territories, or where preferences over private or collective management have an impact on which information is relevant.

Therefore, in the face of a request to provide information on (or to 'measure') the relationship between research and SDGs, we think that it is not a good option to provide a unique list of papers, or an associated indicator, as currently done by commercial database providers.

Instead, we propose that the task of open information infrastructure should be to empower users and beneficiaries to participate in the analysis by bringing in their contexts and values and judge by themselves.

To do so, the project STRINGS[4] produced a map (Figure 4), in which stakeholders can explore the various types of research lines for a given SDG and judge and choose which ones are relevant. As illustrated in Figure 4, the map shows the research areas according to their position in the global research landscape. Proximity between dots signals cognitive similarity among research areas. The tables on the right hand-side list the main disciplinary categories, keywords and specific reviews for the research areas selected. The users can select areas by clicking over one circle or group of circles. Since there is no consensus on the relationship between research and SDGs, we propose the tool to be used in an exploratory manner as different stakeholders may interpret research and SDGs in different ways.

In particular, we suggest each user to make their own selection of research areas, according to those areas that fit with their own contexts and understandings. Such discussion is relevant because some researchers may claim that their research supports a given SDG, but stakeholders may think that claim to be unfunded. For example, biotechnologists developing genetically modified crops can claim to be useful to alleviate hunger (SDG2), but development economists and small farmer collectives may consider this claim without foundation.

[4] See https://strings.org.uk/ for the whole project, and https://www.cwts.nl/strings for the interactive visualisation.

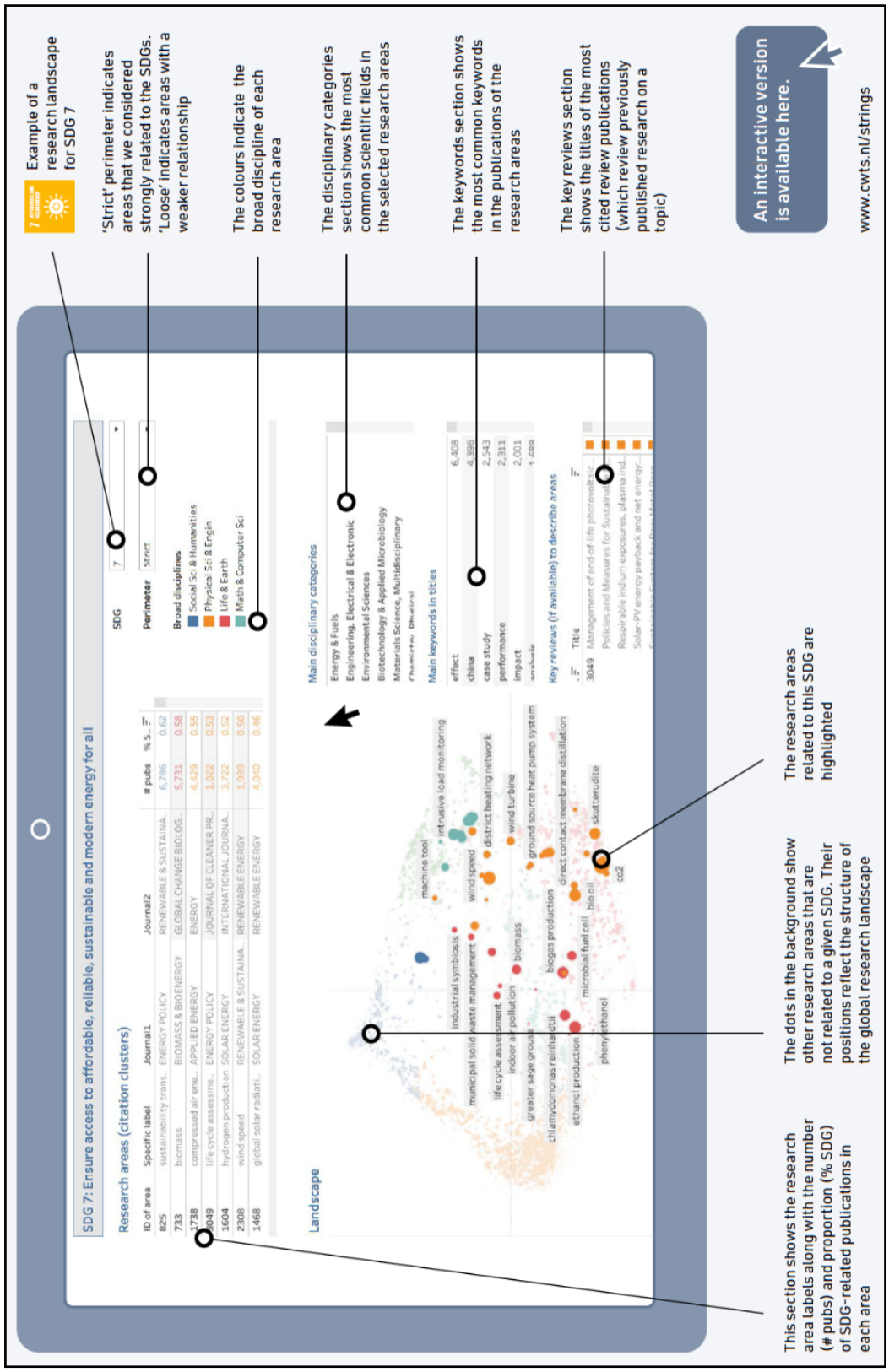

Figure 4. Interactive visualization of the research landscape for SDG 7 (Affordable and clean energy). This type of visualization allows users to create their own mapping of scientific research to the SDGs. Users can adjust settings to identify research areas that are potentially relevant for each SDG. Source: (Rafols et al., 2022)

Towards the multiversatory: a research observatory with multiple perspectives

One of the key goals of the work we are conducting in the *UNESCO Chair on diversity and inclusion in Global Science*[5] in Leiden University is to develop an analytical framework for a scientometrics or 'science of science' that supports inclusion, diversity and pluralism in science. We propose to shift the type of analysis from a unique and therefore implicitly universal and prescriptive description, towards analyses that produce descriptions of science that are conditional on the needs and contexts of applications.

It is well understood in the social sciences that social, cultural and historical knowledges are situated in certain places and times and therefore their robustness depends on context. This applies as well to other scholarly knowledge in disciplines such as agriculture, medicine or engineering, in which robustness of applications depends on the local conditions, including the values and cultural background of local populations. Equally, for research to contribute to social justice, scientometric analyses need to be able to produce descriptions that are appropriate to specific contexts and values. Given that the participation of stakeholders in the analyses is crucial for these perspectives to be realized, this requires research information analyses that are open, in the multiple understandings discussed above.

In this essay, we propose that this openness in research information concerns several dimensions. In the first place, research information should be open in the sense of being transparent and accessible. Second, research information should be open in the sense of being inclusive and diverse. Inclusiveness has two dimensions: that stakeholders not only can reach it, but that they can actually use it, and that the contents include different forms of knowledge – not only the certain types of outputs. Third, the research information should be provided in forms that empower interrogation by stakeholders, so that they can retrieve and construct the descriptions of research that are more appropriate for their context. This last step implies efforts to make visible many scientific contributions from the global south which are currently invisible (Beigel, 2014; Vessuri et al., 2014).

We call this vision *the multiversatory*: an approach to observe science that facilitate a pluralistic analysis of the knowledge created across a variety of places and contexts, the pluriverse (Escobar, 2018). We think of the multiversatory as a *living lab* consisting both of research information infrastructures and participatory processes of the stakeholders engaged in producing a particular description of research. In the first place, the multiversatory will allow using different data sources or different filters on the data sources.For example, in describing a university: what are the main topics when using as filter local, national

[5] https://www.cwts.nl/research/unesco-chair-on-diversity-and-inclusion-in-global-science

or international journals? Or as most cited by local or international databases (Lopez Pineiro & Hicks, 2015)? Or according to English versus the local language? Second, the multiversatory will facilitate a more fluid exploration of research in dimensions of visibility such as funding (Overland et al., 2022), policy mentions (Fang et al., 2024) or press-releases (Zhang et al., 2024). Third, the emphasis on diversity of the multiversatory will allow to compare across research topics, thus allowing to see which topics are relatively understudied, a key concern in terms of geographical inequalities in science (Boshoff et al., 2024; Kumar et al., 2024; Yegros-Yegros et al., 2020).

The key development of the multiversatory (yet to be proven) will be the possibility by the users of using multiple filters and classifications according to conditional choices. A major challenge will be to support stakeholder using the research information platforms to make these choices in an informed way, so that for a given policy question, relevant sources and filters are selected in the face of a broad palette of choices. We expect that new categories of topics and new analytical lenses will need to be developed in order to address questions posed through the engagement of stakeholders. Through this pluralistic approach to ‘science of science’ we hope that stakeholders can be supported in mobilising the knowledge more appropriate for each of them and thus work effectively towards social justice.

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