Management Research: A Note to Accompany My Talk in February

JC Spender, Kozminski & Rutgers

Abstract

The community of management researchers, especially the folk in business schools, continues to hide the fact that much research is based on assumptions that make the conclusions irrelevant to practicing managers. There are many reasons for this; one is that the research activity is for their professional academic advancement and is not intended to aid managers. Second, management researchers are not much interested in understanding firms and the task of generating profit. The Note concludes with some non-mainstream suggestions about how to analyze managing.

Introduction

Management researchers and educators are often anxious - and for good reason. Even as our industry expands, some suspect it is a 'bubble'. Management education is hugely profitable. There is ever more competition for students and fees, especially from low cost providers in our potentially commoditized market. The syllabus is almost uniform across the industry. There are no patented ideas. The business school's costs of production are among the lowest in the university - though their faculty are paid more than most. Student fees are largely shaped by the degree-granting school's reputation, endowment, and what the market can then bear. The elite schools are carefully cultivated quasi-monopolies, restricting their enrollment precisely because the smartest students are the cheapest to educate. Community colleges struggle against this 'natural monopoly'.

We have deeper anxieties are about what to teach and its relevance to managerial practice - the much-remarked 'rigor-relevance gap'. What are management academics, who seldom have much managerial experience, really up to? This Note is not written for academics but turns on academic ideas. It is slightly ponderous, but the issues are not simple. So readers do well to skim on first reading, to get a sense of where I head and why. The sad truth is that while managers are clearly as intelligent and well-read as management academics much recent management writing is insultingly oversimplified - as in 7 habits, or 4 secrets of managerial success. The sellers of such snake-oil are, of course, running a business that seldom confirms the wisdoms they purvey. What are the 7 habits of blockbuster management authors?

I came into this industry over 40 years ago after a varied career as a nuclear engineer, salesman, manager, and high-tech entrepreneur. I did not intend to be an academic, only to improve my managing. I experienced this as a subtle activity, fascinating and frustrating, with frequent failures and occasional successes - but I also understood little about what I was up to. It turns out that not many BSchool people are interested in business managers - part of a longer story that has led me to write critically on BSchools, management education, and its history. Managing clearly needs to be understood better if only because our society and politics are increasingly shaped by private sector management ideas. A vigorous private sector is fundamental to our democratic capitalist system.

After WW2 management researchers shifted their focus towards the 'science of management', in part to revolutionize what was being taught. Our discipline now suffers 'physics envy'. We seek 'rigorous scientific theory' that is 'validated empirically'. Earlier researchers focused on (a) private sector business's ethics and social duties, and (b) business efficiency and the elimination of waste - Scientific Management's pre-WW1 agenda. Neither program had good theoretical foundations or research methods. The post-WW2 shift to (c) 'rigorous science' has been good for us, providing many research topics and lots of research funding. It has been less so for practicing managers. The rigor-relevance gap has widened markedly over the last few decades. While many BSchools are 'course correcting' away from obsessive quantification, taking up the (a) agenda again, teaching ethics and social responsibility, this Note looks at why and at what might be done to make the (c) agenda more useful to working managers. OK, there is a huge literature on 'bridging the gap', most of little use, often mere breast-beating that has negligible impact on the curriculum or on our grasp of our industry's history or practices.

This Note explores a different view. As an ex-manager, I begin with what management researchers 'take for granted' about managerial work - in part because so few experience it. Their research methods force them to 'simplify', for instance to presume managing is rational decision-making using discoverable 'data'. Simplification is justified by claiming it is better to research part of the phenomena 'rigorously' than to try and grasp its entirety. Many assert 'reality' is too complex to grasp - paradoxical given the assertion presumes knowing reality's complexity. My aim is to surface researchers' simplifications and explore how these make the research outcome less relevant to managerial practice than it might be. I then shift towards different assumptions and a more tractable analysis, asserting that managers are more likely to be working on 'knowledge-absences' than on 'knowledge-presences' and data. These absences obliquely define the responsibilities managers cannot delegate. Analyzing management has taken on new urgency in the era of 'Big Data' and AI because understanding it also means realizing robots will certainly re-shape it but can never 'take over'. The urgency is actually more political than technological as we struggle to balance investors' interests against the populace's and grapple with new modes of work and social inequities.

What is 'management research'?

If management research is useful why do managers not do it for themselves? Managers and management academics do not pursue the same objectives. Managers focus on practice, not for lack of interest in research but because their objectives are only reached through their firm's practices. Profit presumes practice, not mere ideas. Resources must be consumed before returns and profits can arise. Profit is a consequence of practice, not of an idea or even an aspiration. Academics are less interested in practice, more interested in ideas. They are likely to see the firm's practices as a way of testing their ideas, not as leading to profit. Academics' practice is oriented towards producing better theory - paradoxically, a practice that cannot be theorized. To argue that entrepreneurship, business model innovation, and idea discovery can be theorized is to misunderstand what these terms mean. When pressed, management researchers plead we are pursuing better ideas to better business practice. But our more pressing objective is personal reputation. Academics operate as sole entrepreneurs in a globally competitive environment, seldom as managed employees in teams. Reputation is key to marketability and grant-givers' favors as well as to resisting the university's (or Dean's) attempts to direct, control, or limit one's behavior. As we say, managing academics is like herding cats. Management academics' reputation among managers has little impact on their careers - though consulting income is always handy, even as it raises awkward questions about why businesses ever use consultants.

Second, academics specialize in research. Their training is in 'research method' - often called 'methodology' - not in managerial practice. Managers specialize in generating and shaping the practices of employees and significant others, very different from academics. It is almost always the case that 'practitioners' know more about the real world of competition, profit, and loss than do academics. The academics' principal claim is to think 'more rigorously' than practitioners, probing for a different kind of understanding, perhaps 'more fundamental'. Recall the medieval meaning of 'theorizing' was 'observing systematically' to uncover a phenomenon's fundamentals. These days our theorizing has converged with rigorous science, the pursuit of reality's fundamental laws and it has been captured by academic method. Young academics must win their spurs with displays of method, not by showing their grasp of the managers' world. The business phenomena being researched are pushed into the background.

Third, there is some miscommunication about the phenomena of interest. Many academics focus on 'business firms' as things that exist. Note they are often called 'organizations' as if the difference between public service and profit-making was of no practical consequence. Academics are observers not participants so they set out by making assumptions about the firms they believe they are observing. Managers, ironically, are less likely to presume their firm's 'nature', being more taken up with creating and directing the practices that move their firm towards its strategic goals - such as profit, competitive advantage, market share, or simple survival in the face of regulation and legislation. Managers focus on what firms do, on outputs and consequences, less on defining what firms are. The managers' reality is practice and consequence, not a model.

This is important because one of management academics' several 'dirty secrets' is that they are not too sure what firms are. Ignoring these doubts, most in our industry presuppose firms 'exist' as empirically researchable socio-economic entities, much as we might research pigs or electric bicycles. One popular research method is to gather up a sample of firms and look for shared characteristics or, presuming a desirable model of the firm, see how real firms match that model. In contrast, most managers believe their firm is unique in important ways, beyond conclusive definition, carrying many alternative futures.

How Management Researchers Think About Managers

Few researchers spend much time with managers, observing what they do. A notable exception was the Canadian academic Henry Mintzberg. His PhD thesis became *The Nature of Managerial*

Work, published in 1973[1]. Despite the book's success, and Dr. Mintzberg's stellar reputation, his research has not been much repeated. Most management researchers' ideas about managing arise not from personal observation but from the assumptions they make about firms. These generally fall into two categories: (p), 'the firm' as a context of activity by measurable individuals, employees, or managers (smart, stupid, trained, imaginative, trusting, etc.), and (q), firms as individual-like entities have measurable structural, cultural, or behavioral features (innovative, global, family, technological, sleepy, monopolistic, dysfunctional, etc.) Strange assumptions about 'existing' get rolled in. We often assume people 'exist', without being entirely sure what we mean. People change and we do not know ourselves completely. Assuming 'rational man' clears up these doubts but at great cost to understanding real people.

Likewise, management researchers assume firms 'exist', again without being sure what they mean, given firms change, have permeable boundaries, and often depend more on intangibles than on what can be measured. Economists especially believe markets 'exist'. Managers, in contrast, focus on setting up and monitoring 'transactions', specific operations in the process of transforming inputs into outputs or making trades with individual customers and suppliers. 'The market' is no more than a way of talking about the latter.

We simplify so that we can apply our research methods. In addition to simplifying assumptions about what exists - individuals, firms, markets - and believing we know what individuals and markets are, we need assumptions about the nature of firms. There are variations but most management theorists use one of two principal metaphors: either (x) the firm as a rationally managed (designed and administered) 'machine' made up of assets and relationships with efficiency and goal-attainment goals, or (y) the firm as an acculturated community of people managed (shaped) by leadership/entrepreneurship, with greater commitment as its goal. The (x) approach is the basis of 'organization theory' (OT). Its ideas derive from theories of machines, the state, and military practice. Its chief features are the development and administration of rational goal-oriented rules, hiring and directing employees to follow these rules, measuring their performance against these rules. The (y) approach underpins 'organization behavior' (OB). This shifts from rational models of the firm, as in (x), and towards simplifying assumptions about individuals/employees - for instance that they are more human than machine-like 'rational man'

[1] Mintzberg, Henry. (1973). *The Nature of Managerial Work*. New York: Harper & Row.

and, consequently, managing them calls for interpersonal skills as well as abilities to design systems and direct people into them. Thus, OT and OB theorists assume what 'people' are.

While OT and OB folk presume their (p)- and (q)-style assumptions about individuals, firms, and markets are compatible, the (x) and (y) approaches are clearly inconsistent - because of the contrasting assumptions that underpin them - for example, people as machine components versus people as more complex. OT and OB academics also make assumptions about managers. The professional consequence of incompatibility between (x) and (y) is two distinct fields of academic activity (OT and OB) which politely avoid competing within management education - neither claiming to be 'right' and the other 'wrong' or 'mistaken'.

I also make assumptions about managers, but based mostly on my own experience rather than on the metaphors outlined above (though some academics will recognize ideas I borrow from non-mainstream writers.) I believe managers know their firm through its practices rather than through metrics or assumptions. Thus, I presume managers see their firm as a complex of multifaceted practices that defies summation. What is the summed 'essence' of firms such as IBM, or HSBC - their balance sheet, factories, patents, product lines, or employees?

Not only are the (x) and (y) approaches inconsistent, leaving managers to wonder which to use, they also imply different notions of 'order'. Academics place high value on order because our methods depend on it. Disorder disables our research methods. Most private sector management researchers presume, without explanation, that order is a 'good', leading to profit, though the connection is seldom clear. Novelists and movie-makers note those of military mind often suffer 'goal displacement', valuing order over more important measures such as the success of the mission. OT researchers cannot avoid implying the perfectly ordered firm, perfectly designed, measured, and administrated. OB researchers likewise imagine perfectly ordered behavior, perfect people perhaps maximizing personal satisfaction or growth, or perhaps leading to the perfect firm comprised of perfect individuals wholly committed to its strategic goals.

Managers are less interested in order *per se*. When queried they will generally accept a degree of 'disorder' or 'chaos' within their firm and its markets. Their 'mind's eye' is on other aspects. Strategizing is the process of choosing the factors and objectives that are to dominate their choices. Choice is a richer term than decision, given we often choose on hunches when we lack conclusive information. Rather than focusing on order managers focus on 'profit', not so much in the accounting sense as 'improvement' or 'gain' or whatever they sense is needed to survive as a business. Which brings us to a second 'dirty secret'. Neither the (x) nor the (y) models can explain profit - waste reduction, yes, but not fresh value. Nor can micro economists who specialize in the 'theory of the firm' explain profit. Indeed, the most remarkable thing about management research is the dismissal of profit as the practicing manager's principal objective. How and why this happened is buried in the history of our industry. Which leads on to puzzles about where the widely shared management education agenda came from and why so few management researchers research the history of management research.

These puzzles are about our industry's evolution and are not of immediate interest to managers. But there is a crucial link. The central theme of this Note is that real managers operate under circumstances of uncertainty that render rigorous models problematic at best, perhaps useless. Academics are not good on uncertainty. Contemporary methodologies depend on data and dismiss uncertainty. One important alternative analysis was shaped by the American economist Frank Knight (1885-1972) who spent most of his career at the University of Chicago. He was and remains hugely influential, often considered 'the father' of the Chicago School of Economics whose members have been awarded many 'Economic Nobel Prizes'. Milton Friedman was one. Knight argued that if markets could be modeled rigorously there would be no firms, individuals would be able to get about their business without them[2]. The intuition connects to arguments about why free markets are better than government regulation - because regulation restricts managers' entrepreneurial responses to market imperfections. For the purposes of this Note Knight's claim was that profit arise only when markets are imperfect (uncertain) and impossible to model rigorously. Only uncertainty provides managers the opportunity to be entrepreneurial. In other words, Knight was suggesting the (x) and (y) management research programs, being based on rigor and order, are profoundly wrong-headed, inappropriate to those who think the managers' principal task is to engage the socio-economy's uncertainties in the pursuit of profit.

Researching Uncertainty and Management's Responses

The sections above imply the bulk of management research stands on wrong assumptions

[2] Knight , Frank Hyneman. (1921). *Risk, Uncertainty and Profit*. New York: Hart, Schaffner & Marx.

about what managers do. Our discipline persists in using them because we pay little attention to management practice, indeed we are professionally insulated from the managers' world. We do not need to claim knowing it. Our claim is to model our assumptions, which do not include the uncertainties on which real business depends. Uncertainty is tricky. I do not mean 'probabilistic data'. Knight's definition was the absence of data, definite or probabilistic. Knightian uncertainty clearly characterizes most managerial situations. For instance, one of the oldest maxims about leadership is that it deals with what cannot be delegated. It is where the buck stops. This is because one cannot direct others rigorously on how to deal with uncertainty. But talking intelligently about uncertainty is demanding. One way is to turn the analysis upside down; instead of focusing on data and making rigorous decisions, to focus on what is not known. The general idea is that as we experience 'not knowing' our imagination is called forth. Profit arises from the purposive application of managerial imagination.

There are problems with making this argument work. First, we need to know something before we can speak about not knowing. We cannot treat uncertainty generally, only as something 'not known', a 'knowledge-absence' of something specific. Management's main question is 'What should we do now?' - always at a specific moment when the facts and unknowns of the situation are specific. The question cascades into subsidiary questions about strategy, resources, people, production, competition, and so on, all based on the interplay of what is known and managers' imaginative response to what is not known. Key is to appreciate that what is known about the real world is always incomplete and flawed. Hence what is known is never sufficient to fully determine the manager's choices. It certainly shapes them, limits them. But that is very different. Thus, there is no managing without managerial judgment, the human practice of drawing conclusions that cannot be demonstrated 'rigorously'. Managers can never step away from their responsibilities and let facts/numbers rule over their choices. They always inject aspects of themselves into their work. Managing is always morally and ethically loaded as others' lives are impacted.

Second, everything we know is expressed in language. Managing is a talking game and researching it demands close attention to managers' language. It is very different from academics' science-talk. Speaking about what is known involves generalities - this is the way languages work. Words stand on categories. We cannot say anything about the completely unique. This contrasts with the way we experience things as instances, singular, and complete. Instances are only capturable in language as categorized events. As poets know, words cannot ever capture the totality of our experience, something gets lost in the simplification. This contrast between the experienced total and the simplified partial, between the general and the specific, goes back to Aristotle, the ancient Greek whose writings greatly shaped Western thought. The (x) and (y) programs seek generalities - theories - a perfectly reasonable endeavor but not much to do with profit, which is the consequence of the exercise of the entrepreneurial imagination in specific situations. Another way of saying there cannot be a rigorous theory of profit-making - and thus of managing in our uncertain world.

Three, how to proceed? The human imagination flies mercifully free. But unlike the poet's, the manager's imagination collides with the experienced facts of the situation, with limits that form our knowledge of what we cannot cause, make happen. We can imagine perpetual motion but cannot realize it. Managers inhabit a world experienced not a theorist's imagined one. They are obliged to reason with limits experienced - so much funding, time, so many resources, contacts, personnel, such and such technology, etc. The limits they choose bound the 'entrepreneurial opportunity space' they thereby create (see Figure1 - note that the constraints' labels are only examples. There is no universal set of labels. Each situation is different and not self-evident. Strategizing is the application of managerial judgment in choosing the limits to be considered.)

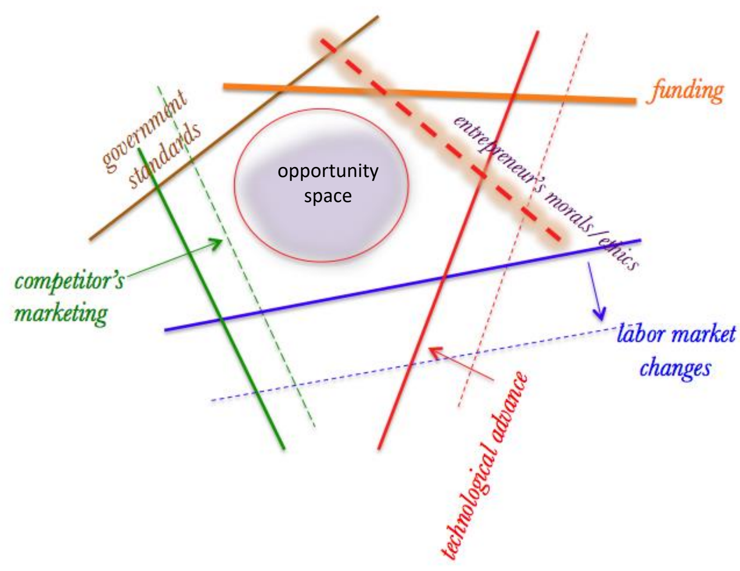

Figure1: Entrepreneurial Opportunity Space [3]

[3] Spender, J.-C. (2014). *Business Strategy: Managing Uncertainty, Opportunity, and Enterprise*. Oxford: Oxford University Press p.179

The managerial imagination occupies this space with entrepreneurial choices. These must be communicable to those others whose practice is needed. So the choices appear as a business language specific to the situation. Developing mission statements is often exasperatingly time-consuming. But addressing the 'vision thing' is utterly crucial to managers' practice and talk, and thus to bringing the firm into existence. Managing is a rhetorical activity and the firm is a 'rhetorical object'. The first step towards profit is developing a language that indicates the opportunity space well enough to draw others' imaginations to engage it. Yes, this process will be obstructed by poor organizational design (p) or messed up personnel incentives (q), but getting these as perfect as possible does not ensure profits. Academics and consultants who focus narrowly on design and motivation alone misdirect managers. Again, no two firms are in precisely the same situation, so each firm's language and choices must be specific. Inasmuch as a firm 'exists' it is only because its managers have created a firm-specific entrepreneurial language that identifies the socio-politico-techno-economic space to be occupied by that firms' practices.

Four, the analysis can be strengthened by paying more attention to time. Again, business people say 'timing is everything' for good reason, change is pervasive, the river is always flowing, markets are ever-changing. Life is uncertain precisely because it cannot ever be fully forecasted and so reduced to aspects of the present. Our industry's third 'dirty secret' is that we focus on the timeless and universal, dismissing the time-full specifics of practice. The assumptions supporting the (x) and (y) programs hinge on static ideas rather than on dynamic ones. For example, disorder leads to inefficiencies to be 'weeded out' by competition - which freezes at the point and moment of equilibrium. The analysis treats this as the ideal, the static situation to be attained. Our conventional research methods are comparative, requiring something to compare the observed situation against. Rejecting static assumptions about the firm and the individuals that bring it to life shifts our attention onto the practices managers drive in the pursuit of profit. These inevitably change both the firm, its individuals, and its markets. Under conditions of uncertainty managers create the team and its individuals continuously at the same time as they create the firm and its outcomes. They help create 'the markets' in which the firm is embedded, bearing in mind that neither the firm, nor its individuals, nor its markets are ever completely determined by the managers' choices, as monopoly theory suggests, nor is the Invisible Hand ever completely stayed. The limits or constraints in Figure 1 are dynamic, changing through uncertain external forces as much as through managerially induced change. All bounds to the opportunity space are ultimately human, moveable, even those we take to be scientific facts. Science is no more than a privileged language capturing our experience. It is not direct communication with reality.

Five, even as uncertainty is a state of knowledge-absence the managerial practice of sketching an opportunity space can be illuminated by appreciating that we experience several categories of knowledge absence - how we talk about the consequences of the ways our minds work. First and most familiar, there can be 'ignorance' of what we consider knowable, even if that knowledge is inevitably temporary and changing. We Google our way out of ignorance, find out what time the flight leaves, research a market to discover its different segments, research prices to compare deals, review CVs to discover employees, etc.

But much of managing hinges on estimating the consequences of what has not yet happened. This is not a matter of 'ignorance' because there is nothing yet to be ignorant of. Game theory explores this category of uncertainty, but real situations always go beyond game theory's limits and 'indeterminate' because we never know every possible causal factor and thus cannot fully forecast any event's outcome. Academics simplify by adding *ceteris paribus* clauses, assuming away the real world's uncertainties. Game theory is only conclusive when the situation can be fully forecast. It is especially weak when forecasting how individuals will respond to unknown events, precisely because no individual is completely knowable or knows how they will respond to 'hypotheticals'.

In addition to ignorance and indeterminacy, we experience a third mode of uncertainty because, as argued above, everything we know is captured in languages founded on assumptions, and those used by managers vary widely. The assumptions we use to evaluate political proposals differ from those we use grocery shopping, just as they differ when we judge our friends' behavior. The variety of assumptions underpinning our knowing means we know many different things, but in 'incommensurate' ways. Just as the incommensurate (p) and (q) stories are useful in their own ways none is 'correct' or determining. The entrepreneurial imagination must bring these varied ways of knowing together into a coherent story sufficient to persuade others to action. Again, there is some subtlety here; thought is not action. The manager's objective is not a new theory that brings the various ways of knowing into a rigorous structure. That is what academics try for, neglecting the gap between thought and action, most famously in Einstein's $E=MC^2$ that changed all the preceding and incommensurate notions of energy and mass into a coherent theory - relativity. Managers seek language coherent to enough to give others the confidence to act 'mindfully' as opposed to thoughtlessly.

This points to the fourth kind of uncertainty, 'irrelevance', the failure of the managers' language to come across as relevant to those (the managed) whose practice leads to profit. Most firms experience a language gap between those 'up there' who seem unable to understand us 'down here' where the action is, even though 'up there' is where direction comes from, where resources are obtained and allocated, a different kind of action. Language production under conditions of uncertainty is difficult but always crucial to the fabric of activity, whether in firms or markets. Just as firms are ultimately places of persuasive language, so markets too presume relevant language, typically going well beyond mere prices.

Finally, six, language's dependence on generalities means every language is at some distance from the immediacy and specificity of practice, it is never able to grasp or determine it completely. Thus, in concept, the firm flip flops between two modes of being: first, as a language development apparatus - determining facts, locating limits, making choices, and framing instructions - and second its enactment, an apparatus acting on the language. There is an analogy to the way computers flip-flop between instruction and execution as 'knowledge engines' computing results from inputs. But being pure logic machines they do not use 'imagination'. Managers use their imagination to engage uncertainties and set up this bi-modal dynamic to harness their own and others' imaginations to practices they believe lead on to profit. The firm is an engine that harnesses both reason and judgment into practice that generates new value.

Most with managerial experience bemoan the time spent in meetings, yet are also aware that meetings can be the locus of two crucial processes: (g) debating, adapting, and updating the firm's language, and (b) being the locus of sharing instruction, to be followed by execution. Managers inhabit ambiguous situations for the firm is not only a complex of language, rules, instructions, metrics, and evaluations, it also 'exists' in the parallel domain of resource-consuming practice. This flip-flop between framing and enactment parallels the Aristotelian contrast of general and specific.

Concluding Comment

This Note sketches a way of thinking - and talking - about managing that is unlike OT and OB management researchers' offerings. I start out by examining the assumptions on which OT and OB stand, and following Knight, argue that because they excise uncertainty they cannot but ignore profit, entrepreneurship, time, and firms - because all hinge on uncertainty. The OT and OB metaphors are clearly useful for researching design, efficiency, motivation, and so on and are of interest to managers. But the languages they enable cannot engage uncertainty and profit, so are ultimately 'irrelevant' to their most basic functions. Engaging uncertainty with judgment and imaginative practice is the managers' 'stock in trade'.

Computers may well be able to beat the world's best chess and Go players, but they cannot imagine. Which is not only a technological point, rather it is that human judgment, our facility for engaging the uncertainties we experience, is the key to profit. We derive our judgment by inhabiting our world with imagination. Our judgment is personal and comes from living our own unique lives. We may also benefit from listening to others talk about theirs - but what we understand is always through the prism of our own judgment.

Movies may entertain as they suggest computers can inhabit our world, but they cannot. They inhabit their own silicon-logical world and can only process ignorance - by reaching out for data and instructions. They cannot process the indeterminacy, incommensurability, and irrelevance uncertainties that arise in ours.

Managing cannot be a rigorous science. Rather, it is a desperately important and profoundly human art form impelled by our 'propensity to truck, barter, and exchange', as Adam Smith said; it is not well characterized as the application of abstract rigorous theory. Some are born to excel at this art form, the entrepreneurs lauded as the heroes of our time. The rest of us can improve by studying the world of human behavior, reaching out beyond our own judgments to those of our co-habitants.