WORLDS OF RANKINGS

RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS

Series Editor: Michael Lounsbury

Recent Volumes:

RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS ADVISORY BOARD

WORLDS OF RANKINGS

EDITED BY

LEOPOLD RINGEL
Bielefeld University, Germany

WENDY ESPELAND
Northwestern University, USA

MICHAEL SAUDER
University of Iowa, USA

TOBIAS WERRON
Bielefeld University, Germany

Reprints and permissions service
Contact: permissions@emeraldinsight.com

ISOQAR certified Management System, awarded to Emerald for adherence to Environmental standard ISO 14001:2004.

ISOQAR
REGISTERED
Certificate Number 1985
ISO 14001

INVESTOR IN PEOPLE

CONTENTS

THE EFFECTS OF RANKINGS

ABOUT THE CONTRIBUTORS

Roland Bal is a Professor of Healthcare governance at Erasmus University Rotterdam. With a background in science & technology studies (STS), he is interested in the development and consequences of infrastructures for healthcare governance, with a focus on quality & safety of care. Working closely with actors in healthcare, his research aims to strengthen the reflexive capacities of regulatory actors. He has published widely in medical sociology, health services research, and STS journals. Currently, he is engaged in research on Covid decision-making as well as in the regionalization of healthcare and social care services.

Justyna Bandola-Gill is a Research Fellow in Social Policy at the School of Social and Political Science at the University of Edinburgh. She works at the intersection of Science and Technology Studies and Public Policy. Her research explores the interactions between research and policy, especially the ways in which knowledge is organized, governed, and mobilized across different settings in order to achieve political goals. Currently, she is working on an ERC-funded project METRO, where her research explores the production and governance of global poverty indicators by International Organisations. Justyna is co-leading the Knowledge and Governance Standing Group at the ECPR.

Jelena Brankovic is a Postdoctoral Researcher at the Faculty of Sociology, Bielefeld University (Germany). Her current research focuses on the institutional dynamics of rankings and other forms of comparison within and across sectors, with a particular attention to the higher education sector, as well as to transnational governance. Her interests extend to the practice of theorizing, academic writing, and peer learning in academia. She also serves on the editorial board of *Higher Education* (Books Editor).

Hyunsik Chun is a PhD candidate in the Department of Sociology at the University of Iowa. His areas of interest include quantification, organizations, culture, and social movements. His research examines the ways that quantification generates organizational change, particularly focusing on how external demands of accountability are translated into organizational action and then reshape organizational power, interorganizational relationships, and organizational politics.

Luciana D'Adderio is Chancellor's Fellow in Data Driven Innovation at the University of Edinburgh's Usher Institute and is a former Innovation Fellow with the ESRC Advanced Institute of Management (AIM) Research. Her research focuses on organizational routines and innovation. She is a member of the *Organization Science* and *Information and Organization* Editorial Boards and has recently acted as a Senior

Editor for the Special Issue of *Organization Science* on "Routine Dynamics" as well as the RSO volume "Routine Dynamics in Action: Transfer and Transformation."

Wendy Espeland is a Professor of Sociology at Northwestern University. She works in the areas of quantification, organizations, culture, and social theory, with an emphasis on how these areas overlap. Her book, *Engine's of Anxiety: Academic Rankings, Reputation, and Accountability* (with Michael Sauder) examines the effects of rankings on higher education. Earlier work analyzed how quantification shapes organizational decision-making and politics. Her publications have appeared in journals such as the *American Journal of Sociology, American Sociological Review*, and *The European Journal of Sociology* and have been supported by fellowships from the Russell Sage Foundation, Radcliffe Institute, Wissenschaftskolleg zu Berlin, and the Swedish Collegium for Advanced Studies.

Anne Essén is an Assistant Professor at the Stockholm School of Economics, Sweden. She is interested in how artefacts such as numerical data shape and are shaped by what individuals and organizations find worthwhile to strive for and feel capable of achieving. She has published papers about the role of numerical data in specific patient encounters as well as in the evolution of medical fields in journals such as *MISQ, Human Relations, Organization, Social Science & Medicine*, and *Sociology of Health and Illness*. Current research projects concern the art of ignoring and its structural enablers, and how platform entrants build legitimacy and market share in highly regulated fields such as healthcare and autonomous transport.

Sotiria Grek is a Professor of European and Global Education Governance at the School of Social and Political Science, University of Edinburgh. Her work focuses on the field of quantification in global public policy, with a specialization in the policy arenas of education and sustainable development. She is the Principal Investigator of the European Research Council funded project "International Organisations and the Rise of a Global Metrological Field" (METRO). She has co-authored (with Martin Lawn) *Europeanising Education: Governing A New Policy Space* (Symposium, 2012) and co-edited (with Joakim Lindgren) *Governing by Inspection* (Routledge, 2015), as well as the *World Yearbook in Education: Accountability and Datafication in Education* (with Christian Maroy and Antoni Verger; Routledge, 2021).

Martin Kornberger received his PhD in Philosophy from the University of Vienna in 2002. Currently, he holds a Chair in Strategy at the University of Edinburgh and is a Visiting Fellow at the Vienna University of Economics and Business. His research focuses on strategies for and organization of new forms of distributed and collective action. He can be reached at martin.kornberger@ed.ac.uk

Stacy E. Lom is an Assistant Professor of Sociology at the University of Central Arkansas, USA. Her research interests include formalization and rules, organizational decision-making, and the politics of knowledge production and

consumption, particularly in relation to the development and effects of evaluation practices. Her research is on rule systems and evaluation in sport, the arts, and education.

Afshin Mehrpouya is an Associate Professor of accounting and management control systems at HEC Paris. Trained as a medical doctor in Iran, he also holds an MBA and PhD in management. His research is broadly in role of performance measurement in transnational governance. He currently studies the construction and use of different calculative knowledge forms such as rankings and ratings in transnational governance regimes. He is a member of the editorial board of Accounting, Organizations and Society. Prior to starting, his academic career Afshin had years of experience in the design of environmental and social rankings and ratings. He has advised a range of development and sustainability related initiatives such as Access to Medicine Index, Aid Transparency Index, Medicines Transparency Alliance, Access to Nutrition Index and Responsible Mining Index.

Clelia Minnetian is a Researcher at the Faculty of Sociology at Bielefeld University (Germany). She works in the project "The Institutionalization of Rankings between 1850 and 1980." Her research interests lie in the fields of discourse theory and analysis, political theory, historical sociology, governmentality studies, and analysis of subjectivation. Recent publications in the field of discourse analysis are "Stumme Ökonomisierung – Machteffekte in Innovationsdiskursen" [Silent economization. Power effects in discourses of innovation]. In: *Zeitschrift für Diskursforschung*, 2. Beiheft, 183–215, 2018, with L. Braunisch & J. Hergesell; and "'Soziale Innovationen' für den Fortschritt von morgen. Eine diskursive Betrachtung der deutschen Innovationspolitik" ['Social innovations' for tomorrow's progress. A discourse analysis of German innovation politics]. In: J. Hergesell, A. Maibaum, C. Minnetian, A. Sept (Eds.), *Innovationsphänomene. Modi und Effekte der Innovationsgesellschaft*. Wiesbaden: Springer VS, 145–166, 2018, with L. Braunisch.

Neil Pollock is a Professor of Innovation at the University of Edinburgh. His book *How Industry Analysts Shape the Digital Future* (with Robin Williams) examines ranking and evaluation within the information technology area. He is currently researching evaluation in the context of digital entrepreneurship. His articles have been published in *Organization Studies, Accounting, Organizations and Society, Management Information Systems Quarterly, Information Systems Research*, and *Research Policy*.

Leopold Ringel is a Lecturer in Sociology at Bielefeld University. A sociologist with a background in organizational sociology, political sociology, and sociological theory, his qualitative research focuses on the impact of transparency on organizations, the history and institutionalization of rankings, and digital transformations. His work has been published in journals such as *Organization Studies, Politics & Governance, Sociologica*, and *Ephemera*. He is currently co-editor of the book series *Politische Soziologie* and he serves on the board of RC17 Sociology of Organizations at the International Sociological Association.

Matteo Ronzani is a Lecturer at Alliance Manchester Business School, University of Manchester. Matteo studies the effects that performance measurement practices have on organizations and society. His interdisciplinary works draws from the sociology of quantification, accounting, and organization theory, and focuses primarily on understanding how technologies of calculation can be mobilized to address societal grand challenges such as poverty alleviation and the management of humanitarian crises.

Rita Samiolo is a Lecturer in Accounting and Financial Management at King's Business School, King's College London. She holds a PhD in Accounting from the London School of Economics and Political Science. Her research is in the area of social and institutional studies of accounting, with a broad interest in the role of accounting and performance measurement in regulation and governance. She is a member of the editorial board of *Accounting, Organizations and Society*.

Michael Sauder is currently a Professor of Sociology at the University of Lowa and a COFUND Fellow at the Max-Weber-Kolleg in Erfurt, Germany. His current work explores the implicit rules that govern invocations of luck, especially in relation to inequality. He also has ongoing projects addressing the organizational effects of quantitative assessment, the diffusion of academic ideas, and how the nature of status hierarchies influences the distribution of status.

Iris Wallenburg is a Nurse and an Associate Professor at the Erasmus University in Rotterdam, the Netherlands. Using insights from science & technology studies, public administration and human geography, her work focuses on the role of healthcare professionals in changing organizational and regulatory contexts, focusing on valuation practices. She is specifically interested in the use of metrics (including financial schemes) in organizing and providing healthcare and policy making. She has published on metrics and performance measurement in *Public Administration, Journal of Health Economic Policy and Law, Journal of Health Organization and Management, Health Informatics Journal*, and in the book *Practising Comparison: Logics, Relations, Collaborations* (Mattering Press). She is currently involved in (e)valuation projects on regionalization of care, nurse professionalization and COVID-19.

Tobias Werron is a Professor of Sociological Theory at Bielefeld University. His research interests include competition, nationalism, globalization, and practices of theorizing. In recent publications, he has explored competition as a social form and global phenomenon (e.g., "Global Publics as Catalysts of Global Competition: A Sociological View," In V. Huber & J. Osterhammel (Eds.), *Global Publics. Their Power and Their Limits, 1870–1990*, Oxford 2020) and the interdisciplinary study of global social change (*What in the World? Understanding Global Social Change*, ed. with Mathias Albert, Bristol 2020). His articles have been published in journals such *Sociologica, International Journal of Politics, Culture and Society, Distinktion, Zeitschrift für Soziologie*, and *Kölner Zeitschrift für Soziologie und Sozialpsychologie*.

FOREWORD: RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS

Research in the Sociology of Organizations (RSO) publishes cutting edge empirical research and theoretical papers that seek to enhance our understanding of organizations and organizing as pervasive and fundamental aspects of society and economy. We seek provocative papers that push the frontiers of current conversations, that help to revive old ones, or that incubate and develop new perspectives. Given its successes in this regard, RSO has become an impactful and indispensable fount of knowledge for scholars interested in organizational phenomena and theories. RSO is indexed and ranks highly in Scopus/SCImago as well as in the Academic Journal Guide published by the Chartered Association of Business schools.

As one of the most vibrant areas in the social sciences, the sociology of organizations engages a plurality of empirical and theoretical approaches to enhance our understanding of the varied imperatives and challenges that these organizations and their organizers face. Of course, there is a diversity of formal and informal organizations – from for-profit entities to non-profits, state and public agencies, social enterprises, communal forms of organizing, non-governmental associations, trade associations, publicly traded, family owned and managed, private firms – the list goes on! Organizations, moreover, can vary dramatically in size from small entrepreneurial ventures to large multi-national conglomerates to international governing bodies such as the United Nations.

Empirical topics addressed by *Research in the Sociology of Organizations* include: the formation, survival, and growth or organizations; collaboration and competition between organizations; the accumulation and management of resources and legitimacy; and how organizations or organizing efforts cope with a multitude of internal and external challenges and pressures. Particular interest is growing in the complexities of contemporary organizations as they cope with changing social expectations and as they seek to address societal problems related to corporate social responsibility, inequality, corruption and wrongdoing, and the challenge of new technologies. As a result, levels of analysis reach from the individual, to the organization, industry, community and field, and even the nation-state or world society. Much research is multi-level and embraces both qualitative and quantitative forms of data.

Diverse theory is employed or constructed to enhance our understanding of these topics. While anchored in the discipline of sociology and the field of management, *Research in the Sociology of Organizations* also welcomes theoretical engagement that draws on other disciplinary conversations – such as those in political science or economics, as well as work from diverse philosophical traditions. RSO scholarship has helped push forward a plethora theoretical conversations on

institutions and institutional change, networks, practice, culture, power, inequality, social movements, categories, routines, organization design and change, configurational dynamics and many other topics.

Each volume of *Research in the Sociology of Organizations* tends to be thematically focused on a particular empirical phenomenon (e.g., creative industries, multinational corporations, entrepreneurship) or theoretical conversation (e.g., institutional logics, actors and agency, microfoundations). The series publishes papers by junior as well as leading international scholars, and embraces diversity on all dimensions. If you are scholar interested in organizations or organizing, I hope you find *Research in the Sociology of Organizations* to be an invaluable resource as you develop your work.

Professor Michael Lounsbury
Series Editor, *Research in the Sociology of Organizations*
Canada Research Chair in Entrepreneurship & Innovation
University of Alberta

WORLDS OF RANKINGS

Leopold Ringel, Wendy Espeland, Michael Sauder and
Tobias Werron

ABSTRACT

*Rankings have become a popular topic in the social sciences over the past
two decades. Adding to these debates, the present volume assembles studies
that explore a variety of empirical settings, emphasizing the importance of
acknowledging that there are multiple "Worlds of Rankings." To this end, the
first part of the chapter addresses the implications of two modes of criticism
that characterize much of the scholarly work on rankings and summarizes
extant conceptual debates. Taking stock of what we know, the second part dis-
tinguishes three areas of empirical research. The first area concerns the activi-
ties of those who produce rankings, such as the collection of data or different
business strategies. Studies in the second area focus on inter-organizational,
field-level, or discursive phenomena, particularly how rankings are received,
interpreted, and institutionalized. The third area covers the manifold effects
that research has unveiled, ranging from the diffusion of practices and changes
in organizational identities to emotional distress. Taken together, the contri-
butions to this volume expand our knowledge in all three areas, inviting new
debates and suggesting pathways forward.*

 Keywords: Comparisons; effects; fields; institutionalization; quantification;
 rankings

INTRODUCTION

A newly tenured professor attended a workshop organized by the university at
which an enthusiastic research manager made an announcement. Compared
to last year, the university had received "more third-party funding." This was

good news to be celebrated. Then came a noticeable "but." "But," the professors were told, several other universities had received "*more* more" in third-party funding, which, the research manager thought, was a serious problem. Thus, although the university might have improved its "performance" in absolute numbers, a comparison with other universities revealed that "we" had actually "lost ground."

As social scientists, we have the luxury of taking one step back to ask: Why is it noteworthy that "we" have "more third-party funding"? Why is the comparison with other universities necessary? Why does it even matter that others receive "*more* more"? Questions like these and the worries of our research manager, we believe, are intimately connected to and can only be adequately understood in the context of the ongoing proliferation of public measures, which evaluate organizational performances and influence the way we think about these performances. There are a wide variety of public measures such as different kinds of ratings, benchmarks, classifications – and *rankings*. We believe that the latter in particular are highly impactful because they create precise and visible hierarchies of their targets. Rankings not only allow us to see, for instance, how our "more" compares to the "more" of our peers, but also show us where we stand in relation to all others in our field and the distance separating us. That is, we can see whether we have "*more* more" or "*less* more."

While a great deal of rankings scholarship has focused on universities and higher education, rankings have become a force to be reckoned with in many areas of modern life. Ministries of education anxiously await the triennial publication of the programme for international student assessment (PISA) study to find out whether they have to publicly justify a fall in rank (Grek, 2009; Landahl, 2020). Organizations in need of new software consult IT rankings such as the "magic quadrant" when making decisions (Pollock & D'Adderio, 2012), development aid agencies are scrutinized by the Aid Transparency Index, a measure that has re-shaped the field of development aid (Honig & Weaver, 2019), and "pigeon-fanciers" – breeders of racing pigeons – use the PIPA (Pigeon Paradise) rankings to sell their "products" to wealthy Asian buyers (Bahrami & Meyer, 2019). As these examples and many others show, rankings permeate diverse sectors and concern multiple dimensions of individual and organizational behavior. Some are global while others are national; some are generally accepted while others are heavily contested; some occupy a competitive space, vying for advantage with multiple rankings, while others have the status of a quasi-monopolist; and some have been around for decades while others have only recently been founded. In short, rankings are not only pervasive, but also incredibly diverse – a fact that this volume does not turn a blind eye to but instead takes as its point of departure.

Corresponding to the flood of rankings into ever more areas of modern life is a burgeoning field of research engaged in studying this phenomenon. From the distinct allure of rankings, to their production, institutionalization, and effects, social science scholarship has provided us with a great deal of insight. Efforts to further our understanding of rankings, however, have been impeded by established academic divisions of labor, as studies in different areas have by

and large remained in their respective trenches. Broadly speaking, higher education scholars study higher education rankings, international relations scholars study nation state rankings, management and organizational scholars study all kinds of corporate rankings, sociologists of the arts study artists' rankings, and health researchers study hospital rankings. While these silos produce valuable knowledge about the effects of rankings in particular realms, we believe that there is much to gain from taking a more encompassing perspective, one that offers both a more general and a deeper understanding of the multiple *worlds of rankings*. For this reason, the present volume assembles scholars from a variety of disciplinary backgrounds, with differing areas of expertise, who focus on diverse aspects of rankings in different domains.

CRITIQUES OF RANKINGS

Over the past decades, we have witnessed a steady increase in scholarly interest in rankings, which has become a vibrant area of study. Generally speaking, research not only tends to provide analysis but also to pass judgment on rankings in one way or another. According to some, rankings are good and rational or at least serve a necessary purpose (even if methodological improvement is needed here and there), while others consider them inherently inadequate and sometimes harmful modes of assessment. Thus, scholars often not only observe, but participate and (try to) intervene in public debates about the promises, perils, and pitfalls of rankings. In analytical terms, we might distinguish two types of criticism: (a) the critique concerning the "how" of rankings, which in most cases is a critique of methodology; and (b) the critique which questions the very idea of rankings, which we tentatively call fundamental critique.

(a) To understand why so many scholarly contributions discuss rankings in strictly formal, technical, or methodological terms, we draw from Bourdieusian field theory, according to which the social sciences are located at the heteronomous pole of the scientific field as opposed to, for instance, mathematics which resides at the autonomous pole (Bourdieu, 2005). As a result, the social sciences often involuntarily act on behalf of idea(l)s, norms, discourses, and groups located outside of the scientific field and in so doing mirror public debates and concerns. Social scientists are

> always prone to receive from the social world [they study] the issues that [they pose] about that world. Each society, at each moment, elaborates a body of social problems taken to be legitimate. (Bourdieu & Wacquant, 1992, p. 236)

Thus, "a good many titles of studies are nothing other than *social problems that have been smuggled into sociology* [emphasis added]" (Bourdieu & Wacquant, 1992, p. 237). In the case at hand, the most fundamental questions for stakeholders who sponsor, consume, or are subject to rankings are usually: Do rankings really measure what they claim to? If not, what should be done to make them better, more precise, more valid, etc.? This, we speculate, might be one of the reasons why social scientists often treat rankings in methodological terms and provide insights into whether and how they can be improved.

The following example, taken from an article discussing the social science foundation of university rankings, illustrates how such imaginaries are not only the tacit backdrop of scholarly inquiry but also often explicitly spelled out:

> The most unnerving aspect of global university rankings is not their power to normalise and exclude – many other social systems do that, including "the economy" – but the *shaky methodologies*, the *arbitrary definitions* and *scope for manipulation*. University status starts to peel loose from its material foundations. Status becomes a circular game in which power makes itself. This highlights the *importance of data quality and interpretative validity*. If rankings are effectively grounded in real university activity there is potential for a virtuous constitutive relationship between university rank and university performance. [emphasis added]. (Marginson, 2014, p. 46)

Such questions permeate and sometimes even dominate scholarly debates on rankings – and they seem to have done so for a long time (Ringel & Werron, 2020). It comes as no surprise, then, that social scientists, producers of rankings, and other stakeholders (donors, lawmakers, etc.) frequently interact with each other and discuss methodological matters – at conferences, workshops, and in publications. For instance, in a volume edited by Marope, Wells, and Hazelkorn (2013), both producers of rankings and ranking researchers contribute articles, thus symbolically and practically aligning research and practice. In a sense, even the fiercest of methodological critics does not question the practice of ranking as such but treats it as a legitimate instrument of evaluation that merely needs refinement. This ultimately serves to reproduce deeply rooted ideals of progress, transparency, accountability, and "choice," promoted by and undergirding rankings (Ringel & Werron, 2020). Whether intentionally or not, rankers, proponents, and opponents in a way accept the same set of tacit premises and rules when participating in "the rankings game" (Corley & Gioia, 2000).

(b) The second type of critique questions the very practice of ranking, focusing not on how well (or badly) implemented rankings are, but instead adopts a fundamentally critical perspective as the starting point of explorations. This means that, by default, rankings are considered to be flawed and "hostile" devices. Usually, they are designated symptoms, instruments, or catalysts of larger trends such as neoliberalism, helping to create a new world order by compelling those subject to their scrutiny to constantly strive to improve their performance. What is more, they define universal categories such as "excellence" or "human development" – which, upon closer analysis, turn out to be distinctly Western idea(l)s – thus neglecting local variations and traditions (e.g., in countries in the global south). Although this type of criticism can be found in several disciplines, higher education research and international relations have spawned particularly vibrant discourses around these critiques – critiques entrenched in a variety of social theories such as Foucault's theory of surveillance, theories of neoliberalism, theories of globalization and post-colonial theories. The scholarly discourse on university rankings is particularly intense, possibly because they concern "us" and we therefore spend very much time and energy on criticizing them. Popular examples for critical accounts of university rankings are Slaughter and Rhoades (2004) and Münch (2014), both of which invoke the term "academic capitalism." The implication

is that the higher education sector has been fundamentally restructured due to the institutionalization of a neoliberal mindset, and rankings are a part of this process of marketization and hierarchization (Jessop, 2017; Welsh, 2020). Others such as Shahjahan, Blanco-Ramirez, and Andreotti (2017) draw from globalization studies and post-colonial theories to conceptualize rankings as devices that promote "northern" and/or "western" visions of scientific excellence in the "global south" (Ishikawa, 2009). In a similar vein, Estera and Shahjahan (2018) argue that the visual appearance of the websites on which rankings are published might appear innocent and neutral, but actually reinforce institutionalized distinctions and hierarchies between students from the north and the south.

We have learned a great deal from critiques of ranking methodologies and their underlying biases. Yet, whether scholars participate in "the rankings game" (Corley & Gioia, 2000) or fundamentally reject it, both approaches come with a price attached: the nature of their criticisms truncates their ability to explore many of the social dynamics related to rankings and to outline new avenues of research. We believe that there is a third way of observing and studying rankings, which allows social science research to not only paint a more nuanced and encompassing picture, but perhaps even to ultimately find surprising (and more effective) ways of criticizing rankings. This third way grows out of studies that draw on a broad variety of social theories and concepts like "commensuration," "reactivity," or "self-fulfilling prophecies" (e.g., Espeland & Sauder, 2007). These studies share a commitment to *value neutrality* in the sense of Max Weber, encouraging analyses without passing judgment. In so doing, these theories and concepts grant a deeper understanding of the social world, essentially transforming "socially insignificant objects into scientific objects" and looking even at "a major socially significant object [such as rankings] from an unexpected angle" (Bourdieu & Wacquant, 1992, p. 221). These two complementary strategies – making the seemingly mundane significant and offering surprising explanations of well-established objects of research – allows for a form of critique in a more humble sense. By carefully tracing how empirical phenomena are fabricated, how they unfold, and what their consequences are, we can draw attention to the fact that they are not inevitable and that there is always possibility for change. Helping to move rankings research in this direction is exactly what the contributions to this volume set out to do.

CONCEPTUAL CONSIDERATIONS: WHAT "IS" A RANKING?

We often presume to know what people mean when they refer to "a ranking" or "rankings," but a great deal of scholarship neither defines the properties of rankings nor discusses whether rankings are devices distinct from other instruments of evaluation and comparison (Brankovic, Ringel, & Werron, 2018). As a result, rankings, ratings, benchmarks, indices, and indicators are often discussed interchangeably as instruments that have something to do with

measuring performances. For this reason, the present section provides a conceptual clarification as to what the properties of rankings might be and whether they amount to a social phenomenon that is in some ways distinct from other forms of evaluation.

First, it has often been pointed out that rankings are *numerical* and rely on calculative practices (Diaz-Bone & Didier, 2016; Espeland & Stevens, 2008; Esposito & Stark, 2019; Hansen & Flyverbom, 2015; Mau, 2019 Mennicken & Espeland, 2019). Notably, even experiments with rank-ordered evaluations in the eighteenth century had some sort of quantitative element, as illustrated in Spoerhase's (2018) study of European rankings of (dead) artists, based on evaluations on the scale of 0–20. This is important because over time numbers have become an institutionalized medium of communication (Heintz, 2010), evidenced by "an avalanche of printed numbers" (Hacking, 1990, p. 2). Numerical assessments, these studies claim, invoke the cultural authority of science, thus granting them an aura of precision that cannot be matched by other forms of evaluation (Merry, 2011). Furthermore, it is often argued that numbers are "portable" in the sense that they travel easily between contexts (Porter, 1995). As a result, numbers partake in the globalization of social templates, such as what nation states should look like (Heintz, 2010) or the meaning of "academic excellence" (Brankovic et al., 2018), and undergird many modern forms of governance (Bartl, Papilloud, & Terracher-Lipinski, 2019). In short, there is reason to believe that rankings as we know them today would not exist if it were not for the institutionalization of calculative practices.

Quantification, however, is a property that many evaluative devices have, but not all of them are equally impactful (Bartl & Papilloud, 2020). A distinguishing feature of rankings is that they are not only numerical but also *comparative*, presenting their scores on an ordinal scale (Fourcade, 2016). As has been shown elsewhere, comparisons of all kinds are powerful tools of communication, affecting the world on a broad scale, whether it concerns cultures, military strength, or human rights (Steinmetz, 2019). Thus, like numbers, comparisons are not only research methods but also social practices and should therefore be studied accordingly. Connecting quantification and comparison, Espeland and Stevens (1998) suggest the term *commensuration* to describe devices that assemble social entities on a common metric (e.g., school grades, ratings, benchmarks – and of course rankings) and thus draw attention to even the most minimal differences (Espeland & Sauder, 2007). What distinguishes rankings from other types of commensuration like ratings, is that they transform numerical comparisons into *zero-sum comparisons* (Werron, 2014, 2015; Werron & Ringel, 2017). Hence, while in principle all students can get an "A" on a test and all countries can receive an "AAA" financial rating, the gains of one ranked entity come at the expense of all the others in the ranking. This creates a situation that is much more conducive to competitive behavior than other types of evaluative schemes.

Modern rankings also have to be *visualized* in specific ways so as to invoke the imaginaries of social hierarchies that they promote, thus adding an esthetic dimension that is often neglected (Espeland & Stevens, 2008; Werron & Ringel, 2017). Typically, but not always (see, e.g., Pollock & D'Adderio, 2012), rankings

are visualized as league tables ordered from top to bottom, with the best at the top and the worst at the bottom. There is reason to believe that the ways in which rankings are visualized is of essence for their putative success. By virtue of visualization, the often-complex calculative practices that undergird rankings are transformed into a simplified and easy-to-understand "full picture" that invokes a competitive spirit and is therefore designed to pit the ranked against each other (Kornberger & Carter, 2010). In other words, competitive behavior is not "just there," rather, it is a social construct that derives its power and seductiveness from the "scarcification" of reputation, which can be accomplished with rank-ordered visualizations (Brankovic et al., 2018).

Lastly, contemporary rankings are typically public measures (Espeland & Sauder, 2007). That is, only if *published* are they likely to "calibrate visibility" (Krüger & Hesselmann, 2020) in a way that addresses larger audiences and subsequently develops the sort of communicative power attributed to them by many studies (see below). Some have argued that what characterizes modern rankings is their periodical publication – for instance, in annual reports (Zapp, 2020) – as a result of which they introduce new temporal logics into fields (Brankovic et al., 2018; Landahl, 2020). Regular publication might seem like a mundane matter, but a historical view reveals that in many cases it has taken a long time to establish the necessary social, discursive, and material infrastructure (Ringel & Werron, 2020). Another factor that helps account for the increased frequency of rankings is the involvement of organizations in the production process. Organizations have the capability to ensure regular publication, they have the resources to address larger audiences, and they are able to deal with and even incorporate criticism (Ringel, Brancovic & Werron, 2020).

There are different ways of theorizing *audiences*. On the one hand, many conceptualize audiences in terms of larger or smaller groups of people who can become constituencies for rankings – that is, as rankings circulate, people who attend to them can find new uses such as creating investments. This helps to institutionalize public measures and it also changes their meanings. For example, university rankings can become proxies for evaluating the performances of administrators or the abilities of job candidates (Espeland & Sauder, 2016). On the other hand, although rankings are certainly consumed by real people, they can also be conceived as addressing more general publics, claiming to speak on their behalf and thus constructing said publics by virtue of publication (Warner, 2002; Werron, 2014, 2020; Werron & Ringel, 2017). In the act of publication, rankings enact specific visions of publics, which, in a sense, are literally talked "into existence" (Flyverbom & Reinecke, 2017, p. 1637; see also Albu & Flyverbom, 2019). Students are interested in choosing the best university for their needs; consumers want a rich experience when visiting restaurants; citizens are concerned about corporate social responsibility; and so forth – all of these statements might reflect what some people think, but they are also powerful imaginations which, once made public, develop a life of their own.

In sum, these different properties amount to a distinct conceptualization of modern rankings. They are numerical zero-sum comparisons, visualized in easy-to-understand depictions (most often, but not only in league tables), regularly

published by organizations of various kinds, and are both shaped by and shape the audiences they address.

AREAS OF RESEARCH: (1) THE PRODUCERS OF RANKINGS

A variety of studies cast light on the producers of rankings. Such diverse organizations like Mercer (Quality of Living City Ranking), the United Nations Development Programme (Human Development Index), Transparency International (TI) (Corruption Perception Index), the World Bank (Ease of Doing Business Index), the Centre for Science and Technology Studies of Leiden University (CWTS Leiden Ranking), or the Institute for Urban Strategies by the Mori Memorial Foundation (Global Power City Index), produce, publish, and promote rankings. While studies tend to focus more on the effects of rankings (see below), Rindova, Martins, Srinivas, and Chandler (2018) argue that it is of essence to zoom in closely on those who make rankings, referring to them as "rankings entrepreneurs" to highlight their active and at times even constitutive role in the success of rankings.

Targeting the *production process*, several studies explore the social processes guiding the collection and interpretation of data. In their study of the TripAdvisor website and the hotel guide of the British Automobile Association, Orlikowski and Scott (2014) discuss the differences between algorithms that aggregate the reviews of laymen – e.g., customers (in the case of TripAdvisor) – and individual experts who receive training to assess hotels according to standardized criteria. While the former involves a complex electronic infrastructure and a permanent influx of new reviews, the latter is contingent on the ranking organization (in this case: the Automobile Association) to provide adequate training and to have expert audits in order to control for individual biases when qualitative impressions are transformed into numbers (see also Krüger, 2020 for the algorithmic infrastructure of devices such as rankings). Similarly, Mehrpouya and Samiolo (2016) show how the producer of the Access to Medicine Index, the Access to Medicine Foundation, compels those working on the Index to "act as a robot" (Mehrpouya & Samiolo, 2016, p. 22): employees have to learn to control their emotions and reach a state where they are "objective" enough to engage in evaluation activities. Exploring a Danish classification scheme of research journals, Bruun Jensen (2011) details how those who are impacted by the scheme – scholars – are involved in the process of its creation by deciding on the order of journals. And finally, Pollock and D'Adderio (2012) explore the complex decision processes behind IT rankings called "magic quadrants," particularly whether new rankings should be created or old ones retired.

A second theme in the literature concerns practices of *visualization*. Some studies show how producers of rankings reflect a great deal on the appeal of numerical pictures. Invoking the term "good distribution," the informants of Mehrpouya and Samiolo (2016) call for attention to the process of assembling pharmaceutical companies on the Access to Medicine Index in a way so that the overall picture