Beyond measure

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The numbered

Elias Canetti's 1956 play *The numbered* tells the story of a society in which everyone knows exactly when they will die. The people in this society are not given regular names, but instead go through life by their 'proper name': a number that signifies the amount of years they will live. While each character knows their own 'moment', i.e. their time of death, they do not know when anyone else will die because it is taboo to reveal one's age. One's date of birth and death are safely stored away in a locket, hung around their neck not long after they are born. This remains unopened until the day they die, at which point a mysterious character called 'the Keeper' opens the locket and takes it away.

In this society, murders and suicides are impossible because the date of one's death is predetermined. Having lost its original meaning, the word 'murderer' is now reserved for those who dispense with their lockets in an attempt to escape their moment. They become fugitives and, if they are caught, their 'moment' takes place before a crowd, like a public execution.

At the start of the play, an anonymous man celebrates the discovery of the 'moment' as 'the greatest advance in human history'. Another man lauds the fact that a person is now certain of their allotted years, so that 'he stands as firmly on them as his two feet' (Canetti, 1984: 13). But as the story unfolds,

the numbers that these people stand on do not appear to give them the stability foretold at the beginning of the play. Seventy, who is just a little girl, is terrified that her mother, Thirty-Two, could die any moment. A boy called Ten is exempted from going to school since he has too little time to put to use the knowledge he would gain; he spends his days throwing stones at people instead.

The protagonist of the story is a rebellious character named Fifty. Fifty does not know his date of birth and therefore does not know when his 'moment' is supposed to come. What's more, he refuses to believe that one's moment is indeed fixed in advance. With a mixture of persuasion and coercion, he convinces two old ladies to hand over their lockets to him. When he opens them, he finds that they are empty. Like Nietzsche's madman announcing the death of God, Fifty runs through the streets with the news that 'the lockets are empty', setting this strange world on a path of transformation towards something like our own.

Or is it the other way around? Has our world already transformed into a version of Canetti's dystopia? Today, the act of quantifying and measuring exerts a curious grip on us. In our personal lives, we scrutinize our diet, fitness, sleeping habits, and menstrual cycles via digital tracking technologies. In our working lives, we are rewarded for our performance according to key metrics such as balanced scorecards and SMART objectives. Even as academics, we are tempted to evaluate the quality of our scholarship according to citation rate, h-index, and journal score. We now live in a totally quantified society characterized by a profound 'trust in numbers' (Porter, 1996), reflecting our long-standing infatuation with scientific objectivity. If our age has a motto, it would be something like the McNamara fallacy: 'If you can't measure it, it doesn't exist'.

But, as Cannetti's play reminds us, numbers do much more than just count what exists. Numbers reveal, but they also hide; they tell us who we are, but also who we ought to become; they show us how happy and healthy we are, but also urge us to adjust ourselves to the norm. Numbers manage us and we, in turn, manage ourselves through numbers. At the same time, the rationale behind these metrics remains inaccessible to us, stored safely away

in a locket, kept secret from all but the few who have access to these systems of enumeration and computation.

In our special issue, we open up this locket and explore questions around measurement in relation to management, organization, and politics – namely, how do processes of quantification intervene in our lives, sideline other modes of judgement and decision, and lead us astray with a trail of numbers. The title of the special issue, 'Beyond measure', signals an attempt to denaturalize measurement, to peel back the layers of commensuration to see what lies beneath. In other words, what practical and moral conditions are required for any kind of measurement to take place at all? To this end, the remainder of the editorial will approach the cultural meaning of measurement through a series of striking examples: the kilogram prototype, time-motion studies, psychometric instruments, and the golden mean.

The adjustment bureau

In the south-west suburbs of Paris, a grand villa sits in attractive parkland. Once owned by Marie Antoinette, the villa now houses the International Bureau of Weights and Measures, an intergovernmental agency founded in 1875 to maintain universal standards of measurement across the world. Locked in a vault in the basement of the Saint-Cloud villa, you will find a piece of metal, no larger than a child's fist, made of platinum and iridium. This is the kilogram prototype, the physical object against which all other weights are measured.[1]

The kilogram prototype, or ur-kilogram, was built to last. Without it, there would be no way to truly standardize the measurements in everything from single-dose pharmaceuticals to large-scale engineering projects. The problem is that the kilogram prototype has been losing mass, slowly but surely, over the last century and a half (Frost, 2018). Shedding perhaps no more than a tiny grain of sand over its lifetime, this loss of mass means that the ur-kilogram is no longer exactly the same weight as it was when it was made in the late nineteenth century. And if the universal standard for

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1   Thanks to Kevin Pijpers for drawing our attention to the kilogram prototype.

weights is untethered from its core property – unchangeability – then true commensuration becomes virtually impossible.

The kilogram prototype offers a kind of moral lesson about the nature of measurement. Just when we think we have pinned down the precise quantity of a phenomenon, even something as basic as weight, we find that it quickly slips from our fingertips. This provides a warning to psychologists who draw conclusions from IQ scores; managers who subject their employees to aptitude tests; and policy-makers who want to measure the happiness levels of a nation. In all of these cases, we might wonder whether intelligence, aptitude, and happiness are just like that small lump of alloy kept under lock and key in a Paris vault: quantities that seem so immutable, but for one reason or another begin to change over time in strange and unpredictable ways, throwing our common systems of measurement out of whack.

The ur-kilogram also tells a story of how organizations are mobilized in the effort to impose measures on the rest of the world. Like a series of Russian dolls, one organization enfolds another for the sole purpose of maintaining strict standards of universal measurement: the International Bureau of Weights and Measures is controlled by the International Committee for Weights and Measures, which is in turn controlled by the General Conference on Weights and Measures – the ultimate authority that approves the International System of Units, encompassing time, length, mass, electricity, temperature, substance, and brightness. The bureaucratic structures required to define and preserve these fundamental magnitudes are labyrinthine, and one could be forgiven for imagining that the elegant villa in the Parisian outskirts is the setting for a Kafka novel.

Universal standards of measurement are useful only insofar as they allow us to measure other things that are deemed to be valuable in some way. While science is near the top of the list – we cannot think of physics, chemistry, or biology without accurately measuring matter and energy, elements and compounds, or cells and genes – so too is trade. Commercial enterprise is nothing without precise measurement and shared methods of equivalence. For example, how do I know how much merchandise I am buying if not by a predetermined weight or length? Moreover, trade is based on the ultimate

universal measure: money. Cold hard cash renders commensurate almost everything we can imagine, from apples and pears and tables and chairs to factory workers and nursemaids and rocket ships and rollercoasters. Measurement, in other words, is a process of bringing disparate things under the same abstract rubric.

We can begin to see why measurement is so central to capitalist organizations. The key question, for any business owner, is how to optimize input relative to output – that is, to finely calibrate the equilibrium between wages, raw materials, and other overheads in order to turn a profit. Historically, labour has been treated in the same way as any other kind of production cost: a fixed quantity, albeit one measured in time. A universal solvent, money dissolves the qualitative distinction between a clanking piece of machinery and a living breathing human being, reducing both to numbers on an accountant's balance sheet.

But here we encounter a curious paradox. While the quantity of labour remains constant during the working day (for example, no one has to work longer that 48 hours a week in the European Union), the quality of labour can be endlessly manipulated, modified, stretched out like dough. Think of the office worker whose line manager overloads them with more and more tasks: 'I don't care how you do it, I just want it done by the end of the day!'. And so the office worker sighs deeply, puts their head down, and works twice as hard as the afternoon wears on. This is the distillation of management's role in capitalist organizations: to wind up its workforce tighter and tighter like clockwork automata, using techniques of measurement – targets, quotas, and deadlines – to discipline and control employees.

There is perhaps no better illustration of this process than Frederick Winslow Taylor, whose *Principles of scientific management* (1911) has become the origin story of management itself. Famously, Taylor conducted a series of scientific studies to determine the 'one best way' to do work, from carrying small bars of iron to operating a metalworking lathe. Boiled down to its essence, scientific management involves replacing the labourer's rule-of-thumb with detailed instructions on how to perform an activity, measured against the ticking of a stopwatch. It is no coincidence that the language

Taylor used to introduce his system of scientific management draws heavily on the rhetoric of mechanical engineering, a field in which exact measurements matter. On this view, time-motion studies reveal the immutable 'rules, laws, and formulae which replace the judgment of the individual workman' (Taylor, 1911: 16), turning a heaving mass of factory labour into mathematical equations sketched in a notebook and abstract trajectories plotted on a graph.

The objective methods and universal standards professed by scientific management were, of course, a sham. In truth, Taylor's conclusions were largely the result of wishful thinking, data manipulation, and outright fabrication (Wrege and Perroni, 1974). When speaking before the US Congress, Taylor himself admitted to making certain 'adjustments' to his calculations by factors of 20 to 225 percent, wildly exaggerating his supposedly scientific observations (Stewart, 2006). But still, the force of Taylor's claims – the promise to ramp up productivity according to strictly scientific criteria – continue to reverberate in capitalist organizations, from the industrial workplace to the virtual office. While it is relatively easy to dismiss Taylor's crude characterizations of industrial workers as 'stupid' and 'mentally sluggish', his strategic reliance on measurement and quantification provides the template for contemporary management, whether in the form of key performance indicators or algorithmic supervision. This is the real lesson of scientific management: let the numbers do the talking, but only after you have decided what those numbers should be.

What's the size of your spirit?

Psychometric instruments are now so commonplace in organizations that we tend to overlook their history. Designed to quantitatively assess our interior conditions – such as cognitive ability or emotional traits – psychometrics turn the inside out, reaching deep within our souls to find raw scores, quotients, and standard deviations. Put simply, psychometric instruments seek to uncover laws and regularities in our character and conduct. This is a peculiarly modern invention: prior to the nineteenth century, our attitudes

and aptitudes were classified in all sorts of ways, but never in relation to a statistical norm. As Ian Hacking (1990) reminds us, statistical normalcy was a product of a society that had begun to mobilize large institutions to collect and sift through numerical data of every imaginable kind, including births, deaths, suicide, crime, sickness, poverty, education, and so on. Out of this context quantitative psychology – pioneered by Wilhelm Wundt in the late nineteenth century – would emerge, giving birth to the 'normal person' with the aid of standardized tests.

Personality tests are perhaps the best known type of psychometric instrument. First used to identify 'unstable' soldiers in the First World War and 'maladjusted' workers in organizations (Gibby and Zickar, 2008), personality tests originally sought to weed out the abnormal from the normal, the unfit from the fit. Today, personality tests extend well beyond simply identifying dangerous or disruptive elements in organizations; they are now used for recruitment, training and development, cultural engineering, organizational planning, employee engagement, performance evaluation, and other organizational functions. To escape from the realm of psychometric testing one would need to escape from corporate life itself.

Outside work, personality tests are no less pervasive. A quick Google search reveals thousands of questionnaires that all claim to uncover your true character. For example, the DOPE test will tell you if you are a Dove, an Owl, a Peacock, or an Eagle. Or if colours are more your thing, you can take the Insights Discovery test and see if your personality is red, blue, yellow, or green. Most of these measures derive in one way or another from the Myers-Briggs Type Indicator, the most popular personality test in the world, used by private companies and public institutions alike to sort people into one of 16 distinct types (Menand, 2018). Such tests promise to provide you with a 'freakishly accurate' description of who you truly are 'in less than 12 minutes' (www.16personalities.com), leading to a deeper understanding of your innermost being. This self-knowledge will help you to relate to other people and, ultimately, will assist you in succeeding in work and life.

While this might sound harmless, there is more here than meets the eye. In particular, personality tests blur the distinction between the descriptive and

the normative. Such tests invariably claim to measure who you are or how you behave in purely neutral, objective terms. But a quick glance at any personality test reveals its language and structure to be heavily laden with normative values. For instance, although one's test results are typically presented as a mere 'transcript' of one's thoughts and inclinations, personality tests subtly nudge us towards understanding ourselves in particular ways – for example, as having 'too little' ambition or 'too much' caution. In other words, some numbers are more desirable than others. Once a personality test is used for organizational purposes, it inevitably does more than simply offer a 'freakishly accurate' description of one's personality; it surreptitiously guides and reshapes employee's beliefs and behaviours in line with corporate imperatives.

Despite their scientific claims, psychometric instruments do not always measure what is strictly speaking measurable. Take the case of leadership studies. Ever since the late 1970s, leadership researchers have conceptualized the leader as someone who is, because of his or her extraordinary greatness, beyond measure. The field of leadership has been in search of superlative adjectives that can explain how these extraordinary characters produce extraordinary results: 'transformational', 'charismatic', 'visionary', etc. The business scandals at the start of the new millennium, in combination with the climate crisis, have only increased the demand for new adjectives that capture the inestimable greatness of leaders, but this time in moral terms: 'authentic', 'spiritual', 'responsible', etc. To study extraordinary leaders, positivist researchers use a battery of psychometric instruments such as the Spiritual Leadership Survey (SLS) or the Authentic Leadership Questionnaire (ALQ) in an effort to measure the immeasurable. But how is it possible to measure one's level of spirituality when the spirit by definition transcends the material world? Or authenticity, the mysterious force that is said to be found only deep within ourselves?

It is difficult to find a leadership researcher who is ready to admit that they are measuring the immeasurable because because it would go against their understanding of themselves as scientists. A scientist measures things that are measurable; their world is not the world of ghosts, spirits, and

superpowers. Yet at least one leadership theorist, Max De Pree, is explicit about something that remains implicit in the work of many others:

> I just want to drop a friendly word of warning: don't measure only what's easily measurable. We need to learn how to measure what's significant, how to measure matters of the spirit, how to measure strategic needs, how to measure competence, how to measure results. We also need to learn how to measure moral purpose in our organizations. In the process we need to learn to sense potential and nurture moral purpose. (De Pree, 1997: 15-16)

We recognize De Pree's noble intentions (the world of leadership and other business fads is full of them), but there is something in this new spirit of measurement that is rather disturbing. After all, how is moral purpose something that can be revealed by measuring matters of the spirit? It seems that nothing is off limits for leadership researchers; for them, all aspects of the human condition can and should be measured – and put to work in organizations.

The lost moderation of measurement

Allen Guttman (1978: 49), in his classic book about the role of measurement in modern sports, remarks with a hint of nostalgia that, for the Greeks, 'man was still the measure of all things, not the object of endless measurement'. Of course, Protagoras' famous declaration that man is the measure of all things has been controversial. Plato criticized Protagoras for suggesting that there is no such thing as absolute truth; such a perspective would, in Plato's view, lead to a highly problematic form of relativism. In our times, the idea that man is the measure of all things may also be criticized for its implicit anthropocentrism. Why should man be the measure of all things, rather than, say, the animals that we share our planet with? And what about future generations – shouldn't they be the measure of what we do?

What Protagoras meant has been the subject of much speculation, not least because very few fragments of his work have survived. But even Plato, Protagoras' most trenchant critic, found it necessary to concede that the human experience of the physical world was inescapably tied up with the place of the human within it. Among the Greeks, there was a general

agreement that the material world could not be described from 'outside' but that any determination of things in the world was tied to the person doing the measuring. More important than finding objective measures to describe and control the world around us, such as the ur-kilogram, was to find the right measure in proportion to one's experiences and place in the world. This is the broader Greek context that Guttman hints at, which offers a very different idea of measure than the one to which we have become accustomed.

This type of thinking is expressed clearly in the Aristotelian notion of virtue as the just measure between two extremes, or the 'golden mean'. The virtue of courage provides a classic example: a courageous person judges that some dangers are worth facing whereas others are not. He or she experiences the right amount of fear, i.e. the level of fear that is appropriate to the circumstances. In responding to the situation adequately, the courageous person finds the correct middle path between recklessness and cowardice. He or she can do so because courage has become a part of their character. What is crucial in our context is that the Aristotelian 'just measure' is tied to the person and the circumstances. In other words, what is appropriate in a specific situation is dependent on the situation and on the person who acts within that situation. The right measure can therefore never be objectified. All virtuous behaviour is, in Aristotle's terms, a balancing act, a matter of moderation. Even moderation must be moderated: moderation (*sôphrosune* in Aristotle) is itself a virtue that requires finding the true course between excess and deficiency.

Today, we tend to associate measurement with scientific instruments that measure something 'objectively', i.e. without relying on the perspective of the individual. It is Aristotle's idea of measure, of a 'just measure', that is lost in our culture's obsession with quantitative metrics. The personality test, rather than a sign of scientific progress, is a symptom of our collective inability to measure ourselves in relation to ourselves. When a 12-minute questionnaire is needed to find out who we truly are, then we really do not have a clue about *who* we are. Our point is simple. Measurement can be extremely helpful in many spheres of life, and science wouldn't be science without it. But the project of objectifying everything, including that which

by nature resists objectification, ourselves included, is spiraling out of control. Is a just measure of measurement still possible?

Introduction to the papers

We open the special issue with a beautiful exhibit provided by artists Richard Ibghy and Marilou Lemmens, called 'Concrete abstractions'. Their text begins by training our eye to see the art in efforts to measure, quantify, and chart. With historical images and narratives, we are taken back in time to the nineteenth century and the quantification work conducted by early political economists and engineers. We see efforts to depict numbers visually through graphs and diagrams, signaling a shift in how knowledge is produced and used. Throughout the exhibit, photographs of Ibghy and Lemmens' artworks – material recreations of these graphs and diagrams – invite us to visualize and denaturalize the power relations embedded in the act of measurement. One of Ibghy and Lemmens' artworks – a piece representing 'Distribution of performance in a plant where methods have not been standardized' – is used as the cover image for the special issue. It is a particularly fitting image because it raises questions of normalcy and deviation embedded within statistical measures (in this case, productivity in an industrial context). It thus serves as a reminder that the process of measurement extends 'beyond measure' by tapping into other kinds of social and ethical assumptions, guiding human conduct in often subtle and insidious ways.

In the first article of the issue, 'Grooving matter(s)', Kevin Pijpers takes a close look at how archeologists 'take measure' by using their sense of touch in archaeological fieldwork. Pijpers shows how archeologists rely on a form of tactile and bodily measurement, which reminds us that measurement is not necessarily quantitative. The dominant discourse on measurement, which tries to reduce measurement to objective relations between instruments and things 'out there', can easily obscure the fact that measurement can (and does) happen in relation to our body and our self. Pijpers further shows how this sense of touch is bound up with archeological knowledge and its affective dimensions. Overall, the paper demonstrates

how science cannot, and should not, be reduced to quantified forms of measurement alone.

In 'The algorithmic panopticon at Deliveroo', Jamie Woodcock explores how precarious workers in the gig economy are supervised and disciplined by digital surveillance technologies. Drawing on in-depth interviews and extensive fieldwork, Woodcock shows how forms of algorithmic management are coming to measure and control the labour process in new and troubling ways. For example, every movement from pick-up to delivery is monitored and assessed by the app-based software, yet the workers themselves do not have access to this data. What's more, if these workers fail to perform according to unknown metrics, they may find themselves suddenly 'deactivated' within the system and expelled from the platform. The case of Deliveroo thus offers a bleak warning about the future of work in which the management of labour is entirely automated, outsourced to an algorithm that is carefully calibrated for maximum efficiency.

In his article 'Subverting capital's temporality', Yari Lanci undertakes a critical reappraisal of the idea of laziness as it appears in a number of literatures, specifically in relation to 'action', 'activity', and 'work'. In doing so, the article argues that laziness is often constructed in wholly negative terms. Lanci claims that contemporary discourses that cast individuals or groups as idle or lazy fundamentally serve the politico-economic logics of capitalism – that is, measuring the worth of human beings according to their 'productivity'. His analysis offers an alternate re-reading of the concept of laziness, ultimately suggesting the power of being strategically lazy to confront, interrupt, and destabilize capitalist social relations and temporalities.

The next article, Nina Pohler's 'Evaluation and the tension between generalization and particularity', examines a radical democratic organization's efforts to design a model to calculate supplementary child allowance. On principle, the organisation pays equal wages to all. However, the inclusion of new members with children becomes a 'critical moment' of radical uncertainty, which sparks a series of deliberations about whether and how to value children and child-raising. The paper analyzes a series of

online discussions between collective members as they construct a standardized evaluation device. Drawing on Boltanski and Thevenot, Pohler reveals how collective efforts to value and evaluate issues of moral complexity are marked by high uncertainty, deep deliberations, and compromised solutions.

Drawing on an ethnographic study of design work at a manufacturing firm, Ulises Navarro Aguiar, in his paper 'A number is worth more than a thousand pictures', examines how designers quantify the value of their work by developing their own evaluation tool. Navarro Aguiar shows how this quasi-parodic attempt to make their work 'count' in the eyes of engineers and managers is not merely a form of cynical resistance; it also has the unintended effect of strengthening the corporate culture of measurement and undermining the designers' own professional expertise. As a whole, Navarro Aguiar's paper highlights what is sacrificed in companies where numbers are prioritized above all else.

In the note 'Sucking stones', Gregory Allen and Robert Campbell draw on absurdism and logical paradox to critique positivist Hofstedian cross-cultural management studies. Over the last four decades, Geert Hofstede and those working in the same tradition have amassed a huge cachet of survey data from over 70 countries, all in an effort to measure and quantify differences between national cultures in the service of managerial objectives. The note outlines the absurdity and self-referential paradoxes in a paradigm that models 'the study of something as complex and clearly subjective as culture on a Cartesian, natural sciences model' (Allen and Campbell, this issue).

Lisa Daily's note, '"This bag provides 185 school meals"', examines how corporations use the power of numbers to underscore their ethical mission. Focusing on lifestyle brand FEED and shoe company TOMS, Daily shows how both companies use a series of metrics – such as the number of donated shoes or free school meals – to quantify their levels of social responsibility. But the problem is that these one-dimensional quotas tend to obscure more complicated realities around structural inequalities and widespread poverty. In other words, '[t]his formation of measurability strives to make objective

and simple that which is subjective and complex' (Daily, this issue). As Daily reminds us, the new regime of ethical capitalism draws on a discourse of philanthropic do-gooding without recognizing its own complicity in patterns of exploitation and alienation.

In his note, 'After measurement', Tom O'Dea discusses the place of optimization in contemporary society. He shows how phenomena that are traditionally seen as qualitative in nature, such as friendship, physical exercise, or sex, become the target of measurement. Once something is measured, it becomes subject to optimization: 'there is a right number of steps, a right number of friends, a right amount of time spent having sex' (O'Dea, this issue). O'Dea explores how human subjects become the object of measurement, and thereby made susceptible to optimization. Understanding how these processes work, O'Dea argues, becomes crucial in trying to come to grips with our increasingly computational world.

We close the special issue with three book reviews. Armin Beverungen reviews Melissa Gregg's book *Counterproductive*. The book provides an exciting re-reading of the history of time management and productivity, unsettling taken-for-granted assumptions about how we measure our working time. Her writing takes us back to early home economics pioneers and the Hawthorne studies, reevaluating them in a feminist light. From there, Gregg scrutinizes all manner of productivity tools such as time management self-help books, productivity apps, and mindful technologies, and ends by inviting us to think differently about post-work productivity.

Mikkel Flyverbom reviews Shoshana Zuboff's *The age of surveillance capitalism*. In what has become one of the 'must reads' of recent years, Zuboff's book speaks directly to 'the role of technology in society, the dominance of tech companies, contemporary mutations of capitalism, and how to protect fundamental human values in the face of these forces' (Flyverbom, this issue). Of particular relevance for this special issue is the trade in human data and futures. Flyverbom's review summarizes the book's key ideas and outlines his take on what future research the book may inspire.

Finally, Chris Land reviews a book that ought to be read alongside Zuboff's tome, a much shorter (64-page) theoretical treatise by Clare Birchall: *Shareveillance*. Birchall is interested in questions about what constitutes transparency and 'open government' with regard to what and whose data is shared, with whom, and for what purposes. For Land (this issue), the book 'offers both a critique of the dominant model of dataveillance and neo-liberal subjectivity, and some potential paths to an alternative use of data'. One of the alternative paths that the book ends with is the possibility for radical, open-access academic publishing and shared, collective authorship to disrupt and resist dominant quantified models of knowledge production in academia – something close to the hearts of *ephemera* and its readers.

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