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Life is not a quantity: philosophical fragments concerning governance by numbers

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Abstract

Management has historically been associated with a fascination for numbers, considered to be the basis of enlightened decision-making, scientific analysis and self-proclaimed objective evidence. The fruit of this belief is the phenomenon of "governance by numbers" (Supiot), characteristic of modern societies and economies. But the illusory nature of faith in figures has been extensively examined in the field of philosophy: numbers are a source of power, but this power operates by simplifying reality (Nietzsche), reducing life in all its complexity to a series of quantifiable values and totally failing to comprehend what constitutes "dignity" (Kant). Taking as our starting point these philosophical perspectives, some contemporary and some more long-established, we seek to illustrate some of the illusions which stem from decision-making founded (exclusively) on numbers, while also examining the managerial consequences of moving beyond this blinkered approach in the context of a public health crisis. In order to do so, we prioritise the sound judgement of individuals, as well as their capacity to unlearn old certainties.

Keywords: Dignity, Governance by numbers, Life, Nietzsche, Kant

Life is not a quantity: philosophical fragments concerning governance by numbers

In recent months our societies have chosen, for the first time in their history, to prioritise the preservation of human life over the health of the economy. This choice has revealed two things: humanity's progress in the field of humanity, and the limitations of the cult of numbers which is a common feature of contemporary organisations. For researchers in management sciences, the urgent question raised by this choice is as follows: are we right or wrong to pilot our organisations using statistical dashboards, thus allowing the figures to take charge? Our aim in this paper is to offer a historical and philosophical analysis of the rise to power of numbers in our societies, the process by which "calculocracy" conquered our organisations. We shall then attempt to define the contemporary expression of this phenomenon, namely "governance by numbers," (Supiot, 2015) before proposing a few potential avenues for further research as management seeks to reinvent itself in response to the sheer incalculability of the current catastrophe.

The apotheosis of numbers, a historical approach

Numbers have historically occupied a central role in Western modernity, with mathematics considered to be both a field for philosophical and scientific reflection, and also one of the keys to understanding the world (Everett, 2019). Tradition holds that Plato's Academy had the following warning engraved above the door: "Let no one ignorant of geometry enter here" ("*mèdeis ageômetrètos eisitô mou tèn stegèn*," Plato, 1966: 445). In the Republic, Plato also asserts that calculus and arithmetic, the science of numbers, "lead the mind on towards truth," (Plato, 1966, VII-526a: 284) because they deal with the very essence of things. Later in Book VII he asserts the superiority of arithmetic over geometry. The theories and philosophies of numbers which have emerged since antiquity are syntheses of many influences, regarding numbers both as a tool and as a key to understanding the world. Numerical studies already occupied a central position in education. The late classical and medieval tradition which originated with Boethius identified four numerical disciplines: arithmetic, geometry, astronomy and music (also considered to be a numerical discipline in the Pythagorean tradition (Mattéi, 2001)). Together they made up the *quadrivium*, the numerical counterpart to the *trivium*, the trilogy of disciplines founded on logos: dialectics, rhetoric and grammar (Rouche, 2003, TI: 169).

The Western fascination with numbers became ever more manifest during the Renaissance and the Enlightenment, culminating in an apotheosis of science whose purest incarnation was held to be physics: the mathematical expression of reality in the form of rigid laws. Since its earliest beginnings, management has been closely aligned with this cult of numericity: Luca Pacioli, the man who popularised dual-entry accounting from 1494 onwards (Pacioli, 1494, P. 1, L. 9), was first and foremost a mathematician steeped in the ancient tradition, fascinated by the "golden ratio" or "divine proportion" (Pacioli, 1509) as both a tool for architecture and the arts as well as a symbol inherited from ancient hermeticism (Neveux & Huntley, 1995). The sea change initiated by F. W. Taylor and F. Gilbreth in the late 19th century, with their search for the "one best way" (Taylor, 1902) and the "scientific" approach to the division of tasks and labour (giving us *scientific management*) firmly entrenched the importance of figures and numerical evaluations in all areas of management (Power, 1999).

The transition we now associate with the Enlightenment, from so-called "traditional" societies to societies founded on Reason, chimes with the desire for emancipation evoked

by Kant in *What is Enlightenment?* (Kant, [1784], 1985: 209-217). The ascendancy of Reason and the supremacy of science brought with them a promise of justice and freedom which resonated throughout the 19th and 20th centuries (Bouilloud, 2012): it is worth recalling that Lenin was an avid reader of Taylor, publishing articles on his work in Pravda as early as 1913 (Lenin, 1913, 1975: 594-595; Scoville, 2001). In more recent times this phenomenon has given rise to a "passion for evaluation" (Amado & Enriquez, 2009) which is no longer limited to the financial or technical aspects of management, having also invaded the fields of individual management and HR, domains which for many years seemed to be protected from this creeping numericization. Economic actors have played a prominent role in this process: Vidaillet (2012) has amply documented the fear but also the desire for evaluation, preferably a "positive" evaluation, and the ambivalence displayed by workers in relation to these numericized assessments. Evaluation is always a form of control, a symbol of the "social extension of the normative," (Foucault, 2001, T. II: 74) an additional constraint upon our freedom. But, at the same time, evaluation is also perceived to be a source of justice, an instrument for obtaining recognition, praise where praise is due. It can also be seen as a force for emancipation since it removes the suspicion that we are being hoodwinked, lifting the lid on a reality which was heretofore hidden from view. Which is why our telephones and computers are now loaded with applications designed to evaluate and compare, helping us to find the lowest prices for flights, hotels and other services, giving us the impression that we are better informed, and thus better equipped to choose.

In fact, as Weber observed, power is regularly obliged to find new ways to express its rational and legal legitimacy. It is interesting to note the major role which measurement and quantitative objectification have long played, and still play, in this process of challenging traditional authority. This mode of legitimation is constructed around a "result" to be achieved, dictating the way in which the organisation will be "governed" since the objective, enshrined in numerical assessment criteria, serves as a tool for directing the activities of managers and their teams. Measurement thus replaces judgement since measuring is, ultimately, a form of judgement. (Dujarier, 2015). To put it another way, governance by numbers tends to impose a normative, unequivocal style of management which leaves little room for interpretation or conflicting opinions.

The numerical illusion, a philosophical approach

Nietzsche's critique of modernity's excessive reliance on numbers is part of a broader attack on the emphasis placed on work, the drive to consume and the avidity for material gain which are the defining features of consumerist modernity. In Nietzsche's view, numbers are always associated with power and strength. "In matters of strength numbers always prevail, because they have the greatest strength." (Nietzsche, 1972: 263). Numbers impose their strength upon us, dragging us out of the hazy realms of the undefined and unquantified. Numbers put an end to all debate by enforcing a sense of finite space: counting and quantifying is a first step towards controlling – as any company auditor will tell you. But this overlooks the fact that numbers are a somewhat futile human construction, resting on the assumption that things have a strictly-defined identity, a hypothesis which Nietzsche contests. In order to count we must downplay differences, lumping together entities which are singular and thus different, schematising and simplifying:

> *"In all scientific demonstrations we always unavoidably base our calculations upon some false standards [of duration or measurement]; but since these*

> *standards are at least constant, as, for example, our notions of time and space, the results arrived at by science possess absolute accuracy and certainty in their relationship to one another. One can thus keep on building upon them — until reaching that final limit at which the erroneous fundamental conceptions, the constant underlying faults, come into conflict with the results established." (Nietzsche, [1878], 1993, TI: 453).*

Numbers lead us to misrepresent reality, and for Nietzsche this problem was inherent to all of the models and representations we rely upon to understand the world in which we live. "To a world which is not the fruit of our own representation, the laws of number are wholly inapplicable: such laws are valid only in the world of mankind." (Id.: 454)

Nietzsche's critique of numericized modernity also embraces the importance afforded to science, our obsession with work and the subjugation of time to modern imperatives. In his view our time is increasingly counted and filled on our behalf, a situation which Morin recently described as the "confinement of immediacy." For Nietzsche, in the modern world, "One thinks with a watch in one's hand even as one eats one's lunch, whilst reading the latest news of the stock market – we live as if we were always at risk of 'missing out on something'." (Nietzsche, [1882], 1982: 219) In another philosophical tradition, this world in prey to rampant quantification, or even quantophrenia, would be described as "alienating." In short it represents an affront to the irreducible individual on an intimate level, the level of his or her dignity.

What is "governance by numbers"?

In Alain Supiot's view (2015), the increasingly widespread use of the term "governance" can be directly linked to the growing power of figures in contemporary society, a pre-eminence achieved at the expense of the law. Supiot is a legal scholar specialising in the labour market, and he considers governance to be a socio-economic system based on calculation. In this system, the law itself is superseded by calculations of utility. But this "dream of harmony" through calculations has since become the preserve of liberal democracies, which have also adopted economic calculations as the primary regulating force of their political systems.

In his analysis, however, the problem with current modes of governance – in the international political, public and private spheres – is that they are founded exclusively on a quantitative approach to problems, even with regard to cultural and civilizational values which are, by definition, unquantifiable. He cites as an example the way that economic thinking has invaded contemporary attitudes to the practice of law, while also soaking up influences from certain theories of management such as game theory, and which by definition "would leave no room for somebody like Jean Moulin, nor anybody else who, for better or for worse, holds certain values to be more important than their own life." (Supiot, 2015: 192). But, as he is at pains to point out, "it is not mathematics which governs the alliances formed by humans, it is the need to strike a balance between the differences in our labours and the similarity of their needs." (ibid.: 116).

We might also turn to Immanuel Kant to lend some theoretical weight to Nietzsche's critique. His *Groundwork of the metaphysics of morals* contains a very neatly-phrased explanation of the difference between that which has a price and that which has no "equivalent," namely that which has its own dignity:

> *"In the realm of ends everything has either a price or a dignity. What has a price is such that something else can also be put in its place as its equivalent; by contrast, that which is elevated above all price, and admits of no equivalent, has a dignity." (Kant, [1785], 1985: 301).*

But governance by numbers subjugates everything to the logic of prices, including those things endowed with "dignity." (Bouilloud, 2012) Governance thus becomes an end in and of itself, asserting the supremacy of prices and basking in the illusion of justice created by the systematic use of numbers and evaluations.

To put it another way, governance by numbers tends to impose a normative, unequivocal style of management which leaves little room for interpretation or conflicting opinions. This in turn gives rise to a misinterpretation of the term "measurement" when used in a management context, as Supiot himself points out, since it often "neglects the importance of the rules of quantification." (2015, p. 120). In other words, the processes of compilation, comparison and interpretation which are inherent to "measurement" are generally absent from the processes of governance as they ultimately apply to employees. As Desrosières has shown (2000), the ultimate political purpose of quantification is often indiscernible, despite the fact that it remains the ultimate justification of the whole process. Quantitative practices in organisations, presented as accounting obligations, are thus revealed to be a form of *ex post* justification which is actually driven by its own intrinsic considerations.

Conclusion: *from the "good enough manager" to the virtues of unlearning*

Ultimately, while science is comfortable enough with uncertainty, politics is not. [1] Science is willing to accept indecision over long periods of time: certain famous hypotheses have remained unproven for centuries, such as Fermat's last theorem. But politics is a very different world, one where decisions need to be taken and indecision is unacceptable in the long term.

Management exists somewhere between the two. On the one hand, it is a field of study which considers itself to be scientific, while on the other hand it must satisfy the demand for decision-making, required for the day-to-day running of the organisational polis. In this respect, the concept of *bounded rationality* as developed by March and Simon represents a realistic model of the way in which decisions are taken within organisations, something akin to an ersatz version of a rational ideal – a choice which is merely satisfactory rather than optimal – which exists in a specific temporal context, determined by the information available at that time. The current crisis is a perfect illustration of this phenomenon in action: our elected leaders and the leaders of our international institutions, in the midst of a public health catastrophe, are called upon to make decisions every day. They make decisions which they feel to be satisfactory at the time, but they can never be absolutely certain that they have made the right choice. But it is nevertheless worth reiterating that, in times of uncertainty, only dignity can provide a moral compass. Numbers alone are no longer sufficient: they are shown to be fundamentally incapable of governing, because they too readily conflate cost with value. The value of a colleague (e.g. a nurse or doctor) within the

1 Science has long embraced uncertainty: from Francis Bacon's *experimentum crucis*, the crucial experiment which decisively determines whether or not a hypothesis is valid, to Popper's theory that it is all a matter of *conjecture and refutation*, uncertainty is a driving force behind scientific exploration. Popper also argued that the only certainties were negative ones: theories exist in a state of perpetual probation, always at risk of being superseded by a new theory which would render them insufficient, invalid or unnecessary.

chain of care is not directly correlated to their salary. And protective masks and gowns may not cost much, but their value is immense because of the lives they save.

As it turns out, the “good enough manager” (Deslandes, 2020) and his/her human understanding of control seems infinitely preferable to a situation in which our critical capacities have been entirely sacrificed to the power of algorithms and numerical norms. In short, refusing to lose faith in our judgement appears to be an essential pre-requisite when it comes to resisting the temptation to surrender control to the dashboards of governance by numbers and the infinite calculations of algorithmic governmentality, instead keeping the power to act in human hands. This view is founded not solely on the fact that organisations are shaped by a whole host of factors which are not immediately quantifiable (the satisfaction of achieving an objective, solidarity between individuals, the desire for recognition etc.), but also on a more fundamental consideration, namely that statistics and computer programmes are worthless unless accompanied by an “enlightened use of figures.” (Charolles, 2016, p. 100). In short, when we describe figures as a means of “getting at the truth” about an organisation, what we are really describing is the possibility, which transcends the numbers themselves, of comprehending the way these figures were designed and constructed. Without this critical reading, this sense of perspective, we run the risk of mistaking numbers for essential ontological realities, when in fact they are simply symbols of abstract equivalence. Only a critical approach to managing organisations, which leaves sufficient room for managers to exercise their faculties of judgement, can imbue numbers with meaning.

What are the implications of this upheaval for the way in which management is taught? Perhaps if we want the “general” managers turned out by our business schools to go on to become specialists, like interns in medical schools, developing their cross-disciplinary, systemic and over-arching knowledge, then we need to seriously reconsider the role of culture and the humanities in management training. In this respect the signatories of the *critical engineering manifesto (https://criticalengineering.org),* primarily engineers concerned about the risks of "algorithmic bio-hygienism," represent a source of inspiration for a new vision of managerial education.

A potential source of de-automation can also be found in the recommendations put forward by Ordine (2017), an Italian literary critic and acknowledged expert on Giordano Bruno and the Renaissance, who argues for a new philosophy of education, indirectly rejecting the polite utilitarianism and cult of numbers which currently dominate most management studies. Ordine argues that the useless is as much a part of humanity as the useful: the sciences, the arts and all other forms of intellectual and spiritual curiosity are not necessarily dependent on ideas of usefulness, and it is precisely this which makes them important; indeed, this capacity to transcend utilitarian considerations is an essential prerogative and privilege of humanity. Hence the importance, in Ordine’s view, of ensuring that our educational system does not “gradually kill off the memory of the past, the humanities, classical languages, teaching, free research, creativity, art and critical thinking.”

Ordine’s book contains a useful lesson for our purposes (as management scholars and educators): before considering their usefulness to the system, it is important for managers to remember that there will always be a certain portion of their working experience which is resistant to quantification. For instance, the satisfaction of completing a project, mutual assistance between the members of a team, the frustration we sometimes feel at work: none of these things is immediately quantifiable, calculable or profitable. There are some

things, like respect and dignity which our “calculocratic” systems and their obsession with usefulness will never be able to apprehend.

In some respects, the role assigned to numbers in management is the humble task of reducing uncertainty, maintaining the illusion of hermeneutic evidence: while words can have multiple meanings, numbers appear to represent undeniable proof, a manifest univocity akin to objectivity. In the context of the current Covid crisis, an immense challenge for scientists as well as those in government, political debate has by and large deferred to “the science.” Should testing be exhaustive or targeted? Lockdown or no lockdown? Is chloroquine effective? Politicians have fallen for the supposed certitude of science, transforming political debate as we know it. Nonetheless, this crisis represents an opportunity for organisations to develop by adopting an approach to management which is more aware of its own weaknesses (Deslandes 2020), finding in this acceptance a source of strength, and transforming organisations into forums of collective dialogue which acknowledge the importance of the incalculable. Because life is not a quantity.

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