Available online at www.centmapress.org

Int. J. Food System Dynamics 9 (3), 2018, 302-305

DOI: http://dx.doi.org/10.18461/ijfsd.v9i3.938

INTERNATIONAL JOURNAL ON FOOD SYSTEM DYNAMICS

Book Review: Muller, Jerry Z. (2018). The Tyranny of Metrics*

Rolf A.E. Mueller

Dept. of Agricultural Economics, Christian-Albrechts-University, Kiel, Germany
raem@agric-econ.uni-kiel.de

Received May2018, accepted June 2018, available online June 2018

ABSTRACT

After extensive discussions at several lengthy meetings, and deep deliberations by its elected part-time officials, the faculty eventually introduced a new mechanism for distributing to departments and professors its rather meager research funds: To each according to his or her publishing performance! The essential element of the mechanism was a point system for publications of various types - many points for articles in high-impact journals (don't ask!), and few points for contributions in trade journals. It didn't take long for a faculty member to expose a weakness of the new rules. He published one and the same a paper in a network of syndicated farm journals and, by that ruse, collected points for each appearance of that paper. He thereby collected more points - and research funds - than he would have received had he published a paper in the most highly ranked research journal in his field. Eyebrows had been raised at the time.

With this episode in my memory, I was intrigued by Muller's book "The tyranny of metrics" of which the publisher claims, "In this timely and powerful book, Jerry Muller uncovers the damage our obsession with metrics is causing—and shows how we can begin to fix the problem." Let’s see how much truth is in this advertising.

* Muller, Jerry Z. (2018). *The Tyranny of Metrics*. Princeton, NJ, USA: Princeton University Press. Hardcover, ISBN 9780691174952, US $ 24.95.

Review

For a start, a word about the book's title. Tyranny is a fearful, attention-grabbing word and one may wonder whether something as abstract and bloodless as metrics can be tyrannical. Actually, Muller is not concerned with the tyranny of metrics, in the sense of metrics exerting an undue absolute and oppressive power on whoever. Indeed, Muller uses the expression 'tyranny of metrics' only three times in his text. Rather, he is concerned with metric fixation, which Muller describes as "the seemingly irresistible pressure to measure performance, to publicize it, and to reward it, often in the face of evidence that this just doesn't work very well" (p. 3). Why "metric fixation" has mutated into "tyranny of metrics" on its way from inside the book to the book's cover is not explained. Perhaps marketing was at work.

Tyrannies tend to encourage tirades against them. A tirade against metrics the book is not. At various places of the book Muller insists that he does not object to measurement *per se*. For him. "The problem is not measurement, but excessive measurement and inappropriate measurement — not metrics, but metric fixation" (p. 4). Rather than haranguing metrics, the book "is about the unintended negative consequences of trying to substitute standardized measures of performance for personal judgment based on experience" (p. 4). The downsides of standardized performance measures are many, as the book shows, and the downsides are particularly pernicious when the measures are tied to rewards and penalties for the ones whose performance is being measured. The book also suggests explanations for why metric fixation is so wide-spread, it traces the sources of metric fixation, provides ample examples from different walks of life, and it suggests remedies.

The book consists of an Introduction and fifteen chapters that are arranged into four parts. In the Introduction Muller directs his readers' attention to the downsides of measured accountability and of metric fixation which aspires "to replace judgment based on expertise with standardized measurement" (p. 6). Here the author already provides several examples of undesirable consequences of metric fixation and he tells his readers how he has experienced downsides of metric fixation in his role as the chair of a university department.

Part I of the book, collects two chapters under the title "The Argument". Chapter 1, "The Argument in a Nutshell" presents exactly that. Here Muller elaborates the concept of metric fixation and its dysfunctions. In addition to having undesirable effects on costs and on employee motivation, metric fixation may have undesirable consequences for innovation. This is because it involves, "Trying to force people to conform their work to preestablished numerical goals..." (p. 20). Muller is, however, careful not to throw the baby out with the bath water. He acknowledges that measurement has its uses and, "One of the purposes of this book is to specify when performance metrics are genuinely useful" (p. 20). In Chapter 2, "Recurring Flaws", Muller classifies frequent downsides of performance metrics into three groups: (i) Distortions of information, such as measuring the simple when the desired outcome is complex, or measuring inputs rather than outputs; (ii) gaming the metrics, such as creaming, e.g. when the dumb kid is asked to stay at home on the day the school inspector is expected, or when standards are lowered to raise performance metrics, and (iii) straight cheating.

Part II of the book collects four chapters in which Muller highlights precursors of measured performance payment, where he provides reasons for the current popularity of metrics, where he links performance payments based on metrics to economic principal-agent theory, and where he discusses some philosophical critiques of narrow metrics. In Chapter 3 Muller identifies three precursors of modern metric fixation. The first was the British MP Robert Lowe who in 1862 proposed that government's funding of schools should be based on the schools' results. Next was Winslow Taylor, of Taylorism fame, whose legacy is threefold: specialization combined with standardization, recording and reporting of all activities, and pecuniary carrots and sticks for the workers according to their measured performance. Finally, there is modern managerialism with its maxim "When you can't measure it, you can't manage it". Robert McNamara, a U.S. Secretary of Defense at the time of the Vietnam War, impersonated an extreme and despicable version of modern managerialism. He introduced the body count as a measure of the US military's progress towards winning the war. Many dead bodies had been counted before the U.S. forces had to beat an ignominious retreat. Apparently, the wretched metric was no substitute for circumspect strategy, trusted leadership, and determination in war.

In Chapter 4 Muller asks "Why metrics became so popular?" to which and he offers four answers: (1) Fading trust combines with metrics' appearance of objectivity and transparency, attributes that are liked by administrators; (2) attempts to contain 'cost disease', that is rapidly increasing costs, in some sectors, such as education and health; (3) organizational complexity that tends to overburden the cognitive capabilities of executives of organizations, particular of executives who arrived at the top of a large organization from the outside, and (4) the spread of IT, in particular of the digital spreadsheet, which lowered the cost of generating and providing access to numerical data.

In Chapters 5 Muller highlights principal-agent theory as the economic idea that undergirds metric fixation. Briefly, principal-agent theory rationalizes monitoring of agent (employee) performance by a principal (boss) because the objectives of the two are imperfectly aligned. That is, the employee is suspected to pursue some objectives for which the boss is unwilling to pay. In order to avoid paying for agent behavior that does not contribute to the principal's goals, the principal has to somehow monitor the employee's performance, and then, on the basis of measured performance, provide the employee with incentives and threaten him with penalties, so that the employee's performance better contributes towards achieving the principal's goals.

Muller suggests that microeconomic principal-agent thinking diffused into public administration under the name of 'new public management,' which tried to make public organizations more businesslike. This scheme often involved introducing performance indicators for employees, rewards and punishments based on the indictors, and making the indicators public for the sake of transparency. Muller does not fail to note that the main ingredient of a business is missing in the package: "... there was no price mechanism by which to determine whether those who supplied the funds were getting good value for their money. Muller closes the chapter with a discussion of the eroding effect of extrinsic rewards based on performance indicators on intrinsic rewards, which, he claims, are important to many professionals, such as teachers and medical staff.

In Chapter 6 Muller pulls Hayek's critique of scientism into his campaign against metric fixation. Scientism, in Muller's words, is the "attempt to engineer economic life, as if planners were in a position to know all the relevant inputs and outputs that make up life in a complex society" (p. 60). Scientism, Muller argues, "also pertains to the ideology of metrics. By setting out in advance a limited and purportedly measurable set of goals, metric fixation truncates the range of actual goals of a business or organization. It also precludes entrepreneurship within organizations, as there may be new goals and purposes worth pursuing that are not part of the metric" (p. 61).

Part III collects case studies of metric fixation from seven profession and sectors of the economy. The case studies are syntheses of evidence of metric fixation which Muller has plucked from various books and articles which appear to have been selected eclectically. Muller intends the case studies "to be suggestive rather than definitive. That is, they don't deal with every way in which the metric fixation manifests itself in each domain. Rather they provide concrete examples of recurring flaws and unintended consequences, as well as examples of the successful use of metrics" (p. 21). Of most interest to readers of this journal are probably the case studies concerned with colleges and universities in Chapter 7, as well as the ones from "Business and Finance" in and Chapter 12. Readers with practical experience in college or university administration will meet in Chapter 7 many of the familiar insults which college administrators routinely and mindlessly inflict with their metrics-based management practices on their academic staff.

In Chapter 12 Muller focuses on four aspects of metric fixation in business and finance. First, he discusses when paying for measured performance works and when such extrinsic rewards are imperfect and sometimes counterproductive substitutes for intrinsic rewards. Another shortcoming of metric fixation that Muller discusses in this chapter is the encouragement it provides for short-termism in business. Muller also indicts metric fixation as being complicit of the financial crisis a decade ago. The most important dysfunction of metric fixation, in my mind, is its deleterious effect on innovation. That dysfunction arises because, "The attempt to substitute precise measurement for informed judgment also limits innovation, which necessarily entails guesswork and risk" (p. 150).

The remaining chapters of Part III contain case studies from schools, the police, medicine, the armed forces, philanthropy and foreign aid. It is not clear from the book how Muller selected his cases. The preponderance of non-profit sectors in Muller's selection suggests that dysfunctional metric fixation is particularly widespread in non-profit organizations. This may be true given that in non-profit organization dysfunctional management methods are not culled by the powerful profit constraint.

Chapter 14 is an excursus where Muller discusses some downsides of transparency. He motivates this deviation from his main concern of the book with the observation, "it is characteristic of our culture that we tend to assume that performance and transparency rise and fall together. But that is a fallacy, or at least a misleading generalization" (p. 158). Against this Muller holds, "In some cases, how well our institutions perform depends on *not* making them transparent" (p. 158-9). The cases discussed by Muller where transparency may be counterproductive to performance are personal relations, politics and government, and diplomacy and intelligence, i.e. spying.

Muller closes his book with a chapter in which he provides a ten-point checklist that is intended to help people with policy responsibilities in organizations to answer two questions: *whether* to use performance metrics, and *how to* use them. I shall not summarize the checklist as this would be akin to divulging the 'who's done it' of a detective story. You'd better read it for yourself.

Earlier in this review I have wondered how much truth is in the publisher's claim that Muller's "Tyranny of Metrics" is a timely and powerful book which uncovers the damage our obsession with metrics is causing—and shows how we can begin to fix the problem." Having worked through the book I can now venture an answer.

Is the book particularly timely? I am not sure. We live since long in times of exponentially falling costs of computation (Nordhaus 2007). In the last fifty years or so dominant software technologies, such as spreadsheets and data bases, translated much of that decline into reduced costs of processing numbers. Together, falling costs of computation and technological focus on number processing rendered metric fixation an addiction whose costs kept falling. Recent advances in artificial intelligence (AI) may soon result in new powerful tools that also exploit continued exponential falling costs of computation but which substitute for a much broader range of limited human cognitive resources than number crunching ever could. The breadth of AI applications is, as yet, uncharted. Kevin Kelly, a well-weathered technology guru, sees no limits to the application domain of AI when he suggests, *take X and add AI*. From this perspective, we are at the verge from moving from *take performance and add metrics* to *take performance and add AI*. When this happens, Muller's book is history. Technology revolutions, tend to unfold slowly however, and the AI revolution is likely to obey Hofstadter's Law: “It always takes longer than you expect, even when you take into account Hofstadter's Law.”

Is the book powerful? The power of a book comes from its rhetoric and a reader's receptivity to that rhetoric. I can say something about the rhetoric whereas readers have to assess for themselves the power that Muller’s rhetoric may have for them. Muller is an academic historian and his rhetoric is different from that of an economist or a business management expert. There are in the book no equations, no line graphs, and no tables with significance-starred estimates held dear by economists, and there are no bullet-point lists, no text boxes, and no power-point graphs that are standard elements of the business management rhetoric. Instead, Muller employs a flowing, sometimes meandering, narrative that spirals around his central theme, obsessive metric fixation. This style encourages reading the text, and not just skimming it in search for easily digestible text-bites. Fortunately, Muller's style is easy to read and the book's chapters are short.

There is truth in the publishers claim that the book uncovers the damage caused by obsessive metric fixation. Truth and the whole truth may, however, be different matters and so it seems to be here. Muller focuses exclusively on the damage of metric fixation and keeps the benefits out of focus. But, as Muller repeatedly notes, there also are benefits of metrics. By keeping detailed benefits of metrics out of sight the book risks, however, to be misunderstood by some as a call against all performance metrics.

I agree with the publisher's claim that the book shows its readers how to begin to fix the problem of metric fixation. It draws readers' attention to the problem, it illustrates the problem with many examples of unintended damages from metrics, and it suggests some solutions in the checklist of chapter 15. This checklist is, however, unlikely to be the last word on solving the metric fixation problem.

In summary, Muller's "Tyranny of Metrics" is a highly readable and timely book that points at an issue from which many who are employed in organizations suffer: their performance is poorly appreciated by overly simple, standardized metrics. The book also details reactions by staff that distract from the performance of organizations that tie performance metrics to rewards and penalties for their staff. The audience that Muller targets with his synthesis of the dysfunctions of metric fixation are people with responsibility for the functioning and productivity of organizations, be they politicians, trustees, board members, or line managers. Experience suggests, however, that sinners don’t flock voluntarily to sermons. The book is likely to appeal more to professionals and staff who suffer from performance metrics than it will be cherished by managers and administrators who are addicted to metric fixation.

References

Kelly, K. (2016). The inevitable: Understanding the 12 technological forces that will shape our future. New York: Viking.

Nordhaus, W. D. (2007). Two Centuries of Productivity Growth in Computing. *Journal of Economic History,* **67**(1): 128–159.