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Quantum management: the practices and science of flourishing enterprise

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ABSTRACT

Quantum Management brings to light the power of direct-intuitive practices – such as meditation, nature immersion, and countless others – to transform a leader's consciousness as the highest point of leverage for entrepreneurial creativity embedding social purpose. Layered on top of such practices are insights from quantum physics and related disciplines that offer a radically different view of organizational life. Such insights help managers understand how direct-intuitive practices work to change a person at the deepest level of their identity. Direct-intuitive practices give managers an experience of wholeness that heightens their awareness of how their actions impact others and the world. Such awareness leads managers to pursue business as a force for good not only because of the analytic business case for it, which remains important, but because of who they are being. Recent developments in science inform their experience by re-framing their understanding of the nature of reality.

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This paper addresses two interrelated questions. How can business as an institution make a positive social impact? Second, what is the role of science in changing how managers think and act? We argue that despite enormous contributions to human progress, market-based for-profit businesses operate at significant cost to society. Solving the world's global and social challenges will require huge entrepreneurial creativity as well as widespread commitment to social purpose, neither of which are sufficiently present in current business trajectories.

We propose that a broad set of direct-intuitive practices can give managers an experience of wholeness and connectedness to increase awareness of how their actions impact others and future generations. Layered on top of such practices are insights from quantum physics and related disciplines that offer a radically different view of organizational life. Such insights help managers reframe their reality and understand how direct-intuitive practices work to change a person at the deepest level of their identity. The result is a science-based framework and a set of practices for achieving the entrepreneurial creativity *with social purpose* needed for business education and corporate practice to effectively tackle the world's global and social challenges.

The context: business contribution to society

Over the past 200 years, business has undeniably contributed to social progress at levels that are without historical precedent (Estes and Sirgy 2018). Life expectancy more than doubled over this period from 35 to over 70 years; the number of people living in extreme poverty declined as a percentage of the world's population from 90 to 10; and basic education rose from 15 to 85 percent (Roser 2019). Business provided jobs, mobility, and access to material wellbeing. More recently, the United Nations Millennial Development Goals (MDGs) recorded a halving of mortality rates of children under-five between 1990 and 2015. The MDGs fact sheets showed the remarkable progress made in gender equality and women empowerment, in maternal health, and in access to improved drinking water (Millennial Development Goals Report 2015). Today more people live materially comfortable lives in relatively decent health and security than ever before in history. Government, the nonprofit sector, and civil society contributed greatly to these outcomes but business remains the motor for much of the observed progress around the world (Friedman 2000; Dicken 2015).

Looking to the future, we see socially-responsible businesses continuing to emerge in every sector of the economy. These take the form of new legal entities such as B Corporations, which provide managers with statutory rights to serve stakeholders, as well as whole new movements such as Conscious Capitalism. In August 2019, 181 CEOs who are members of the U.S. Business Roundtable (BRT) issued a statement on the purpose of the corporation. It acknowledged the central importance of stakeholders including customers, employees, suppliers, local communities and the natural environment, as well as shareholders, who were mentioned last. Compare this statement to the one issued by the BRT in 1997 in which the paramount duty of management was to the corporation's shareholders, wherein the interests of all other stakeholders are only derivative of this duty. Such a *shareholder primacy* doctrine echoed an even earlier *New York Times* editorial, written by Nobel-prize winning economist Milton Friedman in 1970, stating that the only social responsibility of business was to make a profit.

By 2019, over 50 percent of global companies surveyed mentioned the U.N. Sustainable Development Goals (SDGs) in their business strategies (Ingram, Nguyen, and Bala 2019). The advent of new technologies ranging from Artificial Intelligence to CRISPR gene editing and quantum computing are further helping businesses to solve big societal problems fast.

Thus, over the past two centuries the for-profit enterprise has not only powered economic development. It has also evolved to incorporate social and environmental performance, becoming institutionally more socially responsible as customers, employees, and investors raised their expectations of it (Mohrman, O'Toole, and Lawler 2015; Laszlo and Zhexembayeva 2011). There is much to celebrate in 2020, a year that suggests perfect vision. Yet without a clear-eyed assessment of the total impact of business on society, its future role remains disconcertingly blurry.

Is business leading society in the right direction?

Along with the positive contributions of business to society have been large unintended costs. Poor health from miserable working conditions, child labor exploitation, chronic diseases from long-term exposure to toxic chemicals, air pollution, water contamination, gender and sexual discrimination, and indentured contracts that kept families poor for

generations have been features of private enterprise for as long as it existed. What is different now? For one, the scale and magnitude of such negative impacts have reached global proportions (Rockström and Klum 2015). Only in the last hundred years has business been capable of altering the earth's climate and of contributing to such massive declines in biodiversity as to invoke the label of a "sixth major extinction". Only in this recent period has business been converting rainforests to croplands, fixing nitrogen in soil and water, and disrupting the phosphorus cycle at levels that are catastrophically unsustainable for the health and wellbeing of future generations (Stockholm Resilience Center 2015). On the social front, the gap between the haves and have-nots, as measured by the Gini coefficient, is growing in both rich and poor countries. Minimal social standards for human dignity and wellbeing are not being met (Pirson 2017; Raworth 2018). The absence of wellbeing in the workplace is a worldwide phenomenon. Studies show that stress and disengagement in the workplace remain high (Albrecht 2010, 2013; Bakker, Oerlemans, and Brummelhuis 2013; Beck and Harter 2014). Beck and Harter reported that only 30 percent of U.S. employees self-identify as 'engaged' at work, corroborating a decade's worth of annual surveys by Gallup and Mercer.

Understandably, the majority of businesses have focused their efforts on cutting these negative impacts. Hence the language of minimizing social harm and reducing a company's ecological footprint. Corporate social responsibility has translated, in practice, into minimizing, reducing, reusing, avoidance, and prevention (McDonough and Braungart 2013; Ehrenfeld and Hoffman 2013; Laszlo and Brown et al. 2014). While such approaches are vitally important, they should not be confused with making a positive impact (Ehrenfeld and Hoffman 2013). When a business announces that it will cut carbon emission 50 percent next year, it is really saying that it will harm the environment less. A more accurate way to think about such business efforts is that they are only slowing the rate of unsustainability. This should not be conflated with making a positive impact, by which we mean creating economic prosperity, improving wellbeing, and contributing to a regenerative natural environment.

Business strategies that adopt sustainability-as-doing-less-harm are taking society in the wrong direction. Only sustainability-as-flourishing strategies are capable of improving the wellbeing of future generations. An entirely different approach to business in society is thus needed if we are to create a thriving world now and for the future.

Four stages of business evolution

To understand the need for the quantum management approach, it is useful to analyze the evolution of business along three axes: business purpose, organizing principles, and leadership mode. Up to fifty years ago, in much of the noncommunist world the sole purpose of business was to maximize profits for shareholders. Organizing principles centered on efficiency, extending Frederick Taylor's time-and-motion studies into ever more sophisticated systems of management. Leadership mode was primarily fear-based as managers punished employees and business partners who failed to deliver on contractual obligations, often using the threat of loss of livelihood as the ultimate consequence of failure (Tsao and Laszlo 2019).

Then in the '80s and '90s, business purpose began to change as stakeholder value became more widely recognized (Freeman 1984; Elkington 1994). In the place of a sole

focus on shareholder value, new constructs emerged such as blended value (Jed Emerson 2000), sustainable value (Hart 2002; Laszlo 2003); and later, shared value (Porter 2011). Organizing principles evolved to focus on effectiveness, as managers began to ask a broader set of questions about the nature of performance. Many businesses adopted new performance indicators such as the Balanced Scorecard and those of the Global Reporting Initiative (GRI). Leadership mode evolved to incorporate the use of performance incentives. Partially replacing fear-based management, incentive-based practices included the use of extensive stock options as a way to reward executives of publicly traded companies for improved stock price performance. In the '90s, incentive Stock Options (ISOs) and Equity Incentive Plans became popular tools to motivate and retain employees.

More recently in a small but growing segment of the market, business purpose evolved from shared value to *business as a force for good*, in which creating value for societal stakeholders becomes the driving motivation. New forms of mainstream businesses are appearing, such as the rapidly developing B Corps (first appearance: 2007), benefit corporations (first appearance: 2010), and Conscious Capitalism (2012). Multinational companies Unilever and Danone both achieved B Corporation certification. IKEA's Net Positive Strategy and Patagonia's updated mission, "We're in business to save the planet" (2018), are among the most visible examples of this evolutionary stage. Caring and compassion underlie organizing principles in these types of companies. The well-being of employees, suppliers, customers, and other stakeholders are central to their success. Leadership mode transitions from "incentive-based" to "serving others" in which managers seek fairness, equality, community, and cooperation.

Is this third evolutionary stage not sufficient to create the desired results for both business and society? The answer, unfortunately, is increasingly "no" as evidence mounts that corporate sustainability efforts at the collective level are only slowing the rate of harm, which, as argued above, is very different from creating well-being, prosperity, and flourishing for all.

The question facing us now is how to effect transformation at the level of the whole in ways capable of addressing the magnitude of today's global and social challenges. The time for incremental change is past. What is needed is system-wide transformation: a disruption in managerial thinking and action that propels businesses to become agents of world benefit. The source of such transformation, we contend, can be found in a theory of change that draws its power from an emerging paradigm in science that tells a very different story about what it means to be human and the nature of the world we live in. In the following section, the fourth stage of business evolution is described in light of theories of change capable of explaining under what conditions it is likely to emerge.

The 3 plus 1 theories of change

Over fifty years ago a team of researchers published a paper on general strategies for change in human systems (Chin and Benne 1967). They proposed three Theories of Change (ToCs) that they considered universally generalizable. The first was called **empirical-rational** based on the assumption that humans are rational and that they follow their self-interest. It corresponds to the business case for sustainability in which social projects are undertaken only when there is a positive return-on-investment.

The second was labeled **normative-re-educative** based on socio-cultural norms, values, and attitudes to which individuals commit themselves. The third was **power-coercive** which requires compliance of those with less power to the plans and directions of those with greater power.

In the half-century since its publication, none of these ToCs have proven effective, individually or collectively, in transforming business into an agent of world benefit. Business efforts to be socially responsible, based on the three ToCs, have helped companies minimize their negative impacts and, in limited cases, do good. But as contended in this paper, they have not created prosperity for the majority of people in countries where income inequality is continuing to worsen. They are not solving perilous environmental problems such as the continued rise in carbon emissions or the rapid rate of species extinctions. They are not contributing to health and well-being, as evidenced by annual surveys showing high-levels of disengagement and stress in the workplace.

Quantum management is based on adding a fourth strategy for change which we call **direct-intuitive**. It is anchored in the role of direct-intuitive practices that offer people a direct experience of wholeness and connectedness (Heaton, Schmidt-Wilk, and McCollum 2011; Sheldrake 2018; Tsao and Laszlo 2019). Such practices quiet the analytic mind and expand a person's consciousness so that we are more aware of the essential oneness of reality. Also referred to as *connectedness practices*, they encompass both eastern and western forms of mindfulness. They include meditation, walking in nature, art and esthetics, gardening, appreciative inquiry, physical exercise, and journaling, among countless others. Adding one or more such practice(s) on a daily basis can strengthen a person's learning journey and elevate his or her consciousness with creativity and resilience.

Experiencing our lives as deeply interconnected physically, emotionally, and spiritually, changes how we think and act. We become more empathetic and compassionate. We begin to see ourselves as one with the world. We become more coherent in ourselves and in our interactions with others and with all forms of life. The experience of wholeness and connectedness is the foundation for altering a person's behavior and decision-making in business as in life.

The purpose of quantum management – the fourth stage of business evolution – becomes to make a positive impact on society, as leaders experience their lives and the lives of their organizations as relational rather than as ego-centered. The goal becomes to create prosperity for all and to contribute to a healthy environment and improved well-being. This is very different from current management goals in business strategies which, in practice, are often limited to reducing ecological footprints and minimizing social harm.

We are not suggesting that this fourth ToC should be used to the exclusion of the other three. Instead, we are suggesting that, for the “new normal” to be positive impact enterprises, we need all four ToCs: rational-empirical, normative-reeducative, power-coercive, and direct-intuitive. The inner transformation of business leaders toward wholeness and connectedness AND the outer transformation of business toward sustainable value are both needed for flourishing enterprise.

The role of science in transforming business thinking and acting

We need to recognize that science has a huge and often hidden influence on our thinking and acting (Kuhn 2012; Kitcher 2012). In disciplines as diverse as quantum

physics, quantum biology, consciousness research, epigenetics, and neuroscience, a new scientific paradigm is emerging with an implicit worldview that is very different from earlier conceptions of reality. Instead of thinking of ourselves as separate and discreet from one another and from nature, the new sciences suggest that we are all part of one interconnected fabric of existence. In the language of quantum physics, we are instantly and everywhere connected to each other and the world (Bohm 1980; Schäfer 2013; Levy 2018). At the macro level, epigenetics and quantum biology describe living systems that are dynamically connected to each other and their environment (Boucher 1988; Ball 2011). Instead of depending on chance mutations in the genome, evolution is now seen as a finely tuned process with an extraordinarily high level of coherence between species and their environments. Consciousness itself is hypothesized to be a fundamental property of the cosmos that connects and unites us (Hameroff and Penrose 2014).

At the heart of the new scientific paradigm, which we refer to here as the quantum paradigm, is quantum physics, both because it deals with the most fundamental aspects of how the universe behaves and because its findings are so revolutionary.

In the classical Newtonian-Cartesian-Darwinian view, human beings are seen as isolated, spirit-less beings in a mindless, mechanical universe. Aggression and ruthless competition drive endless consumerism and profit maximization. Business leaders absorb these paradigmatic assumptions in our current culture, “all of which utterly dumbfound people of other cultures.” (Meadows 1997, 11).

By comparison, the quantum paradigm, as described in the next section, is distinguished by wholeness and connectedness, a world of potentiality in which people are caring and compassionate ‘spirit-beings’ who, by their essential nature, are relational and cooperative.

Organizational scholar Gareth Morgan asserted that “images and concepts of all kinds are a form of cognitive technology that directly shapes our relations with the world, guiding how we think and act ... ” (Morgan 2011, 470). He distinguishes between *generative “root metaphors”* that broaden and deepen the phenomena we study from more *surface or decorative metaphors*. Our purpose here is to ask the following questions. How might the root metaphors and images of quantum science help managers re-envision organizations and re-shape managerial mind-sets and behaviors? How might it open up new pathways for flourishing enterprise? Let’s take a look.

The quantum paradigm

Quantum physics is now an established science based on numerous empirically-grounded experiments, the most famous of which are the double-slit and the Bell-type experiments. Both have been conducted thousands of times in labs across the world. Understanding them helps us ground the architecture of quantum management in the foundations of natural science.

The world of quantum physics may seem far removed from the day-to-day preoccupations of business managers. Nevertheless, becoming familiar with these two well-established quantum experiments can be hugely valuable in transforming our understanding of what it means to be human and the nature of the world.

The quantum experiments

In the double-slit experiment, the researcher starts by shining a beam of light through an opaque panel with two slits in it onto a photographic plate (a screen) that detects the arrival of the light (Figure 1). As the beam passes through both slits, it spreads out and behaves like waves interfering with each other, creating an interference pattern. If the researcher closes one of the slits, the interference pattern disappears. Light behaves as particles. So far so good.

The source of light is then dimmed to the point of emitting only one photon at a time through the two open slits onto the screen behind it. This can be done using a single-photon gun of the kind first developed in 2005. Each photon leaves the gun as a localized, discrete, and indivisible particle.

When both slits are open, the researcher might reasonably expect that each individual photon will go through one or the other of the two open slits. However, this is not what happens. As each individual photon is sent toward the slits and onto the photographic plate, over time an interference pattern builds up. Being indivisible, a photon should not be able to go through both slits at the same time, thus making an interference pattern impossible. Yet this is exactly what appears to happen. It's as if the single photon is in two places at once, traveling through both slits at the same time. Princeton University physicist John Archibald Wheeler observed: "Quantum mechanics says that the cloud of probability that is the photon until it is detected can take both routes at once." (Wheeler 2000, 225) This apparent ability to be in two (or more) places at the same time is what quantum physicists refer to as *superposition*, in which quantum entities exist in a multiplicity of simultaneous potential states.

A detector is then placed at one of the slits to see which slit the photon actually goes through. Whenever this is done, the interference pattern disappears. The light behaves instead as a particle that goes through one slit or the other.

"When we look, the photon always manifests as a normal everyday particle. When we don't look, the photon manifests its wavelike aspect . . . If the detector at the slit is turned off, we then have no knowledge of the route the photon has taken, its secret is safe, and it resumes its mysterious wavelike behavior and the interference pattern comes back on . . . consciousness [on the part of the photon] interfered in the experiment in such a way so as to have a direct effect at the quantum level." (Levy 2018, 11)

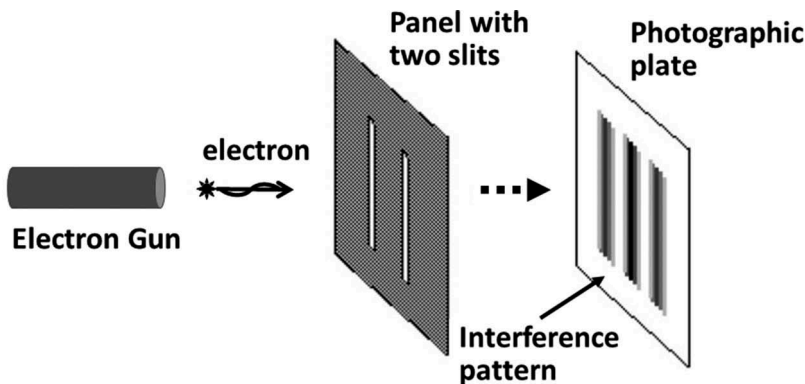


Figure 1. The double-slit experiment.

In summary, the photons or electrons under investigation behave as if they know they are being looked at. Wheeler once proposed a challenge – describe quantum mechanics in five words or less. Physicist Sean Carroll’s winning response was, “Don’t look: waves. Look: particles.” (Carroll 2013, 33)

The bell-type experiment

First proven in the lab by French physicist Alain Aspect in 1982 and repeatedly confirmed since then, a typical Bell-type experiment involves the observation of quantum entities such as photons or electrons in an apparatus designed to produce entangled pairs and to allow for the measurement of some characteristic of each, such as their spin. In Figure 2, the emitting source (S) of the paired particles sends one of the particles (A) through a crystal (a) which has a 50 percent probability of sending it up (D+) and a 50 percent probability of sending it down (D-). Simultaneously, the other particle in the pair (B) is sent through crystal (b) which also has a 50 percent probability of (D+) and a 50 percent probability of (D-). In repeated tests, if particle A goes up (D+), then its pair also goes up (D+). If it goes down, then its pair also goes down. What never happens, across thousands of trials, is for A to go up and B to go down, or for A to go down while B goes up.

With this experiment, Alain Aspect was able to prove that when two quantum entities are paired, they remain forever linked together. Once connected, their wave functions become phase entangled such that there are no longer two independent wave functions but only one which encompasses both quantum entities. Even when separated over large distances, and diverted along different axes, the paired bonding remains instantaneous.

One striking fact emerges: the entanglement is non-local. i.e., it is not due to local hidden variables as Einstein, Podolsky, and Rosen had postulated in their “EPR paradox” first advanced in 1935. Quantum physicist Henry Stapp called non-locality the most profound discovery in all of science. (Nicol 2015). “The recognition that our universe is non-local has more potential to transform our conceptions of the ‘way things are,’ including who we are, than any previous discovery in the history of science.” (Levy 2018, 90).

Nearly one hundred years ago at the dawn of quantum science, Alfred Korzybski observed that “if all people learned to think in the non-Aristotelean manner of quantum theory, the world would change so radically that most of what we call stupidity and even a great deal of what we consider insanity might disappear, and the intractable problems of war, poverty, and injustice would suddenly seem a great deal closer to solution” (cited in Levy 2018, 60). More recently, Pavlovich and Krahnke noted that “we live in a quantum world of coherent forces ... [in which] boundaries between ourselves and others are

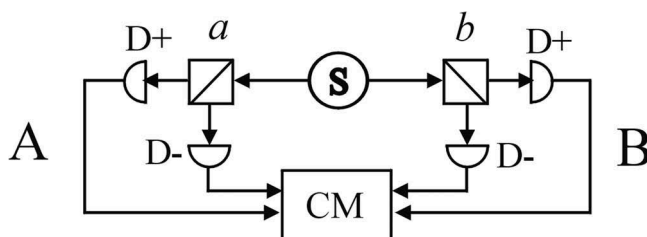


Figure 2. The Bell-type experiment.

blurred, and as we become more altruistic towards the other, we can reach the place of universal consciousness where we may ‘live as one’” (Pavlovich and Krahnke 2012, 136).

Ontological implications

In sharp contrast to the world of Newtonian physics and Cartesian dualism, the quantum paradigm tells us that we are interconnected not just in the metaphoric sense of feeling emotionally close to a friend or in harmony with nature, but in terms of actual energy and information fields that unite us.

It shows that our minds, through the act of observation, are moment-by-moment playing a key role in the creation of manifest reality. “The vision of our universe and our place in it that is revealed by quantum physics is ultimately spiritual – the fundamental interdependence and inseparability of all phenomena is the central pillar in every spiritual wisdom tradition.” (Levy 2018, 164)

Building on both the theory and empirical findings of quantum physics, we can pull together key elements of the quantum paradigm. The list below is not intended to be comprehensive nor is it described in terms that will satisfy every quantum physicist. The goal is to give the thoughtful manager a sense of the emerging paradigmatic assumptions of quantum science about what it means to live and lead in the 21st century.

- (1) The universe is an interconnected whole composed of vibrational fields of energy and information.
- (2) These fields of energy and information are not actual (visible). They exist only as potentiality (invisible). We never actually see the waves of light in the double-slit experiment, only the effects of the waves on a photographic plate. As soon as we try to see the waves, they collapse into particles.
- (3) Physical & mental processes interdependently co-arise in a manner that is circular, nonlinear, and acausal. In practical terms, this means that there is no physical world “out there” apart from our observation of it. Our observations are part and parcel of what we observe.
- (4) As a result, it can be said that we live in a participatory universe whose manifestation comes into existence through the act of observation. Through our observation we create reality as it manifests itself to us. It is not reality itself which, we can only presume, exists and is immutable, and which the world’s spiritual traditions have variously referred to as God, the One, Tao, Dharma, Ein-Sof, Allah, or Aśa.
- (5) Consciousness is a cosmic property. It is not produced in the brain as a physical result of the firing of neurons and axons but is a fundamental feature of reality. It too connects and unites us.
- (6) Uncertainty, indeterminism, and discontinuity prevail.

There is a growing consensus in the scientific community that reality is better described by quantum physics than by any of the theories that preceded it (Levy 2018; Schäfer 2013). Yet many classically-trained physicists remain uncomfortable with its ontological implications, particularly the notion that there is not an objective “out there” to be discovered or that consciousness is a topic of science.

Now, we can further extend the quantum paradigm into a second set of elements with a broader set of implications for living and leading. A partial list of elements in this second set is described here.

- (7) Four-valued logic (true, false, true & false, neither true nor false) is a more nuanced, layered, and effective method of reasoning in a world of interdependence, potentiality, and apparent contradictions (Levy 2018).
- (8) Beauty and goodness exist in the experience of oneness. Human beings and all life have a heliotropic tendency to seek out this experience (Cooperrider 2001; Schäfer 2013).
- (9) Mindfulness practices can enable an experience of oneness. Neuroscience provides evidence at the level of brain functioning (Lutz and Davidson 2014). Quantum science shows that such altered brain functioning may be the result of our processing quantum-level information that is connected (entangled) and coherent even at nonlocal levels (Hameroff and Penrose 2014).
- (10) People are essentially caring, relational, and cooperative. When they experience oneness (i.e., the wholeness and connectedness of the universe), they are more likely to express their essential nature. This view can also be found in evolutionary biology and the study of ecology, both of which demonstrate the extent to which cooperation and symbiosis play a central role in living systems.
- (11) The evolutionary goal of the biosphere, natural ecological systems, communities, organizations, people, and all life on earth is to *flourish*, defined here as “to grow well, to prosper, to thrive, to live life to the fullest.”
- (12) Humanity is an integral part of nature. This too is very different from the prevailing conception, underscored by Cartesian dualism, that nature exists largely as a resource for human consumption.

Consistent with these elements of the quantum paradigm, the purpose of business in the fourth evolutionary stage becomes to make a positive impact on society and the environment, now and for future generations, as leaders experience their lives and the lives of their organizations as relational rather than as bounded individual entities. The goal becomes to create prosperity for all, not just shareholders of capital; and to contribute to a healthy environment and improved human wellbeing. This is very different from the goal of generating a profit in a model of minimizing harm implicit in today's efforts to reduce ecological footprints and lessen social injustice.

Supporting research

In a multi-year research effort, forty-nine leaders of organizations were interviewed to validate the quantum paradigm in business (Tsao and Laszlo 2019). An additional eight in-depth interviews were conducted to follow up on questions raised by the initial findings. Interview subjects were from a wide range of organizational sizes and industry types. The primary consideration in selecting the sample was finding organizations and leaders who showed signs of embodying the quantum paradigm as described in this paper. The authors sought out organizations with a known social impact mission as part of their business purpose and managers with evidence of practices of connectedness in their leadership approach. Practices of connectedness were defined early on as mindfulness or reflective in

nature and later on expanded to include a much broader range of direct-intuitive practices aimed at increasing a consciousness of connectedness.

The full set of research findings can be found in Chapter 5 of *Quantum Leadership* (Tsao and Laszlo 2019). Here we summarize selected highlights that offer the reader a practical, evidence-based description of key attributes of quantum leaders:

Quantum Leaders are (1) high on the scale of consciousness of connectedness, (2) driven by a sense of greater purpose, (3) relational, collaborative, and people-centric, (4) committed to self-cultivation, and (5) evolutionary.

Each of these attributes was expanded in the research as follows.

High on the scale of consciousness of connectedness meant having whole-system vision, relational awareness, and attunement to a spiritual or universal energy field. Quantum Leaders feel a high degree of connectedness to community; the business they are a part of (intra-organizational); networks (inter-organizational); the whole, i.e., a connection to all beings; the totality of their relationships, i.e., relational coordination; nature; self; as sense-making; and among disciplines.

Driven by a sense of greater purpose was given meaning in terms of adherence to values and to a sense of responsibility for others. Greater purpose was aimed at *transforming* the business, the environment, community and society, people, the world, and economic growth.

Relational, collaborative, and people-centric was given expression by collaborative intention; acting as a connector in the organization or community; having an experience of resonance with others; being empathetic; appreciating diversity; and habitually employing differing viewpoints in dialogue.

Committed to self-cultivation was closely associated with a deep desire to flourish. It encompassed not only the goal of personal development but also the flourishing of all people and all life on earth. The meanings given to this attribute were a commitment to self-cultivation; flourishing in the organization; flourishing in society; flourishing in nature.

Evolutionary meant being a learning leader who is future-driven and process-oriented; sensitive to context and narrative, i.e., aware of the bigger picture; able to use constructively the feedback of others; turns crises and limitations into opportunities; able to continuously learn new things; and creative and adaptive.

These research findings offer fresh insights to illustrate the contours of quantum management.

Summary

This paper explores the role of direct-intuitive practices in transforming consciousness as the highest leverage point for catalyzing flourishing enterprise. A consciousness of connectedness is shown to align with new findings in science and perennial spiritual insights related to the nature of reality as an integrated whole. Such insights help managers understand how direct-intuitive practices work to change a person at the deepest level of their identity. By giving people an experience of connectedness that increases their awareness of how their actions impact others and nature, and then reframing that experience through the lens of new paradigm science, quantum management offers a fresh path to creating a world in which businesses prosper, people experience wellbeing, and nature thrives.

Future directions for management research and practice

The thesis of this paper has been that management theory and practice can benefit from the study of direct-intuitive practices and the re-framing of quantum science as a pathway to flourishing enterprise. A few important caveats are in order. First, the paper is intended only as an early exploration into the emerging quantum paradigm. Second, the practical elements of quantum management need further development and testing. The goal is to invite further inquiry.

With these caveats in mind, the following topics may be of interest to management researchers. Emerging discoveries in the sciences have significant implications for how we choose to live which in turn has still unexplored consequences for management theory. Examples of natural science fields that are revolutionizing our understanding of the world are quantum physics, quantum biology, consciousness research, epigenetics, and evolutionary biology. What images of the world do findings in these fields, taken as a whole, portray? How do they alter fundamental assumptions taken for granted in the contemporary field of management?

Related to such developments in the natural sciences is the consilience of different types of knowledge, and its implications for management. The science of an interconnected reality is converging on perennial insights from the world's major religions and spiritual traditions. A unifying source of "all that is" can be found in the Chinese Tao, the Vedantic Brahma, the Buddhist Sunyata, the Zoroastrian Aša, and the mystical realm of Sufism, just as it appeared in many Judeo-Christian traditions. While spiritual wisdom has been largely rejected as a basis for management practice, confirming evidence from the realm of science is giving fresh relevance to historical intuitions of Oneness.

In the social sciences, exciting new theories are revolutionizing entire disciplines. New economic models are being proposed such as Kate Raworth's *Doughnut Economics* (2018), Richard Thaler's predictably-irrational *Nudging* (2009), and Amit Goswami's beyond-materialist *Quantum Economics* (2015). In the Doughnut model, economic activity is constrained by planetary boundaries (the outer ring of the doughnut) while being required to operate at minimum social standards (the inner ring of the doughnut). Instead of economies that need to grow, whether or not they make us thrive, it conceives of economies that "make us thrive, whether or not they grow" (Monbiot 2017). In psychology and organizational behavior, the emerging field of positive organizational scholarship (POS) is putting greater emphasis on strengths and on positive deviance, rather than studying social phenomena as problems to be fixed. POS gives greater weight to the dynamics of whole systems and cooperative relationships. "[O]rganizational research [is] shifting from an emphasis on competition and reductionism to partnerships, networks, high quality relationships, community, and stakeholder negotiation. This movement indicates a paradigm shift from the individual to the collective" (Pavlovich and Krahnke 2012, 131).

What do these developments in the natural and social sciences mean for theories of management? In addition, how might Management, Spirituality, and Religion (MSR) scholarship contribute more centrally to enriching the field?

For management practice, future directions could start with the growing body of scientific evidence that a broad range of mindfulness and spiritual practices have a transformative effect on our consciousness, sense of purpose, health, and wellbeing

(Tackney et al. 2017). Specifically, such practices are shown to help cultivate broader perception and greater awareness of our connection to self, family, community, and the natural environment (Sheldrake 2018). They transform our mind-sets and assumptions about the world through a direct-intuitive experience of connectedness. Introducing such practices into the workplace can help managers see themselves as deeply connected, not just metaphorically, but in the sense of a physical and conscious whole.

The time is now for a new role of business. The opportunity is to make quantum management widely understood and accessible. Its tremendous appeal comes from being able to create economic value consistent with greater purpose by changing who leaders are *being*, not only what they are *doing*. The path to quantum management is above all an experiential one. It is not achieved through conceptual learning alone. Direct-intuitive practices that engage the heart-body-spirit are the gateway to awakening an experience of wholeness and connectedness. Combined with the re-framing of quantum science, they offer a pathway to a more flourishing world.

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