8 Rankings as Surveillance Assemblage

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"No one, no thing, no class, no gender, can 'have power' unless a set of relations is constituted and held in place: a set of relations that distinguishes between this and that (distribution), and then goes on to regulate the relations between this and that … The argument, then, is that power, whatever form it may take, is recursively woven into the intricate dance that unites the social and the technical."

John Law, *A Sociology of Monsters*, p. 16

"Lacking a vision to replace those that foundered on the shoals of repression and corruption in the twentieth century, we are reduced to reform and resistance – the latter being a favored term today in part because it permits action as reaction, rather than as crafting an alternative."

Wendy Brown, *Undoing the Demos*, p. 220

The epigraphs to this chapter articulate a problem for those of us who regard university rankings, metrics, and their politics to be undesirable, or perhaps even destructive to our freedoms to choose what research we conduct, where we publish, and how our universities are governed and to have valid information to make personal and governmental policy decisions. Yet rankings are as much a part of academic history and culture as they are governmental or business tools for oversight and profit generation. The problem is this: the material and cultural relations in which rankings are entwined make them all at once seductive, coercive, and profane to academics, who are not only subject to them but whose very work feeds their production. That is, they are not only embedded within long-standing academic practices and interests, they are increasingly integrated into routine ways of knowing, thinking about, and recognizing legitimate universities and academic work. The university's entanglement with rankings makes a world without them seem unimaginable. In this chapter I discuss rankings within actor-network theory and explain the implications of this

perspective for articulating junctures between rankings, metrics, and university life that require personal and collective reflection, per Wendy Brown's point – to instigate thought as to what alternative values, ethics, and means of recognition might be possible. Rather than presume to know what alternative values and interests are best, I simply outline the current state of affairs and, in so doing, intimate points of departure.

In what follows I provide a brief overview of rankings in popular culture and academia and situate them as a form of global surveillance assemblage. I then engage with data that includes documents, news media, and interviews to illustrate three of numerous points within the global rankings assemblage that have consequences for how universities are currently known and enacted, but also for how any alternative may or may not align with such an assemblage. The three instances I examine are academic standards of merit, university data collection and reporting, and public claims-making. I also draw on data that illustrate concerns with ranking methods in an attempt to discredit them so as to show how action against them merely alters the relations through which academics are tied to rankings while intensifying the assemblage.

Theoretical Perspective

My analysis of global university rankings and related metrics is informed by actor-network theory (Callon, 1986; Callon & Latour, 1981; Latour, 1987; Latour, 2007; Law, 1994; Law, 2012). From this perspective rankings can be conceptualized as an assemblage that includes human and non-human actors that make use of symbolic and material resources to hold relations between them together or break them apart. The effects of such networks are the realities that we observe and experience in day-to-day life. Actor-networks are somewhat stabilized but always shifting as a result of the ongoing negotiations between their components. Within actor-network theory, action is always mediated through the relations in which actors are embedded. For example, rankings lists that appear each year in the *Times Higher Education* are a product of globally mediated action. Rankings are an effect of professors doing research that is published in journals and books, of metadata scraped from these to form databases such as Elsevier's SciVal and Scopus. Rankings are also derived from surveys that ask professors and administrators to submit their opinions on which universities are best. Further, they incorporate institutional data produced at each university around the globe which are submitted to the *Times Higher Education* via standard templates each year. All of the universities, professors, databases, survey respondents, staff that produce institutional data, and rankings organization employees are tied together in a set of relations that produce the annual rankings. Each actor in this web mediates relationships with others, and each of their actions

along the information flows potentially affects the others. The effects are rarely observable other than when one university decreases in the rankings as another increases. No single actor in the web can know for certain why any movement in the rankings occurred. It could be the *Times Higher Education* changed its method. It could be that a group of professors gamed their publication metrics, or it could be that a concerted effort was made by a university to have many friendly people rank their university highly in the annual survey.

Haggerty and Ericson (2000) have described a "surveillance assemblage" composed of individual personal data that flows through various centres of calculation, databases, and information infrastructure to affect people's lives in ways they cannot know. Haggerty and Ericson's notion of surveillance here is intended to refer to broad relations of visibility and scrutiny, or "systems of observation" (p. 606). As David Lyon (2002) has noted, "Surveillance studies covers a huge range of activities and processes" to do with "personal details, that are monitored, recorded, checked, stored, retrieved and compared … processed in many different ways" (p. 2). The surveillance assemblage is positioned in relation to familiar hierarchical forms of monitoring, where managers observed employees on the factory floor or guards watched prisoners in their cells. While these forms of monitoring continue to exist, the surveillance assemblage points to the obscurity of data-based surveillance, to the ways in which individuals under observation may not be aware they are being watched, and, citing Bauman (1992), to how "the population is increasingly constituted as consumers and seduced into the market economy" (in Haggerty & Ericson, 2000, p. 615). Haggerty and Ericson (2000) then elaborate that this is a situation "where individuals monitor their behaviour in light of the thresholds established by such surveillance systems … often involved in efforts to maintain or augment various social perks" (p. 615). People submit themselves to surveillance systems as a matter of routine, going about their jobs, leisure activities, and personal relationships. Importantly, attempts to evade the assemblage involve trade-offs regarding access to resources and benefits.

The global rankings assemblage is a particular sort of surveillance assemblage that pertains to global higher education. Professors and students unknowingly become connected to the assemblage by registering at a university, being hired to teach a course, or publishing a paper. Even when students graduate or professors quit a university for new employment, their traces – data pertaining to their existence, past work, interests – continue to flow through the assemblage in ways they cannot know. I contend that it is this complex web of mediated relations – the global rankings surveillance assemblage – embedded within local and global academic histories and cultures that must be considered for any alternative global system of higher education. Individuals, universities, or

nation-states might consider altering their role within the assemblage or rejecting it completely to disentangle themselves from it.

For many analysts, actor-network theory raises concerns with agency and structure (Corman & Barron, 2017; Sayes, 2013). From an actor-network perspective agency does not require intentionality, is not located within an individual actor, and is not understood as something distinctive of humans. Rather, it proffers a broader notion of agency that can involve resistances and effects that are embedded within, and are a product of, networked relations (Sayes, 2013). Similarly, in instances where non-human actors cannot speak for themselves, humans often make claims on their behalf. In regard to the global rankings assemblage, for example, people may refer to data as "objective," meaning they should speak for themselves as undeniable facts. However, from this perspective there is also no necessarily objective truth to rankings or any data. Rather, they are a product of assumptions and decisions made by specific individuals and organizations. Rankings are dependent on actors across the globe – the professors, staff, databases, and others – that assemble and submit information for their calculation. Importantly, artifacts such as data, information infrastructure (e.g., templates, tables, databases, spreadsheets, network servers) carry interests and act upon their users to limit or facilitate particular capacities. For example, the *Times Higher Education* annually sends a data request to universities with a template that has definitions of student-faculty ratio, research funding, and so on. These define what is important and ought to be legible within the rankings system. Institutional analysts must then take their local categories and definitions and translate them into those that the *Times Higher Education* requires. The templates, definitions, data, and databases that the institutional analyst uses are all a part of the actor-network; they tie together universities around the world and – in part – create the effects of the global rankings surveillance assemblage. Such artifacts work with professors and administrators to make rankings and the network. The actor-network is further strengthened as students and parents consume rankings and administrators engage in public identity management.

Thinking about rankings through actor-network theory has implications for conceptualizing alternative relations. Will we merely alter the relations we observe ourselves embedded within, or might we imagine ways to disengage and create an alternative? It is not rankings alone that must be considered, but the complex of relations in which they are embedded. These include the traditional values and interests of academia, day-to-day work of professors and support staff at universities, students' and parents' concerns to choose a university, the business interests of publishers and rankings organizations, and the political interests of governments. All these organizations and people work with data and information infrastructure to learn about rankings, submit data for

their production, and package them into a variety of consumable products. For example, in addition to the direct data request that rankers make to universities, professors around the world regularly submit their papers to academic journals so that they can be published, often in hopes of being cited in order to increase their own reputation and grow their careers. Metadata is scraped from these publications to create metrics such as citations, and these metrics are then combined with the data submitted by universities to create rankings. The data are also used to develop additional products – such as Elsevier's SciVal and Thomson Reuters' InCites – that are sold to universities for further monitoring professorial and organizational performance. These academic and business interests, data flows, and work must all be considered in any project against the global rankings assemblage. Similarly, strategically crafting an alternative might require evading interfaces with the global rankings assemblage, as the alternative might not truly be one at all.

For the project at hand I examine three of many practices that piece together the actor-network in which the global rankings assemblage exists. Callon (1986) has demonstrated several processes that are important for network formation, including a definition of a problem or situation, the fixation of actors into proposed roles, clarification of knowledge and relations for all involved in these roles, and the actions of the stabilized set of actors as one. Here I examine how problems and roles related to rankings are defined and situated in public claims-making activities. The examples I provide illustrate how actors can alter their networked relations with the global rankings assemblage against a background of how the assemblage itself simultaneously shapes those relations.

An analysis of claims-making can be effective at helping to situate actors within a set of symbolic and material relations because results implicate how actors and resources are enmeshed with one another while also illustrating their values. Strategies for conceiving alternatives might then be a matter of considering what values are problematic, the resources at hand, and any possible costs to altering relations or constructing new ones. My analysis of claims-making shows that the definitions of situations related to academia and rankings are often aimed only at specific parts of the complex global rankings assemblage and that, in the instances I share, the assemblage intensifies.

Situating Rankings

Rankings have a long history in Western societies. Rankings are cultural artifacts derived from human work at categorizing and quantifying a set of ostensibly similar objects, then ordering them according to a qualitative distinction – best to worst, for example. Readers are likely to be familiar with rankings as they are now a common social form that seems to be applied to every object,

organization, and institution. We have rankings for sports, economic freedom, beauty, professors, cars, cities, and animals. Rankings are not value-neutral tools for assessing the true quality of phenomena; rather, they are imbued with the values and biases of the people and data that make them up. Thus, rankings are always political, creating new hierarchies while maintaining old ones (Barron, 2017). Rankings are productive in that they create new orders of people and things, direct attention, and reinforce their reality through reactivity – organizational and individual responses that shift expectations and practices in attempts to manage identities and situations that rankings create (Espeland & Sauder, 2007, 2016). Yet rankings are also destructive in that they ignore, suppress, or truncate information regarded as unimportant to their production and consumption. Rankings can erode professional authority and solidarity, exclude individuals and universities from their lists, and delegitimize local or traditional knowledge. This is because rankings are simple tools for visibility that articulate comparisons in terms of relative quality – they work upon personal and collective identities and representations. In doing so, they become a point of reference that shapes future interpretations of the very same identities and representations.

Rankings draw on academic traditions and discourses of peer review, excellence, and self-promotion, but in ways that are not situated within other academic cultural practices. In its formal standards, academic peer review attempts to recognize diverse forms of excellence and incorporate context into assessments of quality, for example, in assignment of prestigious fellowships and awards (Lamont, 2010) and for tenure and promotion (Sayer, 2016). Academic culture is fundamentally concerned with recognizing excellence and promotion through status hierarchies to which symbolic and material rewards are attached – as are rankings. However, rankings conflict with academic traditions that recognize excellence as taking diverse forms. Universities have been recognized as having the unique organizational property of incorporating diversity, rather than maintaining a singular focus or mission (Smelser, 2013). Rankings discourse and method are not foreign to universities; they are embedded in academic concerns for prestige and distinction but are dissonant with other academic traditions that recognize and support diversity. Rankings impose universal standards and a single mission: a competition for visibility in terms of world-class status. As universities become represented and identified by the global rankings surveillance assemblage, the opportunities to represent themselves become limited to techniques of manipulating data submitted to categories defined by rankings organizations. As such, rankings can also interfere with academic freedom – the liberty to self-govern academic institutions and to pursue uninterested inquiry. By defining situations, rankings simultaneously articulate winners and losers, objectifying subjective interpretations of quality, and in doing so may affect

the distribution of material rewards such as student applications and government funding. Rather than traditional interaction rituals whereby humans can directly engage with one another to represent themselves strategically (Goffman, 1959, 1969, 1986), rankings mediate such interactions and thereby define the terms by which interactions are structured and place limits on possibilities for how they can unfold. As a global system of surveillance, rankings apply their values and definitions to everyone around the world – regardless of whether those values and definitions are shared.

Method

The current analysis is based on a broader research project that examined university rankings as a globally coordinated phenomenon. In that broader project I focused on data work, information infrastructure, and academic culture. My research involved semi-structured interviews with sixty-one deans, department heads, recruiters, institutional analysts at several universities, and rankings organization employees to understand the coordination of global academic activity. The study also included observations at several rankings-focused conferences and promotional events, such as the International Ranking Expert Group (IREG) annual conference, a *Times Higher Education* university summit, and a QS conference on re-imagining education. At the events I also met professors and university administrators from around the world and spoke to them about why they attended the event, why they were interested in rankings, what their local university was like, and how rankings affected them. The interviews and observations helped me understand how academic and non-academic actors in different organizations and roles around the world conceptualize, speak about, make claims in regard to, or publicly share their concerns with rankings and related metrics such as citations and impact factor.

Because of my own standpoint as a graduate student, it made sense to begin my investigation with the University of Alberta, where I was enrolled in a PhD program. I chose Mount Royal University – a small university in Calgary, Alberta – as an additional location for interviews. I believed that its recent transition from a teaching-focused college to a research university, and the fact that it was not included in any rankings, might provide an interesting comparison to ranked universities. Other organizations and sites were chosen primarily for convenience. I invited representatives of several rankings organizations to take part in interviews, but only Phil Baty of the *Times Higher Education* made himself available. Convenience samples of this sort are a pragmatic matter, not purely methodological, in that they provide points of entry into examining and analysing the networks in which each informant is embedded.

My primary approach to interviews was to tell my participants about the topics I was interested in and then let them talk (see Devault & McCoy, 2006). I would describe my interest in the university, rankings, performance metrics, and the day-to-day work that the participant does, then ask them to tell me about their job. As participants described their job titles, I would ask who they work with, who they report to, who reports to them, how they communicate and get information to complete their work. I listened for references to other processes and texts, asked how such items work, what purpose they serve, whether I could have a copy of an item of interest, whether I could observe the informant using the item or if they could describe how it was typically used. I also asked who I should speak with to learn more about the process or item in question. In this way, I was able to trace the infrastructure that my participants create and use as they go about their daily work. I would then follow these relationships to the next person in the chain who could fill information gaps. This process continued until I had established a sense that any further interviews would yield few new details.

I conducted a search for popular media and news articles in January 2014, using Factiva, an online database that contains global media including newspapers, broadcast news, blogs, images, and videos. I intended a broad search, so the only search term I used was "university rankings." I limited media to those created between 1990 and 2014, as many regional or local university rankings emerged in the late 1980s and 1990s, while global rankings became popularized between 2005 and 2010. I also excluded financial news, blogs, videos, audio, obituaries, and other types of media in the database that were not apparently relevant to text-based analysis of media regarding university rankings controversies. The original search included media from Asia, South America, and Africa, but I excluded these from this study as I am only literate in English and many items were not available in English. The search resulted in 1,592 items, but after using my stated exclusion criteria and eliminating duplicates, I had 600 text-based articles: 201 from the United States, 99 from the United Kingdom, 201 from Canada, and 99 from Australia. Many of the articles I retrieved were from newswires such as Canada Newswire and Associated Press Newswire; well-known national papers such as the *Globe and Mail*, the *Guardian*, and the *Australian*; local papers like the *Ottawa Citizen*, the *Bedford Times and Citizen*, and the *Santa Fe New Mexican*. I used the qualitative analysis software R package for Qualitative Data Analysis, commonly known as RQDA (Huang, 2016), to keep track of issues, problems, criticisms, and other aspects of what I refer to broadly as "the rankings controversy" that appeared in the media. Box 8.1 illustrates broad categories of arguments against rankings and their frequency of occurrence in the articles that I collected.

My interest in the media analysis was not a deep examination of themes and sub-themes and their relationships. Rather, it was to clarify how public

Box 8.1. Public Problems and Issues in University Ranking News Media, Ordered by Frequency

Methods Issues – 140
Decision-Making – 36
Alternative Ranking System – 34
Accountability – 24
Top 10/100/200 – 19
Teaching vs. Research – 18
Funding Increases – 18
Diversity in University Mission – 17
Gaming – 16
Cuts – 15
Performance-Based Funding – 14
Simplicity/Complexity – 14
Resistance – 14
Access – 12
Collaboration/Competition – 11
Drop in Rank – 11
Standards – 11
Internationalization – 10
Leadership – 10
International Excellence – 8
Language – 7
More Research – 7
Rank Focus – 7
UK/US Bias – 7
Specialization – 6
Economic Growth – 6
Fee Increases – 6
Costs – 4
No Controversy – 4
Inevitable, Here to Stay – 4
Knowledge Society/Economy – 3
University Autonomy – 2
Alternative Revenues – 2
Deregulation – 2
Efficiency – 1
Hiring Freeze – 1
Increase Student Enrolment – 1
Public Good – 1
Restructuring – 1

claims were stated in the media and, as such, the ways in which problems with rankings were defined. My interest was in public engagement with rankings and in controversies, not the process of constructing the controversy or problem itself – which is more typical of studies in social problems (see Altheide, 2002). I was interested in concerns with rankings, broadly conceived. The themes I report here represent broad categories, operating as inclusively as possible of any statements that fit within the topic to which they refer. For example, "methods issues" includes all statements regarding limitations, weaknesses, strengths, objectivity, bias, or adaptations to methods; "decision-making" includes any statements pertaining to students, faculty, administrators, or governments making decisions in regard to rankings; "gaming" includes any statements I found related to the notion that people were cynically manipulating rankings surveys or data they submit for rankings calculations. I use these categories merely as a point of departure for a more particular concern to reflect strategically on specific parts of the global rankings assemblage.

Discussion

Academic Standards

Universities have engaged in some form of ranking since at least the eighteenth century, when engineering school administrators quantified and ranked student performance (Alder, 1997). More recently, Hazelkorn (2015) has documented three eras of university rankings, beginning in 1910 with an "American Men of Science" ranking that examined schools based on the ratio of "star faculty" to all faculty, followed by regional reputation rankings and global rankings. Concern with reputation likely has its roots at least as far back as the first days of scientific experimentation, when only men of recognized noble status were considered worthy of witnessing and testifying to the veracity of an experiment's results (Shapin, 1994). These examples are illustrative of professors' long-standing concern with reputation, which is a primary form of symbolic capital (Bourdieu, 1980, 1984) within academia through which individuals are hired, granted tenure, and promoted. This concern with reputation is one of the conditions that make the global rankings assemblage possible but also salient within global higher education. It is not a coincidence that appealing to concerns with reputation is a standard marketing technique used by publishing and rankings organizations.

Faculty are evaluated on criteria that emphasize quality and quantity of their work, which, if assessed positively, leads to increasing reputation and prestige. Concerns with reputation and prestige are further reinforced within universities through strategic plans and benchmarking practices. Professors are assessed for tenure and promotion based on increasing reputation and reach of their work. At the University of Alberta, the first stage of promotion is when tenure is granted and the rank of associate professor is awarded (from assistant professor), while the second stage involves promotion to full professor. Tenure is typically awarded on the promise of things to come, as evidenced by the total work over a professor's career to the date of application for tenure and as determined by peer review. In the Faculty of Arts at the University of Alberta, "Tenure is justifiably awarded only where it can be demonstrated that a staff member has research programs of clearly recognized promise and concrete scholarly achievements, in the form of published research or publicly performed or exhibited creative work, of a magnitude and quality that makes it highly probable that there will be continuing significant contributions to the staff member's discipline through a whole career" (University of Alberta, Faculty of Arts, 2014, p. 12). This is more or less consistent across the faculties including science, where the standards for tenure are, "The individual is expected to take an active part in research and scholarly activities, as evidenced by research publications in refereed venues of

international repute" (University of Alberta, Faculty of Science, 2012, p. 5). In this case journals must have international reputation. The international repute of journals is conveyed to the professor who publishes in them and who is then recognized as achieving tenure-worthy status.

For promotion to full professor, the importance of reputation and prestige is more clearly articulated, again from the Faculty of Arts: "Promotion on the primary criterion of research or creative work requires prominence in the applicant's scholarly or creative community as that community might extend … of sufficient scope and intensity to maintain the prominence already achieved" (University of Alberta, Faculty of Arts, 2014, p. 13). For promotion to full professor in the Faculty of Science, "The individual must demonstrate high quality and mature scholarship as evidenced by international recognition of research contributions" (University of Alberta, Faculty of Science, 2012, p. 6). Promotion at the University of Toronto is captured as follows: "The successful candidate for promotion will be expected to have established a wide reputation in his or her field of interest, to be deeply engaged in scholarly work, and to have shown himself or herself to be an effective teacher" (University of Toronto, 2016). These criteria are also used at many North American universities (Sayer, 2016) and elsewhere as standards that colleagues refer to in order to assess one another's worthiness for promotion and tenure. Scholarly excellence operates as an international symbolic economy through which reputation can circulate in exchange for rewards. Rankings align with these interests, using many similar indicators, such as quantity of publications which are measured by citations. The evaluative criteria for professorial work are explicitly and tightly coupled with those of university rankings in regard to their concern for prestige and visibility. By hiring and promoting faculty based on these criteria, universities have interests and values that are well aligned with the global rankings assemblage.

Academic performance standards position reputation as something professors must work towards. Publishing in well-reputed journals is an indicator of quality work; having one's work recognized as such improves the professor's reputation and is considered an indicator of future potential. Reputation coordinates academic work but also circulates through it as a means to acquire rewards such as promotion. Global university rankings are embedded within academic interest in reputation. They incorporate reputation by having academics report on it through surveys and then advertise this reputation in their annual releases. As professors continue to be rewarded based on indicators of reputation and incorporate such concerns into their identities, they become discursively aligned with rankings and their purposes. Reputation is one mechanism by which the global rankings surveillance assemblage coordinates academic work and aligns it with its purposes. Universities also take part in rankings and related metric practices, in part due to the reputation risk posed

by not participating (Power et al., 2009). Reputation – and the use of rankings to convey status – has been a part of university culture for a long time. Any alternative to the global rankings surveillance assemblage must contend with these practices that are strongly embedded in processes used to promote individual professors, as well as personal and collective academic identities.

Actor-network theory sensitizes analysts to the multiplicity of relations in which actors are embedded and how a reality can be enacted and observed (see Mol, 2002). Professors and universities are concerned with not only visibility and reputation but also novel contributions to knowledge. Assessing contributions to knowledge can be done independently of metrics and rankings, which – within the global rankings surveillance assemblage – often dictate what counts as a worthy and reputable body of work. Lamont (2010), for example, in her study of peer review in the allocation of prestigious awards, has demonstrated that academic judgment achieves a pragmatic fairness through inter-subjective negotiation and dialogue to determine quality work. Such practices do not require any reference to metrics or rankings. Crafting alternative ways of valuing scholarship and education must contend with allowing the global rankings assemblage to influence processes of recognition and reward.

University Data Collection and Reporting

Universities create a great deal of data used for many purposes. Institutional analysts and research facilitators work with data and build information infrastructure to assess academic performance, communicate to the public, and support decisions like budget allocations. Institutional analysts are important actors in the global rankings surveillance assemblage in that they produce much of the data that feeds into rankings, but also adapt local data practices and information infrastructure to effectively respond to and work within the rankings assemblage. Where infrastructure is adapted or built to respond to rankings and related indicators, work within universities incorporates their logics, orienting future work. I draw on a university's data warehouse to illustrate this point. Importantly, local data practices and infrastructure can be a site of resistance or outright refusal against rankings organizations and their attempts to align individual universities with their interests. Having data is necessary to perform the university's identity to audiences. Without working information systems, no data can be shared with rankings organizations, accreditation bodies, or potential collaborators. One representative from a large publishing corporation that I spoke with spent much of his time working with universities to do such work. At the University of Alberta, a data warehouse was developed to be the ultimate source of rationalized data across the organization. Once a new data source is created, people begin to ask

new questions of it and it often begins to incorporate new functions and be adapted to new purposes. This is why the data warehouse was named Acorn: "It's just the little seed that grows," I was told by an analyst who helped create it. As data systems like Acorn grow and begin to interface with rankings and publisher systems like Scopus, they become aligned with the global rankings assemblage and incorporate its categories of knowledge, shaping future work within the university.

Rankings organizations also request administrative data of the sort that Acorn was designed to standardize and report on. I was fortunate to connect with one institutional analyst who regularly provided these reports to rankings organizations. She shared the template she used for the submission to the *Times Higher Education* rankings, a portion of which I have illustrated in box 8.2. The template required her to copy and paste data from her own sources into the template, then copy them from that template into the THE rankings online form. The template asks for the university's number of academic staff and students of different categories (international, research, undergraduate, graduate), number of degrees awarded (doctoral, undergraduate), overall institutional income, research income, and research income from industry.

Just as Acorn requires specific definitions to ensure consistency and comparability across departments and faculties, the THE template also contains definitions to ensure that analysts across the globe understand how to make their counts for each category, which will be submitted and combined with other data to create the ranking. Asked where the definitions in the template came from, the analyst said, "The ranking agency develops them and then we apply them as best we can." Another analyst explained that creating counts of employees is a complicated process. Definitions of full-time equivalence (FTE) and medical staff are categories that need to be better understood and standardized. A head count of employees would give one total, but the sum of full-time equivalent employees would give another. Imagine that a university had only ten employees; that number would be the same as the total head count. But if five employees were FTE 1.0, two were 0.2, and three were 0.5, the FTE sum would be 6.9 FTE. The FTE is a more precise representation of how many employees spend their time working on campus, but it is not the total number of employees. Medical faculty added another layer of complication because many worked at the university but were paid entirely or in part by Alberta Health Services – the provincial health system. Notice also that the template in box 8.2 has notes for the analyst: "the term varies across countries," "only doing research," and so on. These notes illustrate how analysts apply definitions "as best as we can." The local data sources such as Acorn are traditionally organized by locally meaningful definitions and categories that don't necessarily fit with those required by rankings and which must be translated as closely as possible. The template

Box 8.2. THE Institutional Data Submission Template: Section and THE Definitions

Academic Staff
This is the FTE [full-time equivalence] number of staff that are employed for an academic post. Typically they will have a post such as: lecturer, reader, assistant/associate professor or professor.

Notes:

- This should include permanent staff and staff that are employed on a long-term contract basis.
- This will NOT include: non-teaching "fellows" (the term varies across countries), researchers (only doing research), post-doctoral researchers, research assistants, clinicians of all types (unless they also have an academic post), technicians and staff that support the general infrastructure of the institution or students (of all levels).
- This will NOT include staff that hold an academic post but are no longer active (e.g., honorary posts or retired staff) or visiting staff.

Number of Academic Staff
operating only

Of which are international/overseas origin
The FTE number of "academic staff" (see above) whose nationality is different from the country in which your institution is based

Research Staff
This is the FTE number of people who are employed only to perform research. *Typically they will not have a permanent post at a university*; often they are contracted specifically for purposes of doing research or similar activity.

Notes:

- This will include researchers, research fellows, and post-doctoral researchers.

is also illustrative of what I mean by a global assemblage of mediated relations. In this instance local meanings and action are mediated by the template and rankings definitions, transmitted to another location, and then manipulated in ways the analysts cannot know.

Businesses like Elsevier and Thomson Reuters also offer ready-made data solutions to track faculty and productivity at universities based on their citation

metrics, impact factors of journals, and relational data such as co-authorship across institutions. However, categories that organize databases tend to be incongruous with local definitions. Just as counts of staff pose problems, governing and organizational structure may as well. For example, one university may have a department of sociology and psychology, whereas another may have separate departments for each discipline, and there may not be any straightforward way to use the ready-made data source to reconcile these differences. Such complications were why the University of Alberta embarked on creating its own data warehouse. Similarly, common concerns with rankings and related products are that they are based on privately owned data and infrastructure, that access is sold through licensed or ready-made products, and that their effects cannot be undone once released to the public. The aim of the data warehouse was much like the purported utility of rankings and tools like SciVal that produce rapidly consumable and interpretable information. An analyst explained, "That is the purpose of the data warehouse … and that's what we're also trying to do … so at one glance, 'oh, that's the trend.'"

The data warehouse produces information that can be understood at a glance as conveniently as ready-made products. However, in instances where data seem wrong or categories do not match with what was expected, there were clear rules to trace back how figures were produced: "the advantage for the deans is everybody's got the same business rules … Because we've defined the business rules and everything behind it, if they want to question, we can tell them what we did." Business rules were developed to ensure anyone could trace back how data in reports were assembled. There are three interesting points here in considering alternatives to integration with the global rankings assemblage. First, local categories and meanings that are not immediately well aligned with those promoted by rankings organizations and publishers do some work against aligning with rankings. Second, by building their own solution, the University of Alberta avoided supporting the rankings and publication industry by not paying for one of their data products. Third, and perhaps most importantly, is that the local forms of organization, category definitions, and organizational units remained while their translation into reports to audiences was also made possible. An alternative might have been to reorganize the university and its interpretation of itself in order to conform with the categories and definitions that rankings and products like SciVal require.

As Acorn use expands, it has implications for future work at the University of Alberta, how administrators and institutional analysts can think about and represent their individual and collective identities. These may become more aligned with rankings and their business interests, or less so, over time. Information infrastructure, data, and the work done to make these have implications for alternative ways of organizing global higher education in regard to the global rankings surveillance assemblage.

Importantly, global higher education and individual universities like the University of Alberta are often only partially aligned with, incorporated into, and controlled by the global rankings assemblage. Acorn had begun to feed the rankings assemblage with data regarding the University of Alberta, but at the time of my research it had been explicitly designed on the terms of local actors with their own interests and concerns. Despite their alignments, local networks may continue to act without being entirely dominated by distant ones to which they are loosely connected.

When Methods Define the Problem

The final nexus with the global rankings surveillance assemblage I will consider here is public controversies that play out in popular media. These controversies intensify and multiply the reach of the global rankings assemblage and facilitate its incorporation into previously ignored domains. As I have illustrated in box 8.1, the broad themes of news articles that I created demonstrate that the primary approach to claims-making against rankings is to attack their method, illustrated not only in the dominant "methods issues" theme but also in concerns with a focus on alternative rankings systems; research rather than teaching; gaming; standards; and language. Hazelkorn (2015) has also noted that a great deal of concern with rankings can be traced to methodology. For example, in 2004 an article in the *Australian* argued against rankings that use survey data: "Regrettably, those who looked only at the table will not be aware of the survey's limitations" (Walker, 2004). In one of his articles on the subject of method, the *Times Higher Education* ranking editor Phil Baty, conveyed a warning by the South African higher education minister that rankings were "limited in their biased use of a range of indicators" (Baty, 2010). In Canada, the Maclean's rankings have also been disputed based on methodology: "While Maclean's university rankings are popular among high schoolers and anxious parents alike, it has drawn some criticism from the academic community for its methodology" (Yang, 2009). Similarly, deans and institutional analysts I spoke with frequently expressed their opinion of rankings in methodological terms. One senior scholar/administrator stated, "You can dislike them, you can find them methodologically flawed in all kinds of ways … they seem to be a very rough, imperfect tool." As I have explained, institutional analysts are the ones who are most often tasked with studying rankings and regularly submitting data to them. One senior institutional analyst I interviewed gave the example that rankings organizations "change the normalization of the citation to consider the population in whatever you write in. So of course [some people] skyrocket. I get that it's not that they've changed how well they do, it is change in the underlying metric." My interviews illustrate that beyond public claims-making, individuals working within universities also commonly concern themselves

with rankings methods. Espeland and Sauder (2016) found this was the case in their study of law school rankings in the United States. I found in public claims and in conversations that critiques based on method regularly lead to the conclusion that adjusting method will create a more effective ranking system. This approach is also taken by academics who study rankings closely and have argued that it would be better to rank national higher education systems so as to make them more objective and less biased (Hazelkorn, 2015).

The problems I mentioned with translating local meanings and categories into the standardized versions that rankings organizations promote and require for their data systems are also methodological. The process involves turning one's vision of oneself and one's organization into something it is not – local understandings and systems of performance measurement have to be adapted or transformed to effectively submit data to rankings. An analyst at an Ontario university explained that her team does not submit some types of data. The decision was made because the data from their source is not comparable to those from other countries, and if they were to transform it in the ways that rankings agencies require it would not match what they publish in their local annual reports. She explained, "Every year the rankings organizations will issue an invitation to universities to participate. And if you decide to participate then you get a template that says we would like you to submit this data … And specific definitions are being laid out. And so we would just pull out that data based on the definition … there's some cases where we would make an additional call saying this indicator is incomparable across countries, so we are not going to submit." Much of the analysts' work to monitor and report to rankings is focused on ensuring that their public image is managed and is as consistent as possible with their local understanding of their university's identity. It is through such work that new relations with actors across networks are formed; as new problems are identified, identities and roles are assigned (Callon, 1986).

I cite these conversations with analysts about their work transforming data for several reasons. First, in addition to methods that rankings organizations publish with their annual tables – the weightings, information about survey data, citations data, and so on – they also convey specific methods to universities in data requests. Second, each university has its own data, its own interpretation practices and means to submit them to the rankings organizations. When critiques are made against rankings organizations for their methods, the methods of all universities taking part in the rankings are rarely considered. Third, the interviews illustrate the fundamental problem that rankings methods pose for universities: they impose standards on a diverse world. Methods have implications for how local identities are conveyed to a global audience. One model may be meaningful or useful to some groups but not others; someone is always left out.

By recognizing what is left out, the rankings surveillance assemblage can grow as new rankings are made.

Further to my point, organizations that produce rankings and metrics regularly respond to criticism by introducing new standards and products. For example, IREG has developed "The Berlin Principles on Ranking Higher Education Institutions," which list principles for good ranking practices and are the basis of their rankings audit (IREG Observatory on Academic Ranking and Excellence, 2014). One of the principles states that rankings need to recognize diversity in mission and goal. The principle is a response to the critique that rankings have a homogenizing effect by promoting a single model of what a university should be (see Marginson, 2007). Recognizing diversity in higher education institutions works well with rankings businesses' marketing and niche standardization to create more types of rankings, or the adaptation of rankings to present them in multiple categories. For instance, global rankings offer a breakdown by academic area such as business management or sciences, university age (under fifty years), region (e.g., Africa, Japan), or emerging economies such as Brazil, India, Russia, China, and South Africa (BRICS) ranking. Slicing up the higher education sector creates new hierarchies while maintaining existing ones. These proliferating niches do not recognize unique characteristics so much as create new groups that facilitate further marketing and surveillance (see Timmermans & Epstein, 2010). The effect is more ranking-related products to sell and further stratification of universities into new status groups. Rather than having one hierarchy where all universities could be recognized, there are now many lists that are hierarchically organized (Barron, 2017) and the global rankings surveillance assemblage touches more of the world than it once did.

One other caveat evident in the examples related to methods: they demonstrate the partial connections within the global rankings assemblage. Only some parts of activity and work are ever included, and occasionally some are left out intentionally. The assemblage is not totalizing in its integration with local activity and realities. This final observation is an important one in that those parts of local networks that are connected to the global rankings assemblage may proliferate it without altering local relations that determine work and identity. Espeland and Sauder (2016) have argued that the proliferation of rankings may actually delegitimize all rankings and reduce the hold that any one ranking may have over universities.

Conclusion

In this chapter, I have argued that university rankings represent a global surveillance assemblage embedded within academic traditions, cultural practices, routine day-to-day work, and the publishing industry. I have briefly

described some of the many networked actors and relationships in this global assemblage. I have also drawn on a selection of data from my broader study to illustrate three specific points within the assemblage that offer insight into its appeal and ongoing intensification. I have demonstrated some of the complexities that must be considered if any alternative future for higher education in relation to rankings and related metrics is to be considered. Routine work in universities enrols students, professors, and their activities into the global surveillance assemblage. Beyond any regular reporting or performance review within a particular university, data is shared or even scraped from universities, professorial work such as publications, and student enrolments. These flow into rankings and other global data systems in ways that are incredibly difficult to trace and understand. The acts of resistance I have described demonstrate forms of refusal that only partially prevent entanglement with the global assemblage. For example, while there are instances of universities refusing to submit some data that does not conform well to rankings organization standards, they still submitted data that do. Perhaps more importantly, independent of any active refusal by a single actor – professor, analyst, university, student – distant actors within the global rankings assemblage can enrol other actors without their knowledge. To clarify, if the University of British Columbia were to refuse to partake in rankings, its citation data could still be scraped from Elsevier's SciVal, reputation data would be submitted by professors around the world who take part in the annual surveys, and university enrolment data would almost certainly be scraped from open data on the university's website. Beyond data, the values and interests that the rankings assemblage promotes are tied to long-standing practices and interests of professors and universities to increase reputation and prestige. I argue that the global rankings surveillance assemblage operates independently of any single actor and that this must be considered in imagining alternatives to rankings and their values. As Michel Foucault once noted, "We are neither in the amphitheatre, nor on the stage, but in the panoptic machine … which we bring to ourselves since we are part of its mechanism" (Foucault, 1977, p. 217). We tie ourselves into power relations based on our own interests and motivations and are often unaware of the ways in which we do so. We constitute our own relations of visibility, legibility, and knowledge with the discursive and material resources available as we pursue our interests – publishing papers in highly cited journals, for example.

Reputation – as a form of symbolic capital (Bourdieu, 1980, 1984) – is not only a means by which academics grow their careers; it is also a mechanism by which the rankings surveillance assemblage coordinates actors' interests and work and generates profit for corporations. Information infrastructure and data work at universities also tie academics, university administrators, and staff into the global rankings assemblage as they translate their work and identities into

forms that rankings require. Similarly, contesting rankings either in public controversies or in private debates on how to manage data can intensify the assemblage, not only by leading to the creation of more rankings and related products but also by encouraging their modification so as to make them more "objective." As the epigraphs to this chapter indicate, the intensity and appeal of the global rankings assemblage have many complications. In addition to monitoring and punishing, the global rankings assemblage rewards, appeals to our interests, and is tightly woven into day-to-day work in ways that are not always obvious. We who live and build our careers within academia are a part of the assemblage that give rankings their pervasiveness and ability to grow and adapt, as much as we might be agents of change. Any consideration of alternatives to the current state of affairs must contend with how the university and its traditions are tied up with the global rankings assemblage.

The notion of the surveillance assemblage has its limits as it draws on Deleuze's (1992) concept of societies of control and places importance on the notion of "dividuals," disaggregated parts of whole individuals. Of course what happens to our component parts can be consequential, and we may care deeply about how aspects of our identities and activities are treated by others, but to regard humans and organizations as less than the sum of their parts is to ignore a great deal of agency. Indeed, what I have articulated about the global higher education surveillance assemblage illustrates that it is often the case that only traces, proxies, and quanta derived from individual and collective bodies are aligned or integrated into it. It is possible to exist within the global rankings assemblage and live according to an ethic independent of it. For example, professors might be committed to values other than increasing reputation for its own sake and producing work published in highly cited journals.

ACKNOWLEDGMENTS

Many thanks to Michael Granzow for his reference to John Law on "power" and his ongoing reminders that "the stakes are low." I also recognize the research and reporting team that I work with for keeping it real, making me a better social scientist, and helping impact the lives of common folk like me for the better.

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