

## RESEARCH PAPER

# Bean-counting research and the mismanagement of knowledge production in business schools\*

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### ABSTRACT

Notorious cases of corporate misconduct often revolve around the misapplication of pay to performance. Yet many business schools have too easily given themselves up to these kinds of high-powered incentives in the management of research. This practice is contrary to the very management knowledge taught in business school classrooms and it can wreak havoc with business schools' mission of knowledge production. The reduction of managing research to a bean-counting performance evaluation, that is, keeping count of discrete units of research outputs as A-class journal hits and citation counts, has arguably tilted the scales in favor of form and against content. This undermines both the quality of knowledge produced and the autonomy that academics need to create knowledge. Much as combat sports, football or soccer, and democratic societies prevent certain traits and actions from conferring an unfair advantage, academics need to reclaim the principle of a level playing field to prevent practices inimical to the academic enterprise.

### KEYWORDS

bean-counting; business schools; mismanagement; publications; performance indicators; level playing field; creating knowledge

### Introduction

Rather than asking colleagues where something was published, we could ask how their research has made a difference and why they continue to be passionate about it. Perhaps at the next Academy meeting, we could describe a newly met colleague as 'a professor who has made a significant contribution by showing that...' rather than repeating the often-used shorthand-of-success and referring to the person as 'the professor who has an AMJ, two AMRs and an ASQ.' (Adler and Harzing, 2009, p.92)

What do a professional army, a hospital, a bank and a business school have in common? And no, this is not a riddle. To begin with, between 2002 and 2008 the Colombian army implemented a reward scheme for soldiers consisting of an award for distinguished service conditional on the number of guerilla fighters killed. A Humans Rights Watch investigation uncovered more than 3,000 innocent civilians killed and passed off as guerilla fighters to claim the awards. As a consequence, soldiers are serving a prison sentence, though only one army general has been charged for these crimes (Vivanco, 2017).

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Second, in trying to achieve timely and appropriate access to health services, the compensation of physicians working for the US Veteran Affairs medical system was made contingent on quantifiable wait-time data. An investigation by the Department of Veteran Affairs concluded in 2014 that, as a result, physicians tampered with data and patient follow-up visits were reduced at the expense of veterans' health (Oppel and Goodnough, 2014).

Third, the Wells Fargo bank boosted its performance by cross-selling credit cards and opening bank accounts to current customers. Employees were compensated based on sales targets, meeting several times a day with their supervisors to review target progression. But these products were a sham, issued without client consent, which harmed the credit score of many customers and forced them to pay unmerited fees. The fraud cost the bank the largest fine ever issued by the US Consumer Financial Protection Bureau (Corkery, 2016).

The common thread in these three organizations is that they violated the golden rule of employee compensation, namely, avoid increasing pay sensitivity to performance when either tasks or their outputs are neither easily measurable nor specialized (Milgrom and Roberts, 1992; Roberts, 2004). The body count of enemies fallen in combat is a subordinate indicator of fighting a war in compliance with human rights principles. Wait-time data is a very imperfect proxy for timely and appropriate access to health services, which are comprehensive goals that depend not only on physicians' decisions but also on the nature of patients' afflictions. The number of bank accounts and credit cards issued is immaterial without the consent of clients, who must be cognizant of the benefits and liabilities of financial products. Yet business schools have long since spearheaded a move to reward their faculty with bounties, making compensation sensitive to proxy measures of research output in what Tsui (2013, p.376) calls a 'bean-counting performance evaluation culture'. Can we really assume this carries no consequences?

In a nutshell, this paper posits that the increasingly common practice at business schools of paying bounties, thus increasing pay sensitivity to research performance, is likely to have a negative impact on the knowledge produced. When tasks and outputs are too complex to observe and to measure accurately, the devil is in the details, that is, intended objectives that employees are induced to neglect when pay sensitivity (for instance, bonuses, commissions or all-or-nothing tournaments) hinges on imperfect proxy measures, or beans for that matter. Thus, just as in notorious cases of corporate misconduct, it is reasonable to expect that business school research is aimed at the perfunctory scoring of points for proxy measures instead of knowledge breakthroughs.

To meet the balance between diagnosis and prescription, this paper expounds on the dangers and opportunities that stakeholders face by describing a dystopian and a utopian scenario in the development of business schools. Most troubling, many business schools are dangerously near to the dystopian scenario, where the autonomy of academics has been eroded by a displacement of goals from knowledge breakthroughs to noisy proxies computed as beans (Kerr, 1975; Ouchi, 1978; Brown, 1990; Milgrom and Roberts, 1992; Baker, 1992, 2000; Roberts, 2004; Pencavel, 2012; Lazear, 2018), such as the number of papers published in dedicated journals, turning the profession into a contest where abilities alien to the academic enterprise are more effective at defining success.

Needless to say, many business schools have resisted the impulse to give themselves up to malpractice in the management of academic research, and this paper wants to avoid generalizations by drawing a positive scenario of what a utopian business school looks like. Despite research incentives not being confidential, they are not always publicly available either (Abritis and McCook, 2017), yet they are often taken for granted and many feel at ease publicizing them. For instance, a call for applications published on a known online faculty job site reads: 'Beyond the salary, the university's foundation grants faculty members substantial publication awards for high-quality publications'.

Similarly, the Central Bank of Norway grants publication bonuses of 'up to NOK 400,000 [€40,600] per author for publications in first-tier journals and up to NOK 150,000 [€15,200] per author for publications in second-tier journals' to authors whose primary employment is at higher education institutions in Norway, with the vast majority of bonuses awarded between 2012 and

2020 going to academics employed at business schools (Norges Bank, 2023). Bonuses are, however, only one way to increase the power of incentives (Lazear, 2018). The elephant in the room is that many business schools adopt practices in the management of research that are in conflict with what is taught in their classrooms, which is disconcerting to see happening in institutions that are supposed to be the fonts of management wisdom.

### **On Bounties and High-Powered Incentives**

Everybody is familiar with the iconic villain of Westerns. He is often in hiding, not only because the authorities want to put him behind bars, but also because there is a bounty on his head, that is, a one-off payment or reward promised to whoever captures him. So-called ‘bounty hunters’ sought villains so they could collect these bounties. Today, bounties are placed not only on criminals, but also on any countable thing whose pursuit is sought by the authority, organization or person ready to pay the bounty. For instance, bounty hunters make a living today out of capturing pythons in Florida, where this invasive species has found a propitious ecosystem and thrives at the expense of indigenous fauna.

Bounties are high-powered because it is possible to incentivize more effort by varying the ratio of net receipts to well-defined tasks or outputs. A bounty hunter will then be motivated to capture more pythons, or bigger pythons, or pythons with whatever characteristic is desired, provided the right amount of money per such and such a python is paid. Thus, the affinity between bounties and productivity is obvious. However, the use of bounties in organizations is limited because many tasks require cooperative effort and cannot be attributed to a single individual. For instance, a recent experiment using tracking devices in one company found that there were a few informal experts with whom everybody ended up speaking, and thanks to whom 265 person-hours a month were saved allowing employees to complete their work 66% faster. However, these informal experts had only average productivity themselves and were not receiving any inducement, or bounty, for the help they gave to other employees (Waber, 2017).

It was long thought that only piece rates, more generally called ‘continuous schemes’, had the powerful properties of bounties because the converse known as ‘discrete schemes’, like flat salaries, involves the invariability of pay with effort, as in the case of these informal experts. However, such invariability holds only when neither work process nor work output is measurable, and thus compensation cannot be made contingent on measurable standards (Lazear, 1986). Even when payment is invariable relative to effort, once employment continuation is made contingent on fulfilling a loosely defined bundle of tasks, the high-powered characteristic of piece rates is replicated by salaries in an all-or-nothing approach. The whole salary becomes, in a sense, the rate paid for a bundle of tasks after time is up.

Thus, in either a continuous or a discrete compensation scheme, what makes them high-powered is the spread between keeping and losing the source of income (Lazear, 2018). That is, the difference between having a commission or a bonus paid or not, or the difference between keeping or losing one’s job. In the latter case, it is obvious that the income spread can be larger, making a discrete compensation system high-powered. The important point is thus the extent to which the output of business school academics resembles the characteristics of the output of a bounty hunter, and whether high-powered compensation schemes can wreak havoc with the business school mission of knowledge production on a par with notorious cases of corporate misconduct.

### *Business school compensation practices*

Making faculty compensation sensitive to research performance has been welcomed in many countries and it happens in three, not necessarily clear-cut, ways in business schools. It can take the form of a continuous scheme, with a large variable part of the compensation contingent on a performance measure, typically publications in eligible peer-reviewed outlets. This is found in business schools

that pay publication bonuses and have no tenure system. China is a case in point, but the Chinese government has recently announced a ban on publication bonuses (Huang, 2020; Mallapaty, 2020), leaving as relevant cases business schools outside the public university system in Europe and elsewhere. A variant of this system is the payment of a small amount of cash per citation over a period of time, for instance, at Oakwood University in the US (Abritis and McCook, 2017), as well as the payment of so-called ‘market loadings’ in Australia and New Zealand or ‘market supplements’ in the UK, which most often hinge on research output.

Compensation sensitive to research performance can also take the form of a discrete scheme where employment continuation is conditional on the achievement of a specified number of papers published in eligible outlets within a given time period. This usually happens in business schools without publication bonuses as in many UK universities (save for the market supplements).<sup>1</sup> It can also take the form of a scheme of relative performance or tournament, where faculty compete for a limited number of tenured positions. The system is typical in US business schools where employment is conditional on the number of papers published in eligible outlets compared with peers’ output within a given time period. All these ways of making compensation sensitive to performance have something in common with bounties, namely, high-powered incentives that move academics to produce an ever-larger measurable output (Williamson, 1985).

### Methodological Approach

There is an inevitable value judgment involved in one’s appraisal of a phenomenon, to wit, academic research in business schools. However, unless such an appraisal is meant to say something of practical relevance instead of to reflect one’s own prejudices, it must be anchored to the diagnosis of mechanisms that can be studied by management science, on a par with how the harmful-dysfunction analysis of medical science deals with the diagnosis of mental disorders (Wakefield, 2010). Mechanisms can thus help prevent critical appraisals from descending into the grievance study kind of hoaxes which have recently rocked critical theory (Beauchamp, 2018).

For instance, medical science used to diagnose hysteria in women with heightened emotional reactions who were not married and had no children. But these same emotional reactions were arbitrarily judged to be the product of bad temper when displayed by men. The disorder was bogus because there was no true dysfunction associated with it (Schumann, 2016),<sup>2</sup> that is, there was never a failure of biological mechanisms exclusive to women that caused hysteria (Wakefield, 2010). Similarly, runaway slaves were once diagnosed with drapetomania, a sham mental disorder that was used to justify the denial of freedom to black people in the US (Szasz, 1971) even though it was never anchored to the failure of true biological mechanisms. Anchoring value judgments to the diagnosis of mechanisms sets clear boundaries that prevent prejudices from creeping in to bias one’s appraisal. Thus, our appraisal of business schools is anchored to the organizational mechanisms that govern pay sensitivity to performance and which give rise to the golden rule of employee compensation: avoid increasing pay sensitivity to performance when either tasks or their outputs are neither easily measurable nor specialized (Milgrom and Roberts, 1992; Roberts, 2004), to be expounded in the next section.

This research also benefits from analogical thinking, which is widely used in the natural sciences when the properties of familiar phenomena are benchmarked against new phenomena to discover the unknown (Gribbin, 1995). Analogical thinking introduces an antecedent and asserts a consequent within the scope of a theory. More formally, if every event like the antecedent *A* is

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<sup>1</sup>Preliminary results of a survey the authors carried out indicate that a noteworthy share of the faculty sampled from triple-accredited UK business schools (i.e. AACSB, AMBA and EQUIS) asserted that their employment would be at risk if they did not produce peer-reviewed publications.

<sup>2</sup>The celebrated interpretation presented in Schumann (2016) has been questioned by Lieberman and Schatzberg (2018).

followed by the consequent  $C$ , it can be said that an analogy retains its truth value whenever  $B$  can be substituted for  $A$  and still  $C$  obtains (Mackie, 1980). We will see, then, that it is plausible to expect that when  $B$  (that is, discrete units of research output, such as A-class journal hits and citation counts) is substituted for  $A$  (that is, enemies fallen in combat or wait-time data or the number of banking products issued),  $C$  will follow (that is, the neglect of the intended objectives behind such proxy measures).

### The Cost of Pay Sensitivity to Performance

The frontline employees of the hospital, the bank and the professional army perform a mix of tasks, many of which do not lend themselves to measurement. Timely and appropriate access to health services, clients' informed consent to financial products, and waging a war require a high degree of specific knowledge that can hardly be encapsulated in a quantitative indicator and is, therefore, costly to transfer up the organizational hierarchy for the consideration of a manager (Baker *et al.*, 1988; Jensen and Meckling, 1998a). Even when compensation schemes are built upon indicators that convey ostensible or general knowledge but either a part of the tasks involved is not measurable or the measure itself is an imperfect proxy, preemptive costs spike (Lazear, 2018; Milgrom and Roberts, 1992; Roberts, 2004; Zimmerman, 2011). These are the costs of measurable tasks taking precedence over non-measurable tasks or the intended objectives that an imperfect proxy measure is unable to reflect (see the segmented line in Figure 1). Obviously, the prospect of increasing one's income in a piece rate system or avoiding losing one's major source of income in a tournament-like system increases the marginal cost of paying attention to nuances, motivating employees to focus narrowly on the blunt quantitative measures used to evaluate their performance.

No effort should be spared in emphasizing the difference between preemptive costs and the so-called 'crowding-out' costs, not least because the cost of preempting non-measurable, intended objectives accords with the commonsense notion of crowding something out. Crowding out is used in the literature, however, to refer to the apparent erosion of intrinsic motivation out of the use of extrinsic incentives (e.g., Frey *et al.*, 2013) as bounties, even when the tasks incentivized are perfectly measured. In contrast, preemptive costs focus on the detrimental effects on quality arising

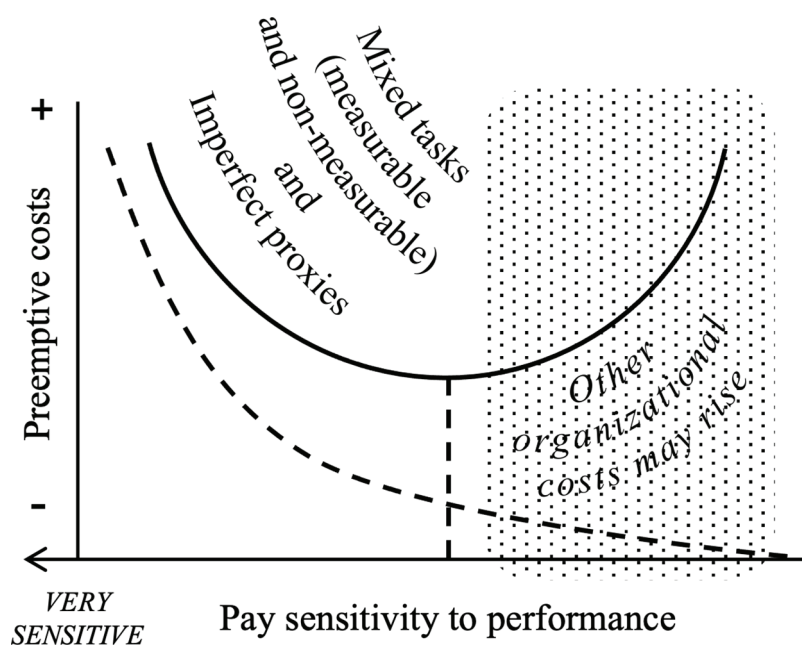


Figure 1. Total organizational costs (solid line) and preemptive costs (dashed line)

from making the fine print of tasks (that is, intended objectives under conditions of imperfect measurability) more costly to accomplish.

Much as the trade-off between outputs targeted by bounties, such as A-class journal hits, and outputs that are not thus preempted, many of the top-tier and research-intensive UK universities known as the Russell Group do not rank equally well in the Teaching Excellence Framework (TEF) run by the UK government. Although an independent survey by the Higher Education Policy Institute and Advance HE found no link between TEF top-rated universities and good teaching, it is striking to see universities outside the Russell Group, where high-powered incentives may be less commonly used for research, scoring highest in several teaching dimensions (McKie, 2018).

There is nothing better than a theory to fill the gaps in fragmentary or contradictory data, and such a theory advises that the larger the spread of the reward structure in favor of research, the more academics will trade teaching quality which is difficult to measure for ostensible research output (Milgrom and Roberts, 1992; Roberts, 2004; Zimmerman, 2011; Lazear, 2018). Thus, we should not be surprised that preemptive costs might be seen in the neglect of teaching.

Unwary business school deans may be tempted to believe that a solution to neglecting quality teaching is to create specialized job profiles, where either teaching or research makes up for all or a substantial part of tasks. This is the path many business schools have trodden carelessly, disregarding extant management knowledge. Exhorting that the one safe way to tackle preemptive costs is to make pay sensitive to specialized and measurable tasks only, such knowledge also advises against the use of noisy measures that hardly reflect the intended objectives of the job (Kerr, 1975; Ouchi, 1978; Roberts, 2004; Brown, 1990; Baker, 1992, 2000; Milgrom and Roberts, 1992; Pencavel, 2012; Lazear, 2018).<sup>3</sup>

### Noisy Measures of Research Output

Journal metrics, like Clarivate's impact factor, are noisy because they are highly skewed (Seglen, 1997; DORA, 2020), conflating under a single measure many paper qualities and types which are not aimed at knowledge breakthroughs. An ecological fallacy ensues, where the whole is falsely taken to represent its parts (Ioannidis *et al.*, 2007). As posited by Nobel laureate Randy Schekman (2013), these metrics are 'as damaging to science as the bonus culture is to banking'. Journal rankings, such as the UK ABS list, the Australian ABDC list, the French CNRS and FNEGE lists and the *Financial Times* list, are perhaps more noisy measures because the criteria and procedures to rank journals are opaque and vulnerable to the vested interests of the parties concerned (that is, academics, editors and publishers). As decried elsewhere:

... senior faculty members support their own status and control the behavior of junior colleagues by forming their own A-lists that, not by coincidence, often include journals in which they personally publish, serve as editorial board members, and/or support the publication records of favored candidates. (Adler and Harzing, 2009, p.86)

Such distortion was obvious to everyone in 2020, when the revision of the *Financial Times* journal list factored in the support of academics, kickstarting a campaign from journal editors to mobilize their contributors and readers to vote for their own journals. Ben Martin, the editor of the journal *Research Policy*, reacted in correspondence with the journal's readership with a warning that the campaign was likely to 'degenerate into an aggressive "dog eat dog" competition', and Herman Aguinis, the President of the Academy of Management whose journals were embroiled in the campaign, posited on the Academy of Management message board:

this is turning into a familiar all-out lobbying campaign. Editors and professional organizations requesting support for their journals are most certainly NOT to blame – this is the reality we live in.

<sup>3</sup>Specialized job profiles in academia also neglect productive complementarities between research and teaching.

But, frankly, it is sad to see that so much is at stake by a list created by journalists whose interests are not necessarily scientific advancement or impact/application of research. (Aguinis, 2020)

Meanwhile, Utrecht University in the Netherlands has decided to stop the use of the impact factor in hiring and promotion decisions (Woolston, 2021) and the research council of France, the Centre National de la Recherche Scientifique (CNRS), has decided to stop the publication of its own journal ranking, used to assess the research output of business schools and universities. Inexplicably, the organization that represents business schools in France, Fondation Nationale pour l'Enseignement de la Gestion des Entreprises (FNEGE), turned a blind eye to the seismic decision of the CNRS and carried on with business as usual using its own journal ranking.

An explanation for the publication of low-quality scholarship in A-class journals was suggested two decades ago in *Nature*, where Lawrence (2003) warned about the problem of fairly assessing papers in the context of a mass of submissions caused by incentives that academics face to score points for publications. Lawrence (2003) spoke skeptically of internet-based services, such as Medline, as aids in sifting through volumes of submissions. In our editorial experience working with the ScholarOne manuscript system, such internet-based services have dumbed down the task of finding knowledgeable reviewers while avoiding the conflicts of interest that arise in a community of academics who have co-authored papers in the past or whose position in a network makes them likely to do so in the future. Such conflicts of interest have been aggravated by other questionable practices, such as paper mills or article publication communes (Bedeian *et al.*, 2010; Butler *et al.*, 2017), which make close associates top the list of potential reviewers brought up by internet-based service algorithms that match authors with keywords, worsening the problem of academic microtribes with parochial interests (Alvesson *et al.*, 2017). The mission of finding knowledgeable, impartial and well-meaning reviewers is thus defeated, even more so when editors accumulate editorial positions, magnifying the burden of an already taxing responsibility.

It is thus alarming to see that the peer review system is being transformed from a mechanism to assess research to, in some accounts, a game of chance where merit is beside the point and strategizing is key (Bornmann and Daniel, 2009). For instance, making a link, however tenuous, with a human disease has long been acknowledged as increasing the chance of publication (Lawrence, 2003), which in hindsight was premonitory in the light of recent entrepreneurship publications (therein Agafonow and Perez, 2020), offering some explanation for the worrying, yet realistic, account recently offered by Olivier Chatain from HEC Paris:

To me, it means you keep the attention of the reader, and you have to assume that they just had a stroke. They vaguely remember the paragraph before, and they have some expectation of the paragraph that's coming, and that's all they have in their brain. Your reader has just had a bad night. (quoted in Makadok, 2021)

Thus, when strategy is key, scholarly writing ceases to be a means of communicating knowledge and becomes instead an exercise devoid of content that seeks to increase the chance of one's paper being published instead of contributing to the advancement of knowledge or making a breakthrough (Smaldino and McElreath, 2016).

### *Does anyone still know what a worthy intellectual contribution is?*

The problem is that there is no close concomitance between quantitative measures of research production and the natural structure of the phenomenon to be measured, that is, knowledge breakthroughs. The weaker such a concomitance is, the less valid performance measures are. Therefore, the degree of ordinality that a performance evaluation system requires is missing, rendering the management tool useless (Agafonow and Perez, 2021, 2023). In other words, if the targets are flawed how can a business school dean look in the eye of an academic who has refused to maximize research output and inform her that she has not been awarded tenure or is being laid off because her

publication targets have not been met? The playing field has every appearance of being tipped against honest academics. As observed by Alvesson *et al.*, 2017, p.15): ‘The bitterness and aggression most academics experience against journals, editors, and reviewers demonstrate a profound sense of unfairness’.

What is overlooked by business schools is that knowledge breakthroughs involve complex inferential mental processes that are unobservable and, at present, impossible to measure. For instance, the so-called ‘puzzle-out’ breakthroughs (Hanson, 1967) are analogous to Kuhn’s (1996) normal science, and they require building on existing knowledge to deduce novel test implications. However falsifiable, such test implications are ‘interpretations in the light of theories’ (Popper, 2005, p.90) and, therefore, they may not always be the most thrilling discoveries. This casts doubt on management scholars’ capacity to recognize worthy intellectual contributions in light of the value the profession puts on originality (Mone and McKinley, 1993) and appeal (Tsang, 2022).

On the other hand, ‘back-into’ breakthroughs (Hanson, 1967), which are related to Kuhn’s (1996) revolutionary science, tap into novel ground and are closer, on the surface, to sheer originality. These breakthroughs are rare and demand retroducing/abducing putative variables that produce a shift in *gestalt*, roughly similar to the shift in the perception of either an old or a young woman *à la* Toulouse-Lautrec in the puzzle picture used by Hanson and reproduced in Figure 2. Whether you perceive one or the other, both images are in fact built into the same picture, which by analogy is data that can support antagonistic accounts, depending on the theory at hand.

These complex inferential mental processes suggest that using qualitative dimensions in the assessment of research output is the way to go. Indeed, this is the recommendation of the San Francisco Declaration on Research Assessment (DORA), which is a worldwide initiative that promotes best practices in the assessment of academic research. It advises turning around the assessment of research based on journal- and paper-based metrics to make clear that: ‘the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published’ (DORA, 2020).



**Figure 2.** A shift in *gestalt* illustrated with the puzzle picture of an old and a young woman *à la* Toulouse-Lautrec (Hanson, 2010, p.11)



### Where are Business School Scandals?

If business school performance evaluation practices are likely to wreak havoc with their knowledge-production mission, why do we not see more business school scandals akin to notorious cases of corporate misconduct? In fact, overreliance on high-powered incentives encourages organizational misconduct in the form of business schools tampering with data to inflate their positions in rankings (see *The Biggest Business School Scandals*, published online annually by Poets & Quants). Culprits include highly ranked business schools which, after all, have most to lose in the ranking game (Devinney *et al.*, 2008; Hopwood, 2008; Mau and Mansilya-Kruz, 2008; Osterloh and Frey, 2015; Thorp, 2023).

There is, however, one important reason why business school stakeholders rarely voice their grievances as hospital patients, bank clients, or citizens and human rights activists do. Business school stakeholders buy into a complex kind of experience good whose value attributes require the very expert knowledge they lack. Otherwise, they would not seek management knowledge in the first place. The peculiarity of experience goods is that they cannot be evaluated in advance by search and inspection to gather enough information to decide whether one will get enough value for the money paid (Nelson, 1970).

Note that there is also a delay between the moment a patient books a medical appointment, a customer agrees on the obligations of a banking product and citizens vote into office a government committed to funding an army, and the moment they will endure or enjoy the outcome of the deal. However, between the time a student enrolls in an academic program, a business hires a business school for advice or a government agrees to authorize the operation of a business school and the moment they realize whether the deal was worth it, there is much more uncertainty and nescience. It all hinges on the very expert knowledge that stakeholders lack.

This is aggravated by management science's inability to produce hard and fast results on a par with those from routine medical interventions or familiar technological applications, a situation by no means unique to management.<sup>4</sup> It is because of the paucity of foregone conclusions in management knowledge that business schools can reap the benefits of a lack of accountability in knowledge production. But at the same time, this is the very reason why performance pay at business schools should be toned down.

### Two Contrasting Scenarios for the Future of Business Schools

A dystopian and a utopian scenario in the development of business schools are outlined next and summarized in Table 1. They seek to raise awareness of the dangers and opportunities that business school stakeholders face, possibly galvanizing them into taking action. The key to understanding the difference between the two scenarios is, in a stylized digest, how the organizational structure that underpins performance evaluation is interwoven with the nature of the knowledge tasks or outputs entail.

Take, for instance, the storage and dispatching of merchandise in warehouses, which involves lifting loads, drop-off and pick-up actions, steering and towing load-carrying containers, monitoring inventory levels, etc. These tasks involve ostensible or general knowledge (Baker *et al.*, 1988; Jensen and Meckling, 1998a), requiring little editing and summarizing before they can be assessed by managers in the line structure (March and Simon, 1993). So much so that near fully automated warehouses exist today, where the span of control (Ouchi and Dowling, 1974; van Fleet and Bedeian, 1977) has been widened because general knowledge tasks, aided by technology, make it possible for a few supervisors to oversee an increased number of undertakings (or the staff carrying them out in the absence of automation), thus moving from quadrant 4 to 1 in Figure 3.

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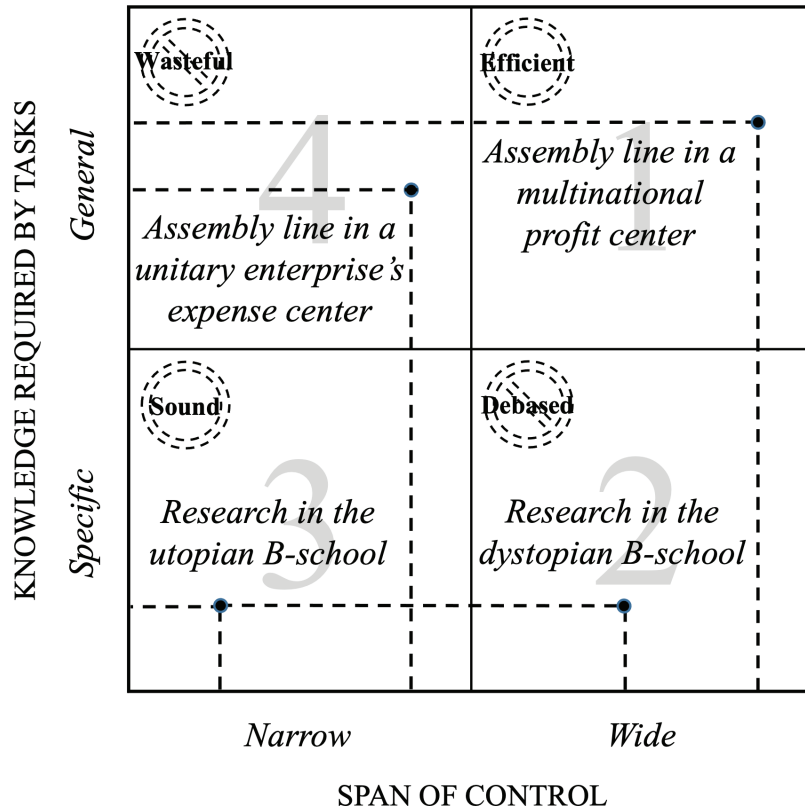
<sup>4</sup>Consider, for instance, the inability of geophysics to predict earthquakes or of astrophysics to control celestial bodies.

However, the span of control cannot be arbitrarily widened (moving from quadrant 3 to quadrant 2) when undertakings are rich in specific knowledge (Baker *et al.*, 1988; Jensen and Meckling, 1998a). This is because accurate measures of performance are much more difficult to come by when undertakings depend on specific, non-standardized, knowledge. If, notwithstanding specific knowledge, noisy proxy measures are relied upon (perhaps to reassure managers with a false sense of control), tasks and their outputs will be debased by preemptive costs, as quadrant 2 indicates.

In a nutshell, the dystopian business school sits on quadrant 2 tilting the scales in favor of *form* by turning the management of knowledge into a bean-counting exercise, moving the evaluation of research up the line structure from true peers to an unconversant manager who contents herself with counting A-class journal hits. Thus an audit culture is fostered (Joseph, 2015; Shore, 2008) with deleterious effects on academics’ professional conscientiousness (Mintzberg, 1979). By contrast, the utopian business school sits on quadrant 3 turning the management of knowledge into a scrupulous quality control exercise that emphasizes *content* over form, moving the evaluation of research down the line structure from academic managers, or professors by administration (Beardsley and Hills, 2017; Wilson, 2016), to true peers who care more about the scientific integrity of findings and ideas than where they can be published, enhancing thus academics’ professional conscientiousness (Mintzberg, 1979).

*A dystopian business school scenario*

One possible course of events that can lead to a dystopian business school has been described by a former editor in chief of the *Academy of Management Journal*. In an analogy with the crime TV series *The Sopranos*, Sara Rynes (2007) referred to the Soprano School of Management. The anal-



**Figure 3.** Specific and general knowledge, and the span of management control they call for (adapted from Agafonow and Perez, 2023).

**Table 1.** Main attributes of the dystopian and the utopian business school

| <b>Dystopian business school scenario</b>  | <b>Utopian business school scenario</b>  |
|--|--|
| <b>Performance evaluation</b>  |  |
| <ul style="list-style-type: none"> <li>Streamlined indicators turn research assessment into a bean-counting exercise.</li> <li>Measurable impact under ideal operating conditions is calculated.</li> <li>Hits in A-class journals are commissioned by analogy with murders in crime syndicates.</li> <li>Academics are treated like small business owners whose outputs are assessed in terms of the contribution to the financial bottom line of the business school.</li> <li>High-powered incentives make the income of academics very sensitive to A-class journal hits.</li> </ul>                                 | <ul style="list-style-type: none"> <li>Research is assessed in its own right, making it a complex and cumbersome undertaking.</li> <li>Because impact measures are compromised by weak ordinality, they are abandoned.</li> <li>Knowledge breakthroughs take precedence over A-class journal hits.</li> <li>Academics are treated like academics whose outputs are difficult to price in line with functional organizations.</li> <li>Low-powered incentives make the income of academics unresponsive to A-class journal hits.</li> </ul> |
| <b>Organizational structure (cf. Agafonow and Perez, 2021, p.14, table 3)</b>  |  |
| <ul style="list-style-type: none"> <li>Market-like devices are infused into the organizational structure, emulating divisionalization in multinationals.</li> <li>Functional departments either disappear or play a disempowered role with academic managers performing clerical responsibilities.</li> <li>A non-traditional dean with a career outside academia, who is not a PhD holder or whose doctorate has been fast-tracked.</li> <li>A deputy dean unacquainted with research oversees hundreds of academics.</li> <li>Academics are absent from the upper levels of business school administration.</li> </ul> | <ul style="list-style-type: none"> <li>Functional organization emulating university departments.</li> <li>Functional departments are empowered by the complexity and cumbersome nature of research.</li> <li>A dean who has long followed a scholarly path and whose academic track record is admired by peers.</li> <li>No research deputy dean for no one can genuinely oversee more than a handful of peers.</li> <li>Academics populate the upper levels of the business school administration.</li> </ul>                             |
| <b>Organizational culture</b>  |  |
| <ul style="list-style-type: none"> <li>Tick-box culture driven by the ranking placements that A-class journal hits make possible.</li> <li>Scientific misconduct is accepted as a cost-effective way to score A-class journal hits.</li> <li>Shirking by taking research shortcuts.</li> <li>Mechanisms of ‘micro terror’ make academics perpetually fearful of falling behind research targets.</li> </ul>  | <ul style="list-style-type: none"> <li>Research culture driven by a passion for knowledge breakthroughs.</li> <li>Scientific misconduct is condemned as detrimental to knowledge breakthroughs.</li> <li>Strong work ethic.</li> <li>Academics enjoy the peace of mind and job security needed to achieve knowledge breakthroughs.</li> </ul>  |

ogy was motivated by the emphasis many business schools put on scoring hits in A-class journals, a process not unlike the commission of hits (that is, murders) by Soprano family mobsters. Similarly, it has been referred to as the neoliberal business school (Fleming, 2020).

In the Soprano School of Management, the management of research is organized following the organizational principles of divisionalization (Mintzberg, 1979; Roberts, 2004), which have allowed multinational corporations to scale up an array of products across many markets and geographies. In the case of multinationals, managing too many different products and geographies poses a cognitive challenge because, first, no single manager may have the knowledge to understand the particular challenges faced in so many different markets and, second, in the absence of divisionalization, top managers can fall prey to the influence of middle managers who claim a sizeable portion of the budget by overstating the contribution their units make to the company (Williamson, 1985; Milgrom and Roberts, 1992; Roberts, 2004).

In academia, the first problem takes the form of so many different academic disciplines that no single academic can closely oversee everything, while the second problem manifests itself as the lobbying of academic managers, or professors by administration (Wilson, 2016; Beardsley and Hills, 2017), for benefits and perks that do not correspond to the recipient's merits. The Soprano School of Management solves the first problem by emulating multinationals in creating an information system based on streamlined indicators of performance that eases the cognitive burden of professors by administration who, instead of evaluating the substantive aspects of research, are content with counting beans (Tsui, 2013), to wit, keeping count of discrete units of research outputs, like the number of papers published in dedicated journals.

The solution to the second problem (that is, lobbying) is an outgrowth of the first problem in that the allocation of benefits and perks is now based on objective measures, however noisy, computed as beans. Thus, it is more difficult to justify a disproportionate claim to benefits by any one academic because research productivity is conveniently measured and professors by administration can be held accountable from the upper levels of the business school if their decisions do not correspond to such measures.

Moreover, once divisionalization kicks in, it is possible to dispense with layers of middle management because a costly qualitative follow-up on research is now replaced by a management information system that requires far less specific knowledge to operate (Baker *et al.*, 1988; Jensen and Meckling, 1998a). For instance, a research dean can now oversee the research production of hundreds of academics, while department heads can either disappear or play a disempowered role in charge of clerical responsibilities (Martin, 2016b). As vividly put by Stefan Grimm:

The reality is that these career scientists up in the hierarchy of this organization only look at figures to judge their colleagues, be it impact factors or grant income. After all, how can you convince your Department head that you are working on something exciting if he not even attends the regular Departmental seminars? The aim is only to keep up the finances of their Departments for their own career advancement. (Stefan Grimm cited in Parr, 2014)

The upshot of divisionalization is the expendability of academics at the upper levels of the business school administration, marking a transition from leadership positions formerly held by academics reared on a scholarly path to non-academic leaders. Thus, a familiar image in the Soprano School of Management is the non-traditional dean with a career outside academia, who has no PhD or whose doctorate has been fast-tracked to keep up appearances, and whose victories playing the ranking game (Devinney *et al.*, 2008; Hopwood, 2008; Mau and Mansilya-Kruz, 2008; Osterloh and Frey, 2015; Thorp, 2023) are heralded by digital media companies sponsored by the Soprano School of Management.

While divisionalization in multinationals is accompanied by a transformation of functional units into profit centers subject to the discipline of the market, that is, evaluated by means of profits (Mintzberg, 1979; Jensen and Meckling, 1998b; Brickley *et al.*, 2016), it is hard to put a figure on the value contributed by every department, let alone every academic. Yet Alice Gast, president of Imperial College London where a professor committed suicide after being placed under performance review, has compared academics to small business owners who, just as multinational profit centers and as touted by Zenger and Hesterly (1997, p. 211), are disciplined by 'market-like devices' except that infused into the core of organizational structures:

Professors are really like small business owners. They have their own teaching to perform, they have their own research and they have their research funding to look after. It's a very highly competitive world out there. (cited in Parr, 2015)

These organizational changes in the Soprano School of Management are followed by a 'bean-counting performance evaluation culture' (Tsui, 2013, p.376), where the importance of knowledge breakthroughs lessens relative to other, more effective, means of scoring hits. The production of

beans is thus maximized in the short term by increasing the spread between keeping and losing one's income, reducing the base salary of academics relative to the variable pay in a continuous compensation scheme or, in the extreme, a tournament (Lazear, 2018) where the income of academics largely depends on the number of A-class journal hits.

Since what matters is to tick boxes, scoring hits instead of doing research properly speaking, different forms of scientific misconduct are relied upon. In business schools, scientific misconduct has been documented to comprise practices like article publication communes or paper mills (Bedeian *et al.*, 2010) that, in the absence of the fractional weighing of authorship (Adler and Harzing, 2009), foster the reciprocal interchange of signatures (that is, gift, guest or honor authorship [Harvey, 2018]) to inflate research productivity, HARKing (that is, hypothesizing after the facts are known), and data fabrication, among others (Butler *et al.*, 2017; Hall and Martin, 2019; Martin, 2016a; Tsang, 2022). Thus, a tick-box mentality sinks in, molding a distinctive faculty whose quintessential academic is a weathercock pivoting on the latest research fad and relying on scientific misconduct to score A-hits solely motivated by money. It has also been described as follows:

They are relatively easy to spot as they seldom speak about their research. They will discuss at great length the ins and outs of performance targets such as impact factor, grant income, invited talks, number of research students, editorial positions, board memberships and awards. (Anonymous, 2018)

This bean-counting culture (Tsui, 2013) encompasses measures of apparent impact on stakeholders, championed by academics with executive responsibilities in the Academy of Management, namely, the so-called pluralist model of scholarly impact (Aguinis *et al.*, 2015, 2019, 2021; Aguinis and Gabriel, 2022; see a critique in Agafonow and Perez, 2023). A theoretical or acquired capacity (Hansen *et al.*, 2009) is thus calculated, where impact under ideal operating conditions is worked out on paper and serves as a target to be put out by academics under draconian contractual obligations.

Whereas this tick-box mentality produces a generalized hypocritical attitude that goes with the tide, many academics agonize over being the target of the mechanisms of 'micro terror' that Ratle *et al.*, (2020) have documented in business schools (see as well Shore, 2008, Joseph, 2015). Falling behind in the production of beans turns academics into red flags on the spreadsheet of the Soprano School of Management dean, alerting her to the dangers of losing the ranking game.

#### *A utopian business school scenario*

The polar opposite of the Soprano School of Management is a business school that wholeheartedly adheres to the spirit of the San Francisco Declaration on Research Assessment (DORA). Emphasizing the content rather than the metrics of research, DORA has unwittingly questioned the suitability of the principle of divisionalization for the organization of knowledge production. Thus, this business school is organized around functional principles because, as posited by Roberts (2004), this is the sort of organization that nurtures excellence in the performance of professional functions. Excellence demands a focus on the substantive aspects of the subject matter rather than a focus on subordinate indicators such as A-class journal hits, citation counts or apparent impact on stakeholders, which are incidental to the intended objectives of research.

This utopian business school dispenses with an information system built upon this kind of indicator, which requires instead the narrowing of the span of control over faculty (Ouchi and Dowling, 1974; van Fleet and Bedeian, 1977). Thus, knowledge production is not managed by remote control anymore, to wit, through a spreadsheet in the hands of a dean who unleashes disciplinary procedures every time an academic fails to produce a bean. Moreover, the utopian business school dean has a strong professional conscientiousness that moves her to speak out against the harmful effects of business school rankings. Examples are an op-ed published in *Le Monde* by the dean of a business school in France (Leblanc, 2013), and a paper signed by executives from 21 US business schools (Bachrach *et al.*, 2017).

Narrowing the span of control entails the organization of knowledge production in small groups of academics with similar disciplinary affinities. As a result, utopian business schools have learned to ‘rediscover their roots as university departments and to become more like other university-based professional schools ... behaving less like the firms they teach about and more like educational and research institutions’ (Pfeffer and Fong, 2004, pp.1514–15). Thus, the supervisory role is transferred from the upper levels of the line structure, where wide divisional boundaries are located, to academic functional units located down the organizational hierarchy, where the actual inferential process leading to knowledge breakthroughs happens (Agafonow and Perez, 2021). Because the scientific inferential process is rich in specific knowledge that is prohibitive to centralize (Baker *et al.*, 1988; Jensen and Meckling, 1998a), the supervisory role lies in the hands of peers and is collegial, although formal responsibility can be attributed to senior academics whose expertise is the key that unlocks the virtues of a knowledge production process that professors by administration find puzzling (Wilson, 2016; Beardsley and Hills, 2017).

This narrow span of control and its accompanying transfer of the ultimate authority over tasks to the smallest decision-making unit (that is, the individual academic) is common to organizational forms that hinge on knowledge production. In this regard, it is illustrative to see how Steve Jobs, co-founder of Apple Inc., understood what the management of knowledge production entails (Anonymous, 2010, pts 1’ 42”–2’16”):

*Journalist:* Are people willing to tell you that you are wrong?

*Steve Jobs:* [Laughs] Yeah!

*Journalist:* I mean, other than snarky journalists.

*Steve Jobs:* Oh yeah! We have wonderful arguments [at Apple].

*Journalist:* And do you win them all?

*Steve Jobs:* Oh no! I wish I did. See you can’t. If you want to hire great people and have them stay working for you, you have to let them make a lot of decisions and you have to be run by ideas, not hierarchy. The best ideas have to win, otherwise people don’t stay.

Similarly, Mintzberg (1979, p.360) notes that in organizations populated by specialists ‘power resides in expertise; one has influence by virtue of one’s knowledge and skills’. Thus, the utopian business school is run by ideas instead of metrics piloted from up the organizational hierarchy. This is conducive to an organizational culture where the intended objectives of research, however difficult to measure, drive the work of academics. This culture is reinforced with low-powered incentives, where pay sensitivity to research performance is muted. Since accurate measures of the process leading to a knowledge breakthrough do not exist, the short-term maximization of A-class journal hits is recognized as counterproductive. Thus, the spread between keeping and losing one’s income is minimized by relying on a base salary with no variable pay, typical of a discrete compensation scheme (Lazear, 2018).

In this utopian business school, scientific misconduct is unheard of because academics are not targeted by mechanisms of micro terror (Shore, 2008; Joseph, 2015; Ratle *et al.*, 2020) to make them churn out as many A-class journal hits as possible in the shortest time. Just the opposite, they enjoy the peace of mind that comes with job security. Finally, in adherence to the adage ‘with great power comes great responsibility’, the academics of the utopian business school have a strong work ethic. They know that the substantive aspects of their work escape metrics and that, should a business school be serious about knowledge production, a great deal of autonomy will be conferred on them to do what only they know how to do best. This autonomy will be used wisely, investing their time in furthering the advancement of management knowledge instead of gaming journals for the sake of just another immaterial A-hit.

### Discussion: When Merit is Reconciled With Ethics at Business Schools

The debasement of research output arguably finds its cause in the management control system that bean-counting performance evaluation entails, and which is manifest in both lower-quality management knowledge and scientific misconduct. Too many papers to reference here have sought to test a relationship between monetary incentives and research output assuming that quality escapes unscathed. Evidence to the contrary, however, is fragmentary, perhaps because data collection has not been guided by theory-laden hypotheses. This the present paper seeks to rectify.

On the one hand, building on the assumption that the goal of business school research is ‘to enhance the prestige of the business school where the research is done’ (Pfeffer and Fong, 2002, p.86) instead of the advancement of knowledge or breakthroughs, Pfeffer and Fong (2020) look at the sales of books written by business school academics. Motivational books written by business academics have, however, topped bestseller lists despite the self-help genre being unlikely to contribute much to academic knowledge.<sup>5</sup> More interesting is that Pfeffer and Fong (2002) also claim, based on a survey by Rigby (2001), that the management tools created by business school academics, compared with those from companies, show a lower utilization rate, a lower level of satisfaction and a higher defection rate. Also, Mingers and Willmott (2013) observe a ‘Taylorization’ of academic research in business schools as a result of the standardization, rather than the diversity, of methods and theoretical perspectives that rankings foster.

On the other hand, surveyed academics in the field of management have witnessed the rise of research malpractice seeking to increase publication output (Bedeian *et al.*, 2010). For instance, by tracking changes between PhD dissertations and the published papers they give rise to, several questionable research practices have been identified. The so-called ‘chrysalis effect’, analogous to a pupa transforming into a butterfly, compels academics to undertake questionable changes to get journal hits (O’Boyle *et al.*, 2017). Further, a case study about the School of Business and Economics at Thompson Rivers University in Canada shows that the majority of faculty with research responsibilities had been encouraged by an incentive policy to publish in predatory journals (Pyne, 2017).<sup>6</sup>

More generally, an emphasis on publication output may increase academics’ confirmation bias because the stronger the emphasis on publications, the higher the number of apparently confirmed hypotheses will be to secure journal hits. Thus, evidence shows that research per capita productivity is significantly correlated with the proportion of positive results claiming to support a hypothesis (Fanelli, 2010). Also, incentives that reward publication output rather than knowledge breakthroughs may have contributed to a paucity of statistical power because reliance on bogus research methods is, against the odds, likely to increase the number of papers published (Smaldino and McElreath, 2016). Relatedly, rewarding publication output has increased the retraction of papers as a consequence of errors, which are more likely when many researchers partake in the same research. There is thus a correlation between the number of papers retracted and a greater division of labor, measured as the number of authors per publication and the number of institutions with which each author is affiliated (Walsh *et al.*, 2019).

The principle of a level playing field is needed to enhance scholarly merit, similar to how combat sports, football and democratic societies prevent certain traits and actions from conferring an unfair advantage (Rawls, 1999). When scholarly production is driven to score points for discrete units of research outputs, the profession is turned into an idiosyncratic system where self-righteous wills collide in a game of strategy (Rawls, 1999; Bornmann and Daniel, 2009). The right and the good are thus dislocated when scholarly production is driven not by the aim of achieving a knowledge breakthrough for its own sake – that is, the right – but by the spread between keeping and

<sup>5</sup>For instance, the best-selling motivational business fable, *Who Moved my Cheese?*, was written by Spencer Johnson, Leadership Fellow at the Harvard Business School.

<sup>6</sup>The university suspended Pyne without pay and barred him from campus as a result of his published findings. Following an investigation, the Canadian Association of University Teachers concluded that Thompson Rivers University had violated academic freedom when suspending Pyne.

losing one's source of income (Lazear, 2018) that comes with collecting a publication bonus or with tenure after having won a faculty tournament – that is, the right (Rawls, 1999). When the right and the good are dislocated, thus being goals in conflict, academics cannot be said to be autonomous, 'acting from principles that they would acknowledge under conditions that best express their nature as free and equal rational beings' (Rawls, 1999, p.452). Such dislocation turns success in academia into a contest for the most goodness, defined as points scored or beans churned, irrespective of how righteous both the means used to achieve goodness and the quality inherent in scholarly output are.

To make academic success contingent on strategy instead of scholarship is tantamount to rejecting the principle of a level playing field, which is at the heart of so many social arrangements agreed upon in the transition from a feudal to a liberal society and the ensuing democratic rule of law. An apparently incidental social arrangement is the introduction of weight classes into combat sports. Before their introduction, merit was masked by traits that conferred an unfair advantage, like possessing a heavier constitution. The rules that regulate football, for instance, play a similar leveling role that, we should remember, was missing from the rudimentary football of the nineteenth century.

In occupational settings, merit is obviously defined by idiosyncratic standards which, in the case of academia, accord with arbitrary natural endowments, such as intelligence, whose positive contribution to the least advantaged would plausibly be agreed upon in a known thought experiment to simulate social justice (that is, Rawls, 1996, 1999). Yet observers believe that academia is becoming an unwelcoming environment for the most talented (Baker *et al.*, 1988; Smolin, 2005; Agafonow and Perez, 2021, 2023). Just like weight classes in boxing, the rules that regulate football and the social policies that help the least advantaged enhance merit properly understood (Rawls, 1999), academic research must be shielded from the preemption of the goal of knowledge breakthroughs that the practice of a bean-counting performance evaluation causes. Otherwise, the odds will be stacked against academics who refuse to maximize research output.

Principled academics would reject this dystopian view of academic success because, first, career expectations would be contingent on practices inimical to the academic enterprise, that is, the array of misconduct that can pave the way to A-class journal hits. Second, this dystopian view would disadvantage academics who lack the political skills to strategize. Third, investing in mastering the scientific method would be doubly costly, that is, the cost of failing tenure or being made redundant when quantitative research outputs are not met would be added to the time and effort spent in mastering the scientific method (Agafonow and Perez, 2021).

## Conclusion

Business schools are supposed to be meccas for the seekers of modern management wisdom, and many are. But many business schools practice outdated management methods, at least in the area of knowledge production. This malpractice cannot but have a negative impact on the mission of business schools because they operate in a market riddled with large information asymmetries that prevent their patrons from realizing what little value they get from a research output debased by the misapplication of high-powered compensation schemes.

Now that China has announced that it will apparently discontinue the payment of bonuses for publication (Huang, 2020; Mallapaty, 2020), it is high time for us in the West to start soul-searching about the implications of high-powered compensation schemes for the production of knowledge. Such schemes, when transposed to business schools, not only run against the teachings of extant management knowledge, but also are a breeding ground for misconduct that harms both stakeholders and the academic disciplines that business schools host.

It is precisely because Western business schools have been self-indulgent with perverse incentives created to manage research, that we must be ready to tackle the hypocritical disapproval of bonuses while turning a blind eye to the large spread between keeping and losing one's source of income which is built into tournament-like compensation schemes. If business schools around the



world have experimented with bonuses for publications and the like, it is because they have uncritically bought into the publish-or-perish rationale of tournaments typical of the tenure system in the US. Such disapproval directed at academic institutions in developing countries often comes from high-flying Western quarters (e.g., Bhattacharjee 2011; Abritis and McCook, 2017). Yet, it is embarrassing to realize that there is more than a kernel of truth in the response of one Saudi university: ‘Our program is not different from those in many elite universities around the world from which top scientists continue to receive attractive offers’ (Zahed, 2012, p.1040).

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