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Article

The Organizational Engine of Rankings: Connecting "New" and "Old" Institutionalism

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Abstract

When explaining the ubiquity of rankings, researchers tend to emphasize macro or contextual phenomena, such as the power of or the trust in numbers, neoliberal forces, or a general spirit of competition. Meanwhile, the properties of rankers are rarely, if at all, taken into account. In contrast to the received wisdom, we argue that the institutionalization of rankings in different fields is also contingent upon another, often-neglected factor: over time, rankers have become increasingly more *organized*. To investigate the role of ranking organizations, we look into the distinct properties of present-day rankings and highlight three dimensions along which rankings have evolved over the course of the twentieth century, namely, *publication frequency*, *handling complex tasks*, and *audience engagement*. On this basis, we argue that these dimensions have to a large extent been affected by formal organization and we show how ranking organizations have over time developed capacities to (a) publish rankings on a continual basis, (b) handle the often complex production process by means of division of labor, and (c) generate considerable degrees of attention by addressing large and diverse audiences. On a more general note, we argue that accounting for the role of organization in the instutionalization of rankings requires a combination of insights from both "old" and "new" strands of thinking in institutional theory.

Keywords

Audiences, Institutions, Organizations, Quantification, Rankings

Issue

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1. Introduction

Higher education, sports, business, human development, and the arts are only some among the growing number of areas which are nowadays routinely subjected to novel forms of quantified comparisons and monitoring. Among these, rankings stand out as particularly pervasive and impactful. Be it the Human Development Index, which the United Nations Development Programme uses to measure the development of nations, TripAdvisor's Popularity Index listing the best restaurants and hotels in a city, or the Times Higher Education's (THE) World University Rankings comparing universities on a worldwide scale – rankings, it seems, play an increasingly important role in the contemporary world.

The extant literature, however, rarely addresses the problem of *why* rankings have become so pervasive. Instead, the effectiveness of rankings is often taken for granted, while little is added to the explanation of the social processes undergirding their institutionalization. Instead, the literature tends to refer to broader trends in society which rankings are part of, such as the onset of digitalization (Mau, 2019), the aura of rationality surrounding numbers (Espeland & Stevens, 2008), the institutionalized trust in numbers (Porter, 1996), the growing importance of performance measurement in governance (Mehrpouya & Samiolo, 2016), neoliberalism (Münch, 2014), or even a general spirit of competition in mankind (de Rijcke, Wallenburg, Wouters, & Bal, 2016).

Following our earlier work, we see the institutionalization of rankings as intimately connected to discursive processes unfolding historically in different fields (Brankovic, Ringel, & Werron, 2018; Ringel & Werron, 2020; Werron & Ringel, 2017). In plain terms, as rankings become increasingly more present in public discourse, be it as objects of praise, criticism or simply "neutral" reporting, they are more likely to become institutionalized. An integral part of this process is that rankings keep the ranked "on their toes": they create pressure for those who are subject to them to strive to not lose their position, maintain it, or improve it (Espeland & Sauder, 2016; Esposito & Stark, 2019). However, we know only little about if and how rankers themselves add to this, given that they are routinely overlooked in the extant literature (Rindova, Martins, Srinivas, & Chandler, 2018). So far, we have learned only little about the properties, practices, and strategies devised by producers of rankings and how they intersect with or add to the discursive institutionalization.

What is then to be said about those who produce rankings? While for a long time the process has predominantly been undertaken by individuals who acted in their personal capacity as, for example, scientists or critics, and who typically had only marginal organizational support, contemporary rankings are usually produced by organizations of various kinds, such as for-

profit businesses, newspapers, international governmental and non-governmental organizations, or universities. A closer look at some of the well-known inventories of rankings and similar devices (e.g. Bandura, 2011; Kelley & Simmons, 2014) reveals that the most "successful" – that is, regularly published, well-known, and impactful – rankings today are the product of organizational efforts and were first published usually between the 1980s and early-to-mid 2000s.

With this in mind, in this article we examine the (largely neglected) role of organizations in the rise and discursive institutionalization of rankings. Broadly speaking, when it comes to the pervasiveness of organizations in modern society, two explanations have dominated organizational scholarship throughout the twentieth century (Selznick, 1996; Stinchcombe, 1997). One body of literature in organizational institutionalism, that is, the so-called "old" one, stresses the capabilities of formal organizations to complete complicated and resourceintensive tasks as opposed to other forms of social organization. In contrast, the new institutionalist perspective, which emerged partly in response to the old institutionalist tradition, explains the explosion in numbers of organizations populating the globe by emphasizing that formal organization itself has become a cultural institution granting legitimacy to those embracing it (Meyer & Bromley, 2013; Meyer & Rowan, 1977). In simplified terms, formal organizing thus abounds either because it has proven effective or because it is legitimate. Although, by and large, the legitimacy argument is today considered a superior approach to this old question, we argue that revisiting the tenets of old institutionalism holds promise for exposing some overlooked elements of the rankings phenomenon.

With these two potential trajectories of explanation in mind, in this paper we review empirical studies focusing on the producers of rankings in a diverse set of fields, particularly, in the arts, science and higher education, education, tourism, and business. Specifically, in the first step we (a) scan the literature on rankings to identify potential relations between the organizational expansion and the rise of rankings; and, in the second step, we (b) look for evidence of the effectiveness argument, rather than that of cultural legitimacy, in the role organizations play in the institutionalization of rankings. By unveiling the properties, practices, and strategies devised by key actors in discursive arenas – the producers of rankings, we wish to open a new avenue in the broader research on their global institutionalization (Brankovic et al., 2018; Ringel & Werron, 2020).

2. The rise of organizations: new institutionalism and the "old"

Since the nineteenth century and particularly since the end of World War II, we are witnessing a rampant spread of organizations across sectors of society (Drori, Meyer, & Hwang, 2006; Meyer & Bromley, 2013). The new institutional theory, in the tradition of Meyer, Rowan, Powell, DiMaggio and others (Meyer & Rowan, 1977; Powell & DiMaggio, 1991), argues that formal organization as such has become a cultural institution embodying and symbolizing the promise of our highest ideals of rationality. The often described "rationalization" of society over the past decades, that is, the spread of universalized and abstract cultural beliefs and templates about equality, education, human rights, gender and so forth, thus "creates a framework that encourages organizing in a wide range of societies and domains" (Meyer & Bromley, 2013, p. 367) beyond actual functional necessities. These beliefs and templates are to a large degree theorized and legitimized by science – a process that new institutional theory refers to as "scientization" (Drori et al., 2006). Modern world society is therefore made up of a dense latticework of scientized norms, values, standards, beliefs, and ideas, all of which are connected to specific visions of organizational actorhood. Accordingly, studies in this tradition have shown that organizations are often more busy incorporating such structures so as to adhere to so-called "rationalized myths" in order to be granted legitimacy by their environment.

How do scientized templates about formal organization and organizational governance find their way into the public and, by extension, trigger the creation of or change in existing organizations? How are they, as institutional theory has it, diffused? The literature suggests two sets of answers. One builds upon the work of DiMaggio and Powell (1983) which conceives of society as comprising a multitude of organizational fields and outlines three isomorphic processes of diffusing organizational templates within fields: coercive (organizational structures are diffused via laws or otherwise formally binding rules based upon sanctions), normative (organizational structures are diffused based upon the belief that they are "right"), and mimetic (organizational structures are diffused because they are taken for granted). The other draws on Strang and Meyer (1993) who emphasize that cultural templates often do not travel directly through communicative networks, but are diffused indirectly, for instance, through observation. They argue that cultural templates are more likely to be spread when they are theorized: "By theorization we mean the self-conscious development and specification of abstract categories and the formulation of patterned relationships such as chains of cause and effect." (Strang & Meyer, 1993, p. 492). Building upon these insights, Werron (2014) suggests defining observers who create such theorizations as "universalized third parties." Such third parties, of which the producers of rankings are an example, specialize in publicly observing actors and addressing audiences, thereby indirectly creating pressure among the said actors to follow the dominant models.

Capabilities of formal organizations, therefore, do not play a major role in the institutionalization of formal organization. According to the new institutionalist line of argument and evidence, formal organizations, put simply, do not necessarily exist in such great numbers because they are (more) effective (than other forms of social organization). If and under which circumstances organizations are or need to be effective in carrying out certain tasks, is then a completely different and, from the perspective of this tradition, secondary question, or at least one that it empirically rarely explores.

In the large body of literature which attributes the rise of formal organization to its superior capabilities to achieve certain tasks, for instance when it comes to administering a region or a country, producing goods, and taking care of the sick, three classics are worth revisiting here. Weber (1947/ca.1915) famously defined organizations as beacons of western rationality due to their unique properties: they produce written rules of conduct, outline specific spheres of competence, divide labor, have clear-cut authority structures, employ trained personnel to fill positions, have some degree of discretion in resource allocation, and have members who typically do not own the means of production but instead receive wages. Barnard (1938) argued that creating formal organizations becomes a necessity when individuals face too many goals and tasks which are too complex for them to accomplish on their own. He also stressed the importance of informality as a complementary mode of action and mechanism to increase support among employees. Coase (1937) was also interested in question as to why individuals feel the necessity to create formal organizations. He highlighted the transaction costs one has to carry when working towards achieving a goal and emphasized that there are essentially two options: services can either be bought on a market or made. In complex situations, for example, when frequent discussions, deliberations, and negotiations are necessary, or, when products have to be constantly refined and repaired, seeking vertical integration by means of creating a formal organization is more rational than buying these services on a market.

In the following decades, a vast body of scholarship critically engaged with these contributions. Nevertheless, they in principle maintained that formal organizations were a modern institution that, for all their flaws, arguably still did some things more effectively than any other form of social organizing and is for this reason an all-pervasive feature of modern society. In public administration studies, for instance, Simon (1945) notably argued that due to anthropological cognitive constraints, individuals exceed their analytical capabilities quickly and thus need to be able to cooperate with others in order to compensate their imperfections.

As a result, organizations are characterized by "bounded rationality": they do act rationally only to a certain degree – and more so than any other type of collective actor (Simon, 1957). This, Simon explains, is because organizations allow individuals to specialize (for example, by observing the environment only in legalistic terms as a company lawyer), which allows them to put their limited cognitive abilities to better use than if they had to consider a multiplicity of aspects (we could, for example, imagine a lawyer who also had to be a PR manager and an expert in the production of goods).

The first and second generation of American organizational sociologists, among which are Robert K. Merton, Philipp Selznick and Alvin Gouldner, were particularly interested in revisiting Weber's claim of the superiority of organizations by studying intra-organizational processes. They unveiled a variety of unintended and sometimes dysfunctional consequences. Nonetheless, as Selznick (1996) and Stinchcombe (1997) argued, they as well acknowledge that organizations are, to some degree, more efficient and effective at accomplishing the tasks at hand. They are able to do so by devising formal rules, which can broadly be defined as "abstractions that govern" (Stinchcombe, 2001, p. 43). Furthermore, Stinchcombe makes the case that institutions are not self-supporting, emergent structures with a life of their own but in need of support by actors on the ground. Institutions, in short, can only survive if organizations deliver services promised by the institution and if the quality of these services is considered acceptable.

Borrowing from the title of Stinchcombe's book (2001), we might summarize the thrust of this body of literature as follows: there are indeed times "when formality works." There is thus a rich variety of contributions to organizational research arguing for conceptualizing formal organizations as a modern phenomenon that has become institutionalized because it does – at least some – things more effectively than any other form of social organization. Formal organizations divide labor, standardize processes, and employ trained specialists (Weber); they coordinate human behavior while retaining autonomy in setting and changing goals (Barnard); they deliver service which could not be bought as easily on a market (Coase); they compensate the limited cognitive capacities of individuals (Simon); and they possess the ability to employ distinct mechanisms of governance (Stinchcombe).

Summing up, according to new institutionalism, we would expect the institutionalization of rankings to lean heavily on the *cultural institutionalization* of formal organization. The "old" institutionalism, on the other hand, would see the institutionalization of rankings as primarily contingent upon the *capabilities* of formal organizations, which are in their effect superior to other forms of social organizing. In the following, rather than seeing the two brands as mutually exclusive, we use their insights as heuristics to analyze the role organizations play

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in the institutionalization of rankings. In the process, we wish to show that institutionalism could in fact be practiced as a way of theorizing that incorporates insights from both the "old" and the "new" tradition.

3. The expansion of rankings along three dimensions

To examine the role organizations play in the institutionalization of rankings, we reviewed the empirical literature on rankings with a specific focus on studies examining their producers. Against this backdrop, we then selectively searched for first-hand information on much discussed and long-lasting rankings in different fields, using publicly available data (published reports, websites and secondary sources). We systematically compared the cases and organized our insights into several themes. Discussing these insights, this section specifies a variety of ways in which organizations matter in making rankings a regular feature of many fields in modern society. The first dimension refers to the fact that rankings usually address and simultaneously maintain a problem, thus inducing their regular and continuous publication as opposed to some of the earlier experiments with rankings which tended to be one-off efforts. The second dimension refers to matters of handling complex tasks, that is, an evolution from the production of relatively simple lists, simple indicators and ranking a relatively small number of entities, to more complex rankings, based on composite indicators and with a larger span. The third dimension, audience engagement, refers to a transition from relatively narrow expert audiences to larger, more diverse, non-expert or lay ones. We take each of the three dimensions in turn and selectively draw from examples of rankings that were produced before the ranking-frenzy of the last thirty years, contrasting them with more recent rankings in which organizations play more significant roles.

3.1 Addressing, producing and maintaining the problem

Rankings neither appear nor exist in a social vacuum. They frequently address societal problems that are in many cases perceived as major or even global challenges, such as education, corruption, or climate change. Even national rankings usually refer to issues that are of universal nature and typically do not touch upon matters that would only make sense in a local context. On the contrary, they normally draw from (global) templates offered by "universalized third parties" (Werron, 2014) – particularly international (governmental or non-governmental) organizations and universities. We might therefore suspect that, following the widespread theorization of global challenges in the past decades, rankers should find it

relatively easy to draw from existing templates in order to define a problem to which their product should be an answer or a road to one.

However, rankings do not only address existing issues, but at times they also actively work towards creating the very problem to which, they claim, their product is the remedy. In our earlier work on global university rankings, for example, we demonstrated that, although such rankings nominally intend to measure something that is supposedly "out there," in doing so they discursively construct a distinct notion of scientific "excellence" (Brankovic et al., 2018). In many ways, rankers such as the Shanghai Ranking or the THE World University Rankings do not just map the existing global field of universities, but instead they importantly contribute to its emergence as a shared social space.

Whether rankings address existing challenges or actively create new ones, in order for them to survive *as rankers*, they have to *maintain* the "problem." This, we argue, is contingent upon their *ability* to keep the operation going. A crucial prerequisite of doing so is, logically, to secure funding. However, as rankings are produced by a host of different types of organizations, there is no one clear path for all of them to follow. For-profit organizations, such as the U.S. News or Mercer make rankings part of their business strategy (for higher education check, for example, Stack, 2016). Many rankings, on the other hand, are produced by public and non-profit organizations such the OECD, Transparency International, or the World Bank, and depend upon an often complex and dense network of funding bodies, ranging from government agencies, prominent international organizations, private foundations and philanthropies, to corporations.

Yet, however ripe the cultural and symbolic infrastructure for the birth of ever new rankings, for rankings to become effective they also have to be published repeatedly and sometimes even regularly (Brankovic et al., 2018; Werron & Ringel, 2017). Surprisingly, research often does not take note of the fact that present-day rankings are typically produced weekly, monthly, annually or biannually. To pinpoint the struggles such continual publication creates, it is illuminating to contrast modern-day rankings with their predecessors (Brankovic, Ringel, & Werron, 2019). In fact, many of the early rankings and similar forms of quantitative evaluation (that is, quantified comparisons sharing some, though not all properties of modern rankings), published in the pre-1980s area, were one-off experiments by individual experts in their respective fields who had no or, at best, minor organizational support.

Take the art field for instance: even though efforts to establish numerical forms of evaluation in the arts can be traced back to the eighteenth century, they only have become successful since the 1970s (when the periodic art ranking, the German *Kunstkompass*, was first published) and particularly the 2000s (Buckermann, 2019). Spoerhase's (2018) study on art

rankings in the eighteenth and early nineteenth centuries illustrates this point. He traces quantified comparisons of (mostly) deceased artists produced by other artists and art critics, starting with the publication of Roger de Piles' *Balance des Peintres* in 1708 and ending with Jean-Francois Sobry's *Balance de Peintres, Rectifée* in 1810. In a similar exercise about a century later, surrealist rankings published in the journal *Littérature*, edited by surrealist artists André Breton, Lois Aragon and Philippe Soupault, were also created as singular experiments (Schmidt-Burkhardt, 2005).

Science and higher education provide another instructive example. A review of higher education rankings between 1900 and 1980 reveals that almost all of them had only been published once (Webster, 1986). Among the first to create such league tables was the psychologist James Cattell, professor at Columbia University and editor of the journal *Science* (Hammarfelt, de Rijcke, & Wouters, 2017; Ringel & Werron, 2020), who produced a variety of one-off rankings and whose method was copied by many of his successors. Even in cases when a ranking exercise was repeated, such as those by Raymond Hughes, published in 1925 and 1934, and the so-called *Cartter Report*, published in 1966 and 1970 (Webster, 1986), the periods between the publication of the first and the second report – nine years and four years, respectively – were relatively long and certainly cannot be considered regular.

What are the reasons for the absence of repetition in the production of these rankings, both in the arts as well as the scientific field? A tentative answer could be their purpose. Spoerhase (2018) suggests that the rankings and similar devices which he studied did not seem to aim at measuring current performances, to be re-assessed at a later stage, but rather resembled what we today sometimes refer to as "best of all times" lists. After publishing such lists, individual rankers lacked interest in furthering their assessments. In the scientific field, the previously mentioned Cattell produced rankings as part of his studies on the origins of "eminence," as a relatively stable category and he did not seem to show much interest in *capturing change* as such. Organizations, on the other hand, have means to "force" their members to have a long-term interest in rankings: within a "zone of indifference" (Barnard, 1938), members of an organizations can be expected to do as they are told irrespective of their emotions, preferences, or (changing) interests.

A second reason for the one-off nature of many of these early rankings in different fields seems to be that repeating them would have been not only costly, but also time-consuming: producing anything on a regular basis instead of once obviously has clear implications for the workload to carry and the money to spend – especially in the case of individuals for whom producing rankings is not their sole or even their primary responsibility. Hammarfelt and

colleagues (2017), for example, detail the amount of time and energy Cattell had to dedicate to produce one ranking. He first had to scan encyclopedias, make a list of "eminent" scientists in different fields, prepare a questionnaire, select those who should receive it, sent out letters to them with specific instructions, wait for the letter to return, weigh scores, calculate overall results, and, finally, publish his findings on the "scientific strength" of universities in the journal *Science*, which he only could because he himself was the editor. The authors suggest that Cattell did not repeat this exercise due to a "lack of data." They further speculate that as the biographical directory *American Men of Science*, which was the foundation of his sample, grew in size, Cattell on his own was not able to maintain the "calculative power" necessary for compiling and reproducing the ranking. They conclude that "(i)t may have been too much for Cattell" (2017, p. 405).

All of this stands in stark contrast with how today's rankers are able to handle their workload. Besides their superior ability to retain financial resources mentioned earlier, they have trained personnel specialized in and paid for the production of rankings. In their study of rankings in the IT sector, for instance, Pollock and D'Adderio (2012) showcase how contemporary ranking organizations such as Gartner have an "army" of employees who are responsible for the creation and maintenance of so-called "magic quadrants." This indicates that in the case of many contemporary rankings, the employment of those responsible for the production process is contingent upon the ranking exercise to be continued. In turn, if individuals decide to leave the organization, they can be replaced by others who continue their work. Take the Corruption Perception Index (CPI): even after its well-known founder, Johann Graf Lambsdorff, retired, and wanted to retire the Index (Global Integrity, 2009), Transparency International continued the publication.

Not only employees, but also the ranking organizations themselves may have incentives to commit to continuing the production. This is especially true when a ranking becomes so successful that the survival of the organization depends on it. When it produced its first college rankings in the early 1980s, *U.S. News*, a weekly magazine, was in financial trouble. The publication of its first successful – and still existing and widely read – ranking practically saved the business. In the coming years, *U.S. News* became increasingly more invested in the production of rankings (Espeland & Sauder, 2016). In 1990, less than a decade after its first publication, *U.S. News* expanded its ranking to include all four-year colleges in the United States, alongside its traditional top 25 lists (Jin & Whalley, 2007). Pigeon Paradise, an auction house producing league tables of pigeon races, is another example of an organization rapidly expanding through rankings. They started out in the 2000s as a club ranking pigeon races in Central Europe. This soon spurred interest in Asia, which attracted considerable financial resources as buyers sought the most successful pigeons. The growth

which ensued led to the Pigeon Paradise proclaiming itself the "engine of the pigeon market" (Bahrami & Meyer, 2019). In these cases, two complementary characteristics of organizations seem to reinforce each other: while the *effectiveness* of organizations contributes to the regular publication of rankings, once established, the rankings use the *self-preserving tendencies* of organizations for their long-term institutionalization.

3.2 Handling complex tasks

Over time, rankings in different fields have arguably become more elaborate and more complex, which can add to their perceived significance and legitimacy. Ranking organizations play a crucial role in this development as they can over time become more efficient in managing the collection, quantification, evaluation and aggregation of ever more information about an increasing number of cases. To give some examples: PISA started out as a ranking of 43 OECD and non-OECD countries and in its last edition in 2015 included 72 countries; the CPI by Transparency International went from 41 countries in 1995 to 180 countries and territories in 2018; and the website ArtFacts, founded in 2001, constantly increases its sample, currently holding at a staggering number of 601.331 artists. However, organizations do not only increase the sample of individual rankings, they also often multiply the population. The U.S. News, on the other hand, did not merely expand its original ranking by including more universities, but also began to "export" rankings into other domains, such as hospitals, law firms, vacation destinations, and even cars.

In more abstract terms, contemporary rankers often act as what Latour (1987) refers to as "centres of calculation," that is, they mobilize, translate, standardize, quantify and evaluate information by developing large-scale networks. Due to their calculative power, formal organizations are able to include a large number of ranked entities. Such requirements greatly surpass the capacities of single individuals, or even small teams. To produce a ranking of colleges in the U.S., Kunkel, for example, had to rely on his friends: "The data upon which this paper is based were secured from three different volumes of 'Who's Who,' the only ones at the time available, in order that I might profit by the very kind assistance of my friends, Mr. and Mrs. Marion H. Hedges, without which I fear I would not have carried out the investigation." (Kunkel, 1915, p. 317). Such solutions are today, arguably, less common.

Furthermore, producing complex rankings which include a large number of entities usually requires a high degree of expertise and specialization. The personnel of ranking organizations is typically highly educated, in possession of specialized knowledge, and sometimes receives additional extensive training – thus making up a large labor force that serves as an important infrastructure for the emergence of ever more rankings.

Organizations also rely on their ability to mobilize the input and cooperation of experts and academics. The Freedom House's Freedom in the World Index, for example, assembles "a team of in-house and external analysts and expert advisers from the academic, think tank, and human rights communities"; "the 2018 edition involved more than 100 analysts and more than 30 advisers" (Freedom House, 2018). The main task of the analysts is to evaluate their respective countries of expertise by using "a broad range of sources, including news articles, academic analyses, reports from nongovernmental organizations, individual professional contacts, and on-the-ground research." The analysts then produce quantified scores, which "are discussed and defended at a series of review meetings, organized by region and attended by Freedom House staff and a panel of expert advisers" (Freedom House, 2018). Another example is the World Bank's Ease of Doing Business Index, which relies on both inhouse and external expertise and in doing so consults thousands of experts who fill out the questionnaire, interacts with these individuals, and then even does spot-checks in a variety of countries (World Bank Group, 2018). Arguably, only an organization that is able to manufacture high levels of legitimacy, controls vast resources, and has extensive staffing and global networks of expertise at its disposal could accomplish a task so complex and resource-intensive.

While centres of calculation still steer the processes and, to some degree, are able change the outcomes (see Pollock & D'Adderio, 2012), other organizations create and maintain what Kornberger and colleagues (2017) call "evaluative infrastructures" - a mix of technologies, assemblages, institutional arrangements, cultural rules, norms, habits and conventions, allowing for the collection, creation and procession of large amounts of data. Typical examples are platform organizations which depend on users' sharing their experience. In such cases, the organizations provide certain rules and framings (such as algorithms), but the resulting evaluations, ratings and rankings emerge in a more or less organic fashion. TripAdvisor, for instance, has an algorithm that produces its popularity index which ranks hotels and restaurants in different areas, relying on user review (Jeacle & Carter, 2011; Orlikowski & Scott, 2013). Even though the production of the Popularity Index proceeds almost automatically as soon as the algorithm is in place, TripAdvisor still has to provide a great deal of maintenance work. Moreover, operating at such a large scale in some sectors, such as tourism, involves setting up contracts with a variety of auxiliary organizations, engaging in PR activities, providing help desks and counseling in cases of problems, and dealing with a variety of legal questions and even lawsuits.

The increasingly complex evaluations and calculations, and not least their expansion, require a certain degree of standardization, but also distance from the object of ranking. Just like any other, ranking organizations strive to improve their management, as well as to develop strategies to socialize their members, allowing them to coordinate actions of often large, diverse, and spatially dispersed groups of people (Ashforth, Sluss, & Harrison, 2007; Maanen & Schein, 1979). Orlikowski and Scott (2013) detail the formally standardized learning process of newly hired staff at the Automobile Association which publishes a yearly accommodation guide in Great Britain. The authors describe a well-honed, elaborate, and standardized process of peer-learning at the end of which newcomers become experienced – and trusted – hotel evaluators. Similarly, in their study on the Access to Medicine Index, Mehrpouya and Samiolo show how the Access to Medicine Foundation constantly reminds its analysts to suppress their subjective impressions and feelings and analyze data as a "robot" (Mehrpouya & Samiolo, 2016, p. 21). With such practices in place, ranking organizations are not only able to standardize the behavior of their employees, but also to deal with its fluctuation. Their ability to handle ever more complex tasks, then, can be seen as both a prerequisite and an effect of their involvement in the continual production of rankings.

3.3 Engaging large and diverse audience

The aforementioned examples from the arts and sciences indicate that the early producers of rankings were typically experts in the field, addressing a small circle of people and expert audiences, usually their professional peers (other artists and scientists, respectively). The compilers of art (proto)rankings, for example, even deemphasized the validity of their findings (Spoerhase, 2018), signaling that they respected institutionalized structures of connoisseurship at the expense of promoting their easy-to-understand ranking tables to mass audiences. Similarly, in the field of science, "early attempts had in common that they originated from the sciences themselves and, although they claimed to be of relevance for students, their audience mainly consisted of fellow scholars" (Hammarfelt et al., 2017, p. 406).

Since the 1980s and 1990s, more and more rankings are explicitly produced for non-expert and in other ways diverse audiences. In many cases, the very meaning of the ranking is based on the idea of transforming expert judgments into information for broader publics. However, while many accounts emphasize the numerical authority of rankings, empirical studies also highlight their aesthetic appeal. In their study on the IT ranking organization Gartner, Pollock and D'Adderio (2012) describe how the creators of Magic Quadrants always keep in mind that a ranking has to deliver a "beautiful image": a distribution that makes sense to clients, thus neither including too many nor too few cases, while offering a meaningful spread. In a similar vein, Mehrpouya and Samiolo (2016) show how ranking organizations strive to create what their informants call a "good distribution." In Latoursian terms, ranking organizations invest a great deal of time and resources to craft rankings as powerful and appealing "inscriptions" spanning and travelling a multiplicity of contexts (Latour, 1987).

In contrast to individual rankers, who seem to focus more on interacting with other experts, ranking organizations often strive to maintain interest in their product across several audiences, some of which are more and some less competent when it comes to understanding the complex and multifaceted calculations undergirding rankings. To address various audiences ranking organizations either develop hybrid practices, that is, they engage in activities spanning multiple fields (Furnari, 2014), or divide labor processes, i.e. they set up different departments focusing on technical tasks *and* institutional environments amounting to what is often referred to as decoupling (Meyer & Rowan, 1977). Crucially, all of the practices depend on the specific capacities of formal organizations, particular division of labor in professional expertise, ranging from technical abilities (e.g. statistics, accounting) and management to communication skills (e.g. scientific, marketing, public relations).

Rankers' ability to span multiple audiences also allows them to have both the personnel specialized in adhering to a noble cause (for instance, protecting the environment, or improving healthcare) and engaging in commercial activities to generate revenue. Their complex structure enables organizations to even use their products to promote certain causes via rankings and then provide remedial services. Kornberger and Carter (2010) detail how the Anholt City Brand Index ranks global cities to promote the idea of a "city brand" and then establishes itself as a consultancy to help cities improve their brand. The aforementioned Pigeon Paradise simultaneously addresses expert audiences (so-called "pigeon fanciers") and uses its rankings to increase the valor of pigeons, which it then auctions off to the highest bidder (wealthy investors in Asia). These examples indicate that owing to their diverse and qualified workforce as well as their ability to coordinate the action of multiple departments via managerial oversight, organizations are well equipped to expand into a multiplicity of fields. With modern society comprising exponentially more fields over time (Christin, 2018; Fligstein & McAdam, 2012; Krause, 2018), such capabilities are in great demand when it comes to the handling of devices such as rankings.

Another important factor for the engagement of large(r) and (more) diverse audiences is that rankers often end up attracting attention by creating "news." In contrast, early rankings were rarely set up with this goal in mind. It is therefore little surprising that rankings which actually gained traction and were published regularly before the 1980s, such as the *Kunstkompass*, an artist ranking by German journalist Willi Bongard, actually could rely on organizations to deliver certain tasks such as marketing. In the case of the *Kunstkompass*, the journal in which it was published took care of printing, distributing and promoting the ranking over the

years, allowing Bongard to use his time to engage in the public discourse surrounding his ranking and to address criticism (Wilbers, 2019). Contemporary rankings, however, are often geared towards maximizing the attention of a large, lay and in many cases also global audience (Brankovic et al., 2018; see also Kornberger & Carter, 2010). Not only do they take great care of how they visualize their products, but they usually also employ communication or PR experts responsible for monitoring, evaluating and engaging with stakeholders. Their tasks include, among others, disseminating reports, communicating their product in a language which is more accessible to a broader audience, organizing events and devising elaborate social media strategies.

The production of rankings that reach beyond narrow circles of experts, especially those addressing global and diverse audiences, increases the likelihood of criticism. Almost by definition, regularly published rankings are in a continuous battle for legitimacy and often fiercely debated. The CPI has been accused of furthering US-American interests (Gutterman, 2014), while university rankings regularly face pushback (Dörre, Lessenich, & Singe, 2013; Espeland & Sauder, 2007). Criticism and efforts to avoid it can sometimes affect the way a ranking is made and push the ranker to be "deliberately less bold" and even – as it was the case with the aforementioned Hughes' and Cartters' reports – to completely refrain from presenting the findings in a rank order (Webster, 1992, p. 252) as a way to "de-emphasize the pecking-order relationships" (Roose & Andersen, 1970, p. 2).

Some of the most prominent rankers today certainly do not shy away from controversy. To address critics and sceptics, they often devise elaborate strategies. The earlier mentioned social media activity is one such example, while organizing events is another. THE, for instance, organizes summits and launches, which they use to also get in touch with critics and/or experts, "refine" their methodology, and see how they can "do it better" next time (Lim, 2018). Organizations are in general able to counter criticism quite effectively as they have the means to orchestrate such collective responses by providing its members who appear in public with "fronts, appearances, manner, routines" (Manning, 2008, p. 680), thus allowing them to promote a favorable self-presentation (Ringel, 2018), even in spite of backlash.

Another strategy is to involve those who could potentially criticize and even de-legitimize the ranking in its production process. A classification of journals by the Danish Agency for Science, Technology and Innovation, for instance, was created by assigning the task of categorizing journals to scholars from the respective fields (Jensen, 2011). The agency thus acted as a centre of calculation by branching out its calculative processes, while at the same time creating barriers against criticism: the evaluation criteria of the journals, if challenged, would be the responsibility of "the scientific community" – not of the Agency. Arguably, the

ranker, which in this case was a ministry, granted legitimacy and authority to the process – something which would be far more difficult for an individual to achieve.

4. Concluding discussion and outlook

The expansion and effectiveness of rankings is certainly contingent upon their acceptance as a modern rationalized institution. Research in the framework of new institutionalism has time and again demonstrated that collective actors who are perceived as legitimate have easier access to resources than those who cannot or do not wish to incorporate institutionalized structures. Even more fundamentally perhaps, we have to recognize that "organizations can best communicate with other organizations," that is, organizations consider other organizations "the only adequate points of contact" (Kühl, 2015, p. 263). Hence, it is easier for ranking organizations to acquire funding and establish cooperation, compared to other types of actors, such as individuals, simply because they are organizations. As a result, we might attribute the dominance of organizations among modern rankers today, to some degree at least, to the symbolic quality of formal organizations as such.

In this article we have argued that the new institutionalist thesis on the global-cultural institutionalization of "organization" could benefit from the (often forgotten) insights offered by the "old" institutionalism. We, however, do not wish to undermine cultural rationalization as an important driving force behind global organizational expansion; organizational expansion as such is, after all, not what we have tried to account for here. Rather, we call attention to the aspects of the expansion or "success" of contemporary organizational *rankers* which, we argue, cannot be accounted for exclusively though the new institutionalist lens. We neither wish to claim that rankings become institutionalized *because* they are produced by organizations; rather, we argue that organizational capabilities are an important element in the larger mechanism of this complex process. Finally, we do not claim that individuals cannot produce and reproduce popular rankings, but those are, to our knowledge, exceptions, rather than a rule.

To elaborate this point further, and drawing on the empirical evidence mentioned thus far, we suggest that organizations enable the ongoing production and promotion of rankings in at least three ways. First, plainly put, compared to individuals, *organizations are able to do more things at once*. Transparency International, for instance, has a secretariat that is, among other things, involved in the production of the CPI; it also has national chapters all over the world engaging in different activities, such as advocacy, networking, engaging with the media and lobbying. Extreme cases are large and highly influential international

organizations often employing hundreds of people, with the World Bank, the OECD and the United Nations being well-known examples. For such organizations, producing a ranking does not necessarily mean setting other tasks aside. Take the World Bank: while producing and promoting Indexes, such as Doing Business Index and Human Capital Index, it provides loans to countries, funds all kinds of projects, conducts research and engages in advocacy.

Second, organizations can do more things at once – for a longer time. They often outlive individuals – even their founders – which makes them more likely to sustain a long-term interest in the production of rankings. Individuals, on the other hand, not only eventually pass away, but they also may lose interest in the production of rankings as they become dedicated to other endeavors. The repeatedly mentioned James Cattell is a prime example: albeit showing great interest in mapping scientific "eminence," he was also involved in the promotion of university reform and anti-war proclamations during World War I, which eventually consumed much of his time and even put him in the position of losing his tenure at Columbia University. Put differently, there are limits to what a single person, or even a group for that matter, can do in their lifetime – a restriction that does not in principle apply to formal organizations.

Third, organizations can do more things at once, for a longer time – and can accumulate more resources, often from a greater variety of sources. Producing and maintaining a ranking (or several different rankings) is in certain cases extremely resource-intensive. Individual producers of rankings were therefore either forced to invest their own resources or wait for opportunities to arise. Cattell, for instance, had the advantage of editing a leading journal in which he could publish more or less at his own will. Kunkel, as we have seen, relied on friends. Individuals, as opposed to organizations, are also less likely to secure the funding necessary to acquire expensive instruments and technologies needed to ensure the calculative power for the production of the rankings they envision.

In conclusion, while in this article we acknowledge that the diffusion of rankings in contemporary society is largely a matter of discursive institutionalization, we wish to draw attention to the properties, practices, and strategies devised by the actors responsible for their ongoing production, which have largely remained ignored by rankings research to date. We therefore argue that formal organization is, in a way, a vital cog in the engine of modern-day rankings. Having reviewed a large body of empirical studies on rankings, we have identified three dimensions along which rankings have evolved decisively once being produced by organizations: publication frequency, handling increasingly complex tasks and audience engagement. We illustrated how, in contrast to rankings produced by individuals, organizations are better equipped to publish rankings on a continual basis, handle the

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increasingly complex production process, generate considerable degrees of attention by addressing larger and more diverse audiences, and develop mechanisms to respond to their criticism. In short, there is reason to believe that the organizational production of rankings provides an elementary and hitherto overlooked infrastructure undergirding the discursive institutionalization of rankings. On a theoretical level, therefore, our analysis suggests that we are well-advised to reconnect insights on the legitimacy of institutions as promoted by the "new" institutionalism with the "older" institutionalism's emphasis on the effectiveness and efficiency of organization in order to make sense of the pervasiveness of institutions such as rankings.

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Conflict of Interests

The authors declare no conflict of interests.

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