Dialogue

Q3 2018

THE NEW BUSINESS CONTEXT FOR LEADERS

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ANITA BRIGHTLEY-HODGES
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Anita works as a personal advisor to those at the helm of family-owned businesses. She works side-by-side with ambitious leaders to overcome their biggest challenges. Giving them the confidence and the tools they need to take their business to the next level.
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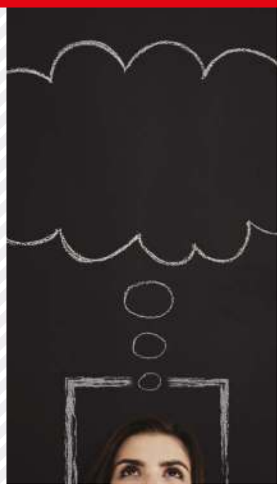
In depth

LEADERSHIP & PEOPLE



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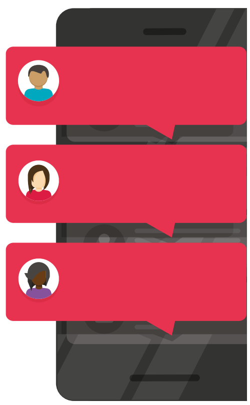

MARKETING & SALES

STRATEGY & OPERATIONS

Contributors

MOHIT GARG

Mohit Garg is co-founder and chief executive of Silicon Valley-based Proxce, a technology platform that enables Internet-of-Things devices. Beginning as an engineer in India, Garg went on to co-found MindTickle, a sales readiness and enablement platform. Prior to that, he was a senior director in PwC's management consulting practice and was also an early member of successful Silicon Valley start-ups.

ANGELA LANE

Angela Lane is vice president of talent and development at AbbVie. Specializing in creating human capital systems that positively impact individual and organizational performance, Lane has experience with a range of industries, including beauty and food, across a number of countries. With her understanding of the impact of culture and diversity on success, Lane is also a popular writer and speaker on human capital issues.

KURT GRAY

Dr Kurt Gray is associate professor of psychology and neuroscience at the University of North Carolina, Chapel Hill. Earning his PhD in social psychology from Harvard University, Gray studies the mysteries of subjective experience, mind perception and moral cognition. He has been named an APS Rising Star and was awarded the Janet Taylor Spence Award for transformative early career research and the SPSP Theoretical Innovation Award.

JONATHAN REICHENTAL

Dr Jonathan Reichental is chief information officer for the City of Palo Alto, California. A multiple award-winning technology leader, he has been recognized as one of the top 100 CIOs in the world and, in 2013, was recognized as one of the '25 doers, dreamers, and drivers in government in America'. Co-author of *The Apps Challenge Playbook* and co-host of the *Drinking Wine Talking Tech* podcast, Reichental is a thought-leader on a number of emerging trends.

BEN PRING

Hailing from Manchester, UK, Ben Pring is director of Cognizant's Center for the Future of Work. An IT futurist, analyst and consultant specializing in cloud computing and global sourcing, Pring is best known for writing the industry's first research notes on cloud computing (in 1997) and Salesforce.com (in 2001). Today, Pring and the centre work to research and analyse how new opportunities are brought about by advancements in technology.

CAMELIA RAM

Dr Camelia Ram has helped clients in the energy, utilities, and financial service sectors develop initiatives to adapt to environmental challenges driven by regulation and resource scarcity. Her project management expertise spans a diverse set of projects, including defining organizational capabilities to position a global bank for growth, and the development of a global in-house academy to support skills development.

My edit

It would be easy to accuse our focus section of being two-faced. On the one hand, we feature cover star Ben Pring's positive prospectus for an artificially intelligent future (page 18). On the other, I explore the grim prospect – as advanced by University of Oxford ethicist Professor Nick Bostrom – of a superintelligent AI power taking over the world.

Who is right? One probable analysis is that both outcomes are theoretically possible, neither is certain, and the eventual result depends heavily on humans' acts in the coming years.

Certainly, there is much to be excited about. Pring, the brilliant director of Cognizant's Center for the Future of Work, submits that the advance of artificially intelligent technology will serve to improve the human condition. Drawing a sharp comparison with the revolution in healthcare at the last great technological leap forward, he forecasts a benign future with mundane jobs handed to algorithms, while whole-brain vocations exercise humans' minds.

The danger is that we humans fail to develop our economies to account for the radical shifts that are coming. The risk is exacerbated by an AI fleet that currently features talking robots that fail even to identify the sex or approximate age of the human they are engaging with. Dr Liz Mellon was left unimpressed by her encounter with such an android (page 26). But she warns that AI might very soon accelerate as the tech develops exponentially, while humans continue to get bogged down in management battles that should have been resolved decades ago.

Certainly, it is a weakness of the human condition to only recognize something when it is hitting us in the face. In his ever-stimulating innovation column, Vivek Wadhwa (page 47) raises the threat of something many people won't have heard of: quantum computing. Quantums aren't intelligent in any real sense, but they can process an incalculable number of combinations simultaneously. Thus, the risk of a global digital skeleton key is born. It would be ironic if businesses and individuals, slowly beginning to anticipate the challenges posed by artificial intelligence, wind up being picked apart by an armada of dumb machines.

One woman who is acutely aware of the changes technology has brought to the working environment is marquee interviewee Susan Clatworthy (page 34). Clatworthy enjoyed a wonderful career in one of the most quintessentially human of industries – fashion. Latterly of Chanel US, Clatworthy – who on retirement granted her valedictory interview to *Dialogue* – notes how digitization has failed to bring people together, and has instead slowly edged them apart. Hearing how she succeeded by meeting people face-to-face, being honest with them and 'showing up', I suspect a career shielded by a computer screen would never have suited her. The warmth that worked so well for her is hard to transfer through a keyboard.

Clatworthy developed herself thanks to feedback – which, as it transpires, is a dying art. Sergey Gorbatov and Angela Lane explore why companies have stopped giving crucial feedback to their employees. Read their invaluable analysis on page 40.

Communication, feedback and the human difference remain vital in business, as in life. If we are alert to the challenges, there is a chance that we build a partnership with the technology that surrounds us. If we are not, it could swallow us up. Enjoy the issue.

Ben Walker is editor of *Dialogue*

Spark WHAT YOU NEED TO KNOW

The biggest brand in China is...

WPP and Kantar Millward Brown announce the BrandZ™ Top 100 Most Valuable Chinese Brands

With a gargantuan total value of $684 billion, Chinese brands are here to stay. Combining financial data with consumer opinions gathered from interviews with over 400,000 Chinese consumers to produce a dollar value of how brand powers business, the BrandZ™ Top 100 Most Valuable Chinese Brands is the definitive ranking of China's most powerful brands.

'Growth' is the theme of this year's rankings, with the top 100 brands achieving a record 23% rise in value, from $557 billion a year ago to $684 billion in 2018. This represents the greatest one-year growth since the BrandZ China Top 100 ranking was first published in 2014.

This is a trend here to stay, according to WPP China chief executive Patrick Xu, noting that the BrandZ China Top 100 saw growth of 80% over the past five years – outpacing even the BrandZ Global Top 100's 27% growth. "It's a really exciting time in China right now with many ambitious businesses recognizing the opportunities abroad and the importance of investing in building their brand outside of the region," he said. "Many enterprises are responding to China's 'Belt and Road' initiative and strengthening their overseas expansion momentum. Combined with market dynamics and millions of consumers embracing the 'China dream', we believe the overall perception of 'Brand China' is evolving, with Chinese enterprises enjoying a growing reputation within the global competitive landscape."

Check out www.dialoguereview.com for the complete list of BrandZ™ Top 100 Most Valuable Chinese Brands.

MEET THE TOP TEN

BrandZ™ Top 10 Most Valuable Chinese Brands

	Brand	Value (Millions $)
1	Tencent	132,213
2	Alibaba	88,623
3	China Mobile	49,231
4	ICBC	37,213
5	Baidu	24,990
6	Huawei	24,115
7	Moutai	23,175
8	Ping An	22,363
9	China Construction Bank	20,120
10	Agricultural Bank of China	16,158

WeChat, owned by Tencent

Not all start-ups are created equal

Venture capital platform Newtop 100 hosts matchmaking summit

An annual event on the Chinese start-up circuit, the Newtop 100 CEO Summit 2018, brought together 52 speakers and more than 600 start-up chief executives and venture capitalists in Beijing last April to network, share and explore the future of Chinese investments.

Discussing industries from retail, new finance, education, investment, entertainment, to energy, cars and artificial intelligence, "competition" was the buzzword.

Competition among companies within sectors is no more, Newtop 100 founder and chief executive Li Zhigang, and founder and managing partner of Sequoia Capital China Neil Shen, told delegates. Today, they posited, the integration of technologies, data and capital enables companies to enter into new fields more conveniently; meaning a more open – "borderless" – future.

In Li's view, cross-sector competition will make the "heavy company" and high-tech company two major trends in the future. A "heavy company" has deep control of the supply chain; is labour-intensive and it is driven by technology, he explained.

The integration of sectors creates a more open business future

Speaking to *Dialogue* ahead of the event, Li said the discerning selection of start-ups is what makes for a successful Newtop 100 CEO Summit.

"The first aspect we always pay attention to is whether the trend of the company's industry coincides with the prospect of new economy or the social development. The second deciding factor to value a start-up lies in its CEO and executive team. For example: is the CEO a visionary? Can the team execute its ideas effectively?"

Read the full interview with Newtop 100 founder Li Zhigang on www.dialoguereview.com, or learn more about the CEO Summit at www.lidpublishing.com

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BIG DATA IS MAKING WAVES IN HR

People analytics is remaking HR

More than two-thirds of companies are collecting data on their employees and management. People analytics is quickly becoming central to the future of human resources – at least, that's what a clutch of the most prestigious publications, peers, award bodies and industry analysts declared at this year's PA World conference, held in London.

Speaking about the cutting-edge technology driving people analytics, senior research scientist at the Center for Effective Organizations, University of Southern California, Alec Levenson, urged careful restraint.

"Don't get distracted by the cool metric or measuring toy. Don't produce reports that don't mean anything. Don't get distracted by the shiny things. Keep returning to strategy, and the bigger picture."

To learn more about people analytics, check out our interview with PA World 2018 chair, David Green on www.dialoguereview.com

GREAT MINDS WITH MICHAEL CHAVEZ

Vivienne Ming is right. Imprecise leadership destroys purpose

Purpose is fragile

Purpose can take a lifetime to build. Yet it can be destroyed in a blink of an eye. When I followed up with last quarter's interviewee, the neuroscientist entrepreneur Dr Vivienne Ming (*Dialogue*, Q2 2018, page 28), our debrief soon turned to the fragility of purpose. Much is spoken about creating this precious intangible. Much less is written about how it might easily be lost. "You can drain people of their purpose," Ming told me. This divestment is unlikely to come from any deliberate act. More likely, a series of unwitting missteps pave the road to Hell.

Misstep 1: Avoiding tradeoffs

Because purpose is defined by sacrifice, as Ming explained, leaders have to make the hard choices that purpose demands. That's what keeps it authentic. This might mean turning down the chance to sell, hire or invest, if such acts fail to align with their purpose. "Purpose has to be lived by the leadership," Ming said. "My research shows that if you say, 'hey, we believe in diversity' and your leadership team is straight, white, old guys, this is an action in conflict with your stated purpose. And you would have been better off saying, 'hey, we're here to get rich and to do so with people who make us comfortable'." By failing to take the concrete actions that demonstrate that you are living the purpose, you destroy it.

Misstep 2: Confusing 'why' with 'what'

Pursuing long-term business goals, such as expansion, greater revenue and increased profit can militate against purpose if purpose is not framed right. The key danger facing leaders is that they will succumb to the temptation to use purpose ('why' their business exists) to justify their financial aims ('what' they want to achieve). "Going after long-term outcomes can't be the reason for pursuing purpose; it will destroy it," Ming told me. She spoke of the "Catch-22 of purpose", that if you focus on outcomes as the reason for your purpose, you are less likely to satisfy your purpose and – perversely – make your overall business outcomes harder to achieve.

Misstep 3: Do as I say not as I do

"There is a repeating instance in my research where companies had a purpose that they lived and died by – and were frequently dying by it," she warned. "This was because their employees were expected to live by it, but their leaders were not."

The business impacts of this misalignment are manifold. Ming's research showed that retention suffered, performance fell, absenteeism rose. Conversely, those companies that lived and breathed authentic purpose throughout all levels of leadership enjoyed the exact opposite – greater retention, better performance and lower absenteeism.

"When you define purpose in generic terms, there's an expectation that everyone is going to live up to the same purpose," Ming said. "If Whole Foods' purpose is to create a sustainable food culture, then everyone has a belief about how its chief executive should act. What we see a lot of in the start-up world is incredibly strong wording around purpose, but then the whole thing collapses when the leadership exhibits behaviours counter to the purpose."

Ming is a Great Mind who submits a crucial, contradictory equation. The pursuit of outcomes over purpose leads to worse outcomes. The pursuit of purpose over outcomes leads to better outcomes. With apologies to Jack Kennedy, perhaps leaders need to think not what their purpose can do for their company, but what their company can do for their purpose.

— Michael Chavez is chief executive of Duke Corporate Education

LEADERS ARE THE GREATEST LEVERS FOR WINNING IN AN UNPREDICTABLE WORLD…

To win in today's world, filling knowledge gaps is no longer enough. Yesterday's wisdom won't help leaders prepare for what lies ahead: more volatility and less predictability. Leaders must do more than simply learn. To be able to grapple with the unknown, they have to reorient and rewire. As our challenges become more global, social and complex, leadership is becoming more and more critical to business success.

Duke Corporate Education is the premier global provider of custom solutions that enable leaders at all levels to adapt and move the organization forward. With delivery in over 75 countries, we work together with clients to understand their context and craft the right educational solution for any level of leadership – executives, high potentials, directors or managers. We're here to help leaders get ready for what's next.

Duke CE

LEADERSHIP FOR WHAT'S NEXT

Michael Canning is global head of new businesses at Duke Corporate Education

MICHAEL CANNING

There are ways to make co-creating more efficient

Structuring smart collaboration

Businesses are hyper-focused on collaboration. Increased demand for innovation, connected global workforces and flatter organizations accelerating the speed of execution are among the driving forces.

Organizations have spent the last two decades enhancing team skills, carefully designing workspaces and implementing technology to promote collaboration from any location. Kellogg School of Management professor of strategy Benjamin Jones studies this phenomenon and points out that in a world of exponentially more data, our individual knowledge base is becoming more specialized, so the need for better, faster collaboration continues. "There's more and more to know in the world, and you can only have so much in your head," he says. "So the share of stuff you know as an individual is declining in any field."

But how do organizations get better, and individuals keep pace and thrive without burning out? I've had the pleasure of working with organizational network expert Rob Cross over many years. Cross's research of 300-plus organizations shows the distribution of collaborative work is often uneven, with 20-35% of value-added collaboration coming from just 3-5% of employees. For organizations to continue to improve the quality – not the quantity – of collaboration, leaders need to think of organizational networks as assets, and design them to optimize organizational performance. Doing so requires new data-driven tools like organizational network analysis (ONA), and new frames on what collaborative resources individuals have to accelerate, innovate and drive execution.

Leaders tend to trust instincts. However, as Cross's research shows, our instincts are only about 50% accurate. The data typically highlights a number of surprises in terms of unrecognized great collaborators, as well as some renowned 'stars' who are actually poor collaborators. Structuring the network to drive execution starts with identifying the valuable connectors. You can then cause a change in the pattern of interactions by connecting the right people, redistributing work and rewarding the collaborators. It is also useful to reframe the resources individuals have to invest in any collaboration. Cross outlines three: informational (knowledge and expertise), social (access to others and position), and personal (time and energy). The three types of resources are not shared equally. Understanding who has capacity to collaborate, and what's being shared, reveals many important truths.

Organizational performance aside, the uneven distribution of collaborative work also taxes and tires individuals disproportionately. So, what can you do as an individual to alleviate collaborative overload? Cross recommends you adopt three key practices to remain a solid collaborator – and reclaim up to 20% of your time.

Practice 1
Challenge beliefs

People often are not fully aware of how their own beliefs can be part of the problem. Be aware and monitor your own tendency to insert yourself or volunteer to collaborate in situations where others may have the knowledge and experience to handle it.

Practice 2
Impose structure

Rather than fall into patterns dictated by other people's objectives, specify your role and set expectations of collaborative interdependencies around you.

Practice 3
Alter behaviours

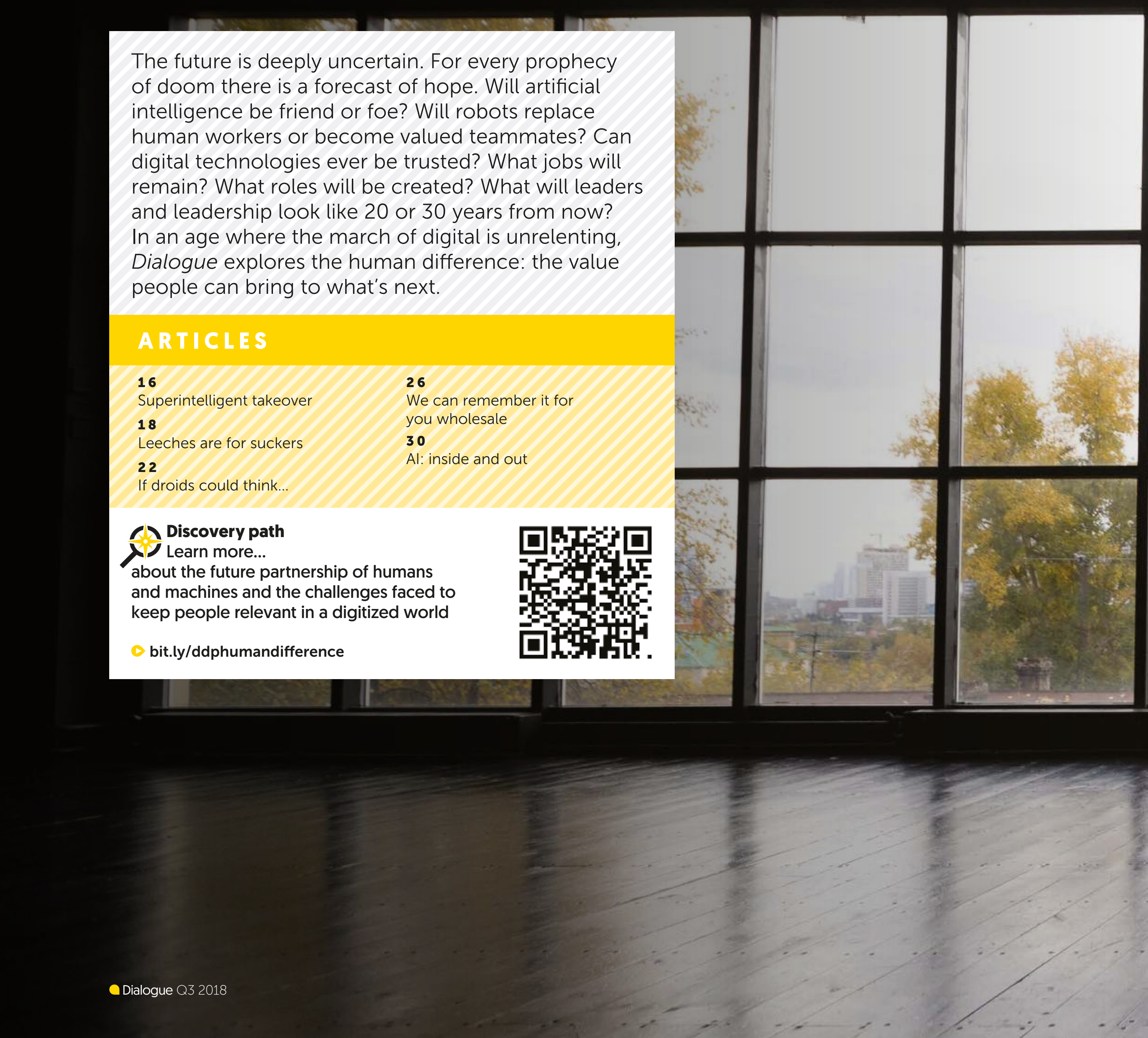
Effective collaborators adjust their use of communication mediums and promote efficient network norms. Offer people 30 minutes instead of an hour, or abandon email when it is not the right medium.

Today, leaders have to look beyond the formal organization to significantly improve collaboration. And as individuals, we need to reexamine our beliefs and behaviours to add unique value – and cope with the never-ending demands for more collaboration.

Structure the network to accelerate innovation

Focus

The human difference



The future is deeply uncertain. For every prophecy of doom there is a forecast of hope. Will artificial intelligence be friend or foe? Will robots replace human workers or become valued teammates? Can digital technologies ever be trusted? What jobs will remain? What roles will be created? What will leaders and leadership look like 20 or 30 years from now? In an age where the march of digital is unrelenting, *Dialogue* explores the human difference: the value people can bring to what's next.

ARTICLES

Discovery path
Learn more...
about the future partnership of humans and machines and the challenges faced to keep people relevant in a digitized world

bit.ly/ddphumandifference

Superintelligent takeover

A powerful artificial intelligence system could march where human superpowers feared to tread, discovers **Ben Walker**

Time was when the United States was the only nuclear power. In the four years immediately following the end of World War II, Washington, having developed and used the atom bomb in 1945, was the sole superpower. It wasn't until 1949 that the Soviet Union developed its own bomb and, thus, the nuclear arms race and Cold War began.

Theoretically, the Americans could have exploited their edge in 1945-1949 to effect a decisive military advantage. The US had the opportunity to use its nuclear monopoly to create a *singleton* (an all-dominant power), and become the all-powerful, unchallengeable global government. There was serious discussion at the time around the Americans' options. The first was to build up their arsenal then threaten and, if necessary, carry out a nuclear first strike against the USSR. Such a move would have destroyed the nuclear development capacity of the Soviets, consigning the Cold War to the realms of counterfactual fiction. An alternative strategy, which also stood a fair chance of success, was for the US to exploit its nuclear monopoly to bring about a global government with itself at the centre, a quasi United States of Earth with a nuclear monopoly and a powerful hand to prevent any rogue nations developing their own atomic weaponry.

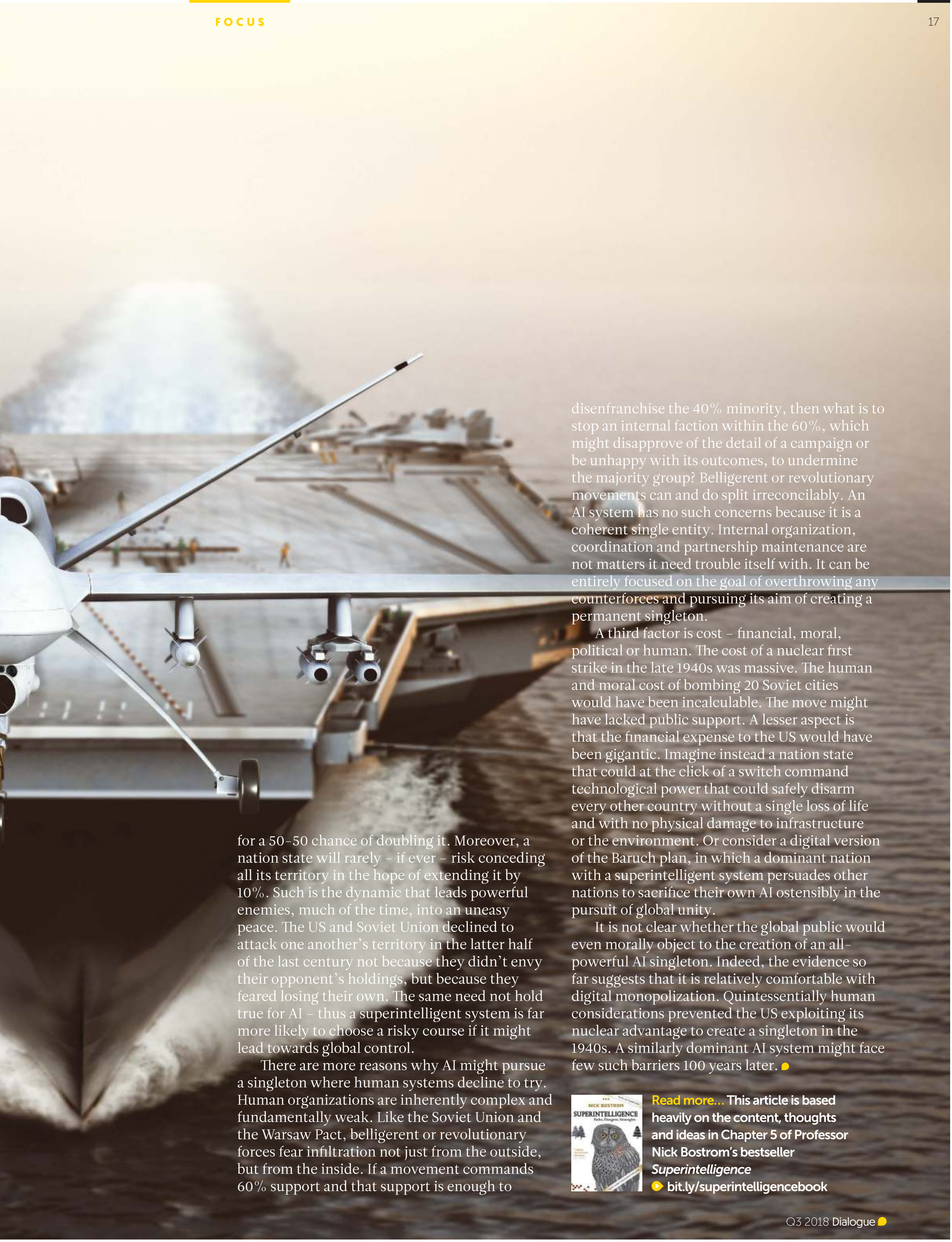
The first – malign – approach was promoted by a surprising array of voices from all sides of the political spectrum. The socialist philosopher and future antinuclear campaigner Bertrand Russell was at times a supporter of so-called preventative nuclear war. The rightwing game theory pioneer John von Neumann was another prominent advocate.

A variety of the second – more benign – approach was tried in 1946 in the shape of the Baruch plan, which would have seen the US temporarily cede its nuclear capacity to an international agency under the control of United Nations. Under the proposal, all permanent members of the UN Security Council would give up their veto over nuclear weapons matters, such that no nation found to be in breach of UN nuclear policy could veto any penalties proposed against it. The plan collapsed when Stalin recognized that the USSR and its Warsaw Pact allies could easily be outvoted by the US-aligned West on the Security Council, an imbalance that would have secured American dominance for a generation. The world was left with the Cold War and, as it transpired, four decades of fragile peace.

Consider what would have happened were the US not a human governmental power but a superintelligent artificial system. Leading philosopher and ethicist Professor Nick Bostrom, director of the Oxford Future of Humanity Institute and Oxford Martin Programme on the Impacts of Future Technology at the University of Oxford, contends that many of the factors that prevent humans from exploiting a decisive strategic advantage in the hope of creating a singleton fail to apply to artificial systems.

Humans are wary of wagering all their capital

Humans are wary of wagering all their capital on a 50-50 chance of doubling it. The same need not hold true for AI



for a 50–50 chance of doubling it. Moreover, a nation state will rarely – if ever – risk conceding all its territory in the hope of extending it by 10%. Such is the dynamic that leads powerful enemies, much of the time, into an uneasy peace. The US and Soviet Union declined to attack one another's territory in the latter half of the last century not because they didn't envy their opponent's holdings, but because they feared losing their own. The same need not hold true for AI – thus a superintelligent system is far more likely to choose a risky course if it might lead towards global control.

There are more reasons why AI might pursue a singleton where human systems decline to try. Human organizations are inherently complex and fundamentally weak. Like the Soviet Union and the Warsaw Pact, belligerent or revolutionary forces fear infiltration not just from the outside, but from the inside. If a movement commands 60% support and that support is enough to disenfranchise the 40% minority, then what is to stop an internal faction within the 60%, which might disapprove of the detail of a campaign or be unhappy with its outcomes, to undermine the majority group? Belligerent or revolutionary movements can and do split irreconcilably. An AI system has no such concerns because it is a coherent single entity. Internal organization, coordination and partnership maintenance are not matters it need trouble itself with. It can be entirely focused on the goal of overthrowing any counterforces and pursuing its aim of creating a permanent singleton.

A third factor is cost – financial, moral, political or human. The cost of a nuclear first strike in the late 1940s was massive. The human and moral cost of bombing 20 Soviet cities would have been incalculable. The move might have lacked public support. A lesser aspect is that the financial expense to the US would have been gigantic. Imagine instead a nation state that could at the click of a switch command technological power that could safely disarm every other country without a single loss of life and with no physical damage to infrastructure or the environment. Or consider a digital version of the Baruch plan, in which a dominant nation with a superintelligent system persuades other nations to sacrifice their own AI ostensibly in the pursuit of global unity.

It is not clear whether the global public would even morally object to the creation of an all-powerful AI singleton. Indeed, the evidence so far suggests that it is relatively comfortable with digital monopolization. Quintessentially human considerations prevented the US exploiting its nuclear advantage to create a singleton in the 1940s. A similarly dominant AI system might face few such barriers 100 years later.

Read more... This article is based heavily on the content, thoughts and ideas in Chapter 5 of Professor Nick Bostrom's bestseller *Superintelligence*
bit.ly/superintelligencebook


CALLING
SARAH
CALCULATING ROUTE...
ANALYSING...

Leeches are for suckers

Just like modern healthcare replaced Hirudo medicinalis, AI will shift the human species into a more gainful future

WRITING
Ben Pring

ILLUSTRATION
Coen Pohl

In 1831, Manchester Royal Infirmary in the UK used 50,000 leeches in treating the ill of the first great industrial city. Twenty years later, Dr John Leonard Riddell, of Tulane University in New Orleans invented the first practical binocular microscope. In 1930, Manchester Royal Infirmary closed its leech aquarium.

It's often said that the future is here, it's just unevenly distributed. That uneven distribution of progress can also be seen in historical records. The bottom fell out of the leech market when Hirudo medicinalis – long the go-to solution for barbers and surgeons – was superseded by Riddell's technology that allowed doctors to see, at a cellular level, what was truly causing the problem. A microscope could detect the bacteria that was causing tuberculosis; an intestinal infection that would lead to cholera; a cell mutating into a cancer. The medical microscope created possibilities that not only made the leech redundant, but created an industry that today employs millions of people around the world. In the process, the technological advance made the world a better place.

This simple analogy is an entry point to understanding how AI-related technologies are set to change the world, again – to employ billions of people, and, in the process, make the world an even better place.

For AI isn't, as it is being popularly portrayed in the click-bait media, a job destroyer. AI is a new tool – a *datascope* perhaps – that will allow us to see in much more fine-grain detail, and allow us to do work that has previously been unimaginable. New tools allow us to do new things. Incredibly powerful tools allow us to do incredibly powerful new things. New tools don't automate people away. They allow people to do things that people have never been able to do before.

AI is set to revolutionize just about everything we can think of, in the way that technologies like the microscope changed medicine. In another generation, using non-AI infused technology will seem as barbaric as using leeches does today. It's likely that the next generation of ambulance-chasing lawyers will argue that doctors who don't use AI tools are guilty of medical malpractice.

In the transformation from leeches to microscopes, did Riddell destroy anyone's job? Well, probably he did. The leech magnates of Manchester no doubt went to their graves cursing his name. But microscopes were central to the explosive growth of healthcare that led to the population and economic growth that made the modern world.

Nobody in their right mind now would argue that we should have stayed in a leech-based paradigm. Of course, if your current business model is a modern version of leech-breeding or leech-retailing, then AI *is* bad news. You may be able to eke out a living for a generation or two, as the leech magnates did until 1930. But nobody mourned the demise of their business – and

nobody will mourn the passing of their modern equivalents.

The medical field, in fact, presents lots of opportunities to see how the interplay between tools and people – between man and machine – plays out, and will play out, in the future. And nobody is closer to this – and more bullish on the possibilities ahead – than Dr Eric Topol, author of bestseller *The Patient Will See You Now* and founder and director of the Scripps Translational Science Institute in La Jolla, California.

Topol has recently taken the ‘AI is a job destroyer’ argument head-on in radiology, where advances in machine-based MRI analysis have led some to believe that radiologists will soon be as redundant as leech wranglers.

“AI is an adjunct to radiologists … whose purpose is to scale the productivity of radiologists … AI’s true impact on radiologists will be its ability to integrate information, rather than hasten information extraction … the amount and sources of information are outstripping our ability to understand their significance … AI is well placed to perform pixel biopsies,” he wrote in *Journal of the American College of Radiology*, March 2018.

Topol sees AI not as a tool that reduces the labour component of a process, but as a way to increase the overall scale of the process. In short, the tool will allow the radiologist to see and do more, to manage much finer-grain information and, in sum, produce better outcomes.

This is a profound insight and outlines a much more realistic vision of how AI will create the future of work, not just in medicine, but in every field. The three key ingredients of this future are density, complexity and speed.

New tools don’t automate people away. They allow people to do things that people have never been able to do before

D Density

The first microscopes had a scale of 9X (i.e. they could make things appear nine times larger than they were). The most advanced microscope in use today (at McMaster University in Ontario, Canada) has a scale of 14mX (i.e. it can make things appear 14 million times larger than they are). This extraordinary magnification is opening new vistas in areas such as nanotechnology, which will be core to the next generation of electronics and technology.

Greater and greater levels of density can be seen in just about any aspect of contemporary life, but ironically, are often hard to see. Take, for example, an ordinary Monday morning for an ordinary office worker in an ordinary town in any country in the western world.

Wake up:
- Check email
- Check Twitter
- Text the children to wake up
- Put on the TV
- Scan CNN, the BBC, read the front-page of the *New York Times*, the *Sun*, BuzzFeed
- Get dressed
- Get out of the front door

Travel to work:
- Check email again
- Check Twitter
- Dial into conference call
- Scan Apple News
- Check E*TRADE
- Shazam the song playing in the railway station
- Book hotel for tomorrow’s business trip
- Check email

At desk
- Check email
- Respond to email
- Check Twitter
- Get mad at Twitter
- Start work on overdue end-of-month report
- Check Twitter…

All before 8:30am in the morning…

This density would be completely unrecognizable to Riddell. Put him in a time machine and catapult him forward to 2018 and he would be catatonic amid the bustle of the world he found himself in. (Tim Urban of acclaimed blog *Wait But Why* talks about ‘Die Progress Units’ to illustrate this idea – the amount of time it takes human beings to achieve enough progress that the shock of bringing a

The pace of change has never been this fast, yet it will never be this slow again

time traveller to your era would kill them). Even somebody retired for a few years and adrift from contemporary work mores would be shocked by this density of information, activity and action. Yet this is completely normal to most of us now.

C Complexity

Allied to density is the complexity of life and work in 2018. Again, take an average worker in an average job and think about how many information sources they are trying to juggle, how many steps there are in the process they are executing, how many stakeholders need to be consulted, how many reports need to be generated, how many accounts need to be reconciled. Now think about a superstar hedge-fund manager, a video game developer, a commercial jet pilot, a CGI film maker, a reinsurance portfolio executive, a national security analyst.

The complexity of these jobs – the information that needs to be sourced, managed, integrated, analysed, leveraged – is a far cry from the jobs that Richard Scarry would have outlined in his *What Do People Do All Day?* children's book from just a generation ago.

My job – as I'm sure is true for most *Dialogue* readers – is far more complicated than it was just a few years ago. I work with teams of people all around the world – we schedule meetings (for mutually inconvenient times) – with different cultural attitudes and expectations. I need to juggle much more information than ever, and need to be *au fait* with developments far beyond the walls of head office, let alone my home office. My clients – as are yours – are more demanding and unforgiving than ever. The stakes are higher. Bad decisions have greater ramifications. Disruption is a greater and greater reality. Life – and work – has never been less simple. Hence why, as an aside, so many people from Marseilles, to the aforementioned Manchester, to Mason, Ohio, have a deep nostalgia for the past: for less complicated times.

S Speed

In the 1990s, the chief executive of the software company Oracle, Larry Ellison, had an infamous dictum – the 24-hour rule – that made it clear that if you didn't respond to an email within 24 hours you'd be out of a job. In 2018, that seems quaint. Twenty-four hours? If you don't reply to an email within 24 minutes nowadays you're considered a loser – a B-player in an organization that only hires A-players.

The acceleration of modern business life is so extraordinary as to be almost invisible. Because we are the proverbial frogs in the pan of heating water, we find it hard to comprehend how much faster work – and life – occurs than it did just a few years ago. Information travels around the world in a fraction of a second. Ideas spread from San Francisco to Singapore as fast as they do to Sacramento. People fly from Sydney to Beijing for a lunch meeting and then turn around and go straight back home. In James Clavell's wonderful series of books about the first Europeans in Asia (*Shogun*, *Tai-Pan* etc) the world record in 1848 for the fastest journey from London to Hong Kong is set at 59 days. Now that's a 15-hour flight. Many people understand the meaning and significance of Moore's Law in computer hardware. Far fewer, I wager, understand the significance of the speeding up of every aspect of the modern world. And yet this speeding up – this exponential curve we are in, which shows no sign of faltering – is unprecedented across the long arc of man's existence. As Canadian Prime Minister Justin Trudeau put it at the World Economic Forum in January 2018, "The pace of change has never been this fast, yet it will never be this slow again."

The algorithm of change

Topol's insight of how AI will allow radiologists to see more data (the pixel biopsy), integrate that with other information sources ('multilayered data', in his medical vernacular), and make faster decisions, is 100% transferable into any and every discipline and business process one can imagine. Density, complexity and speed are all set to be turbocharged by new AI and machine-learning capabilities. 'Datascopes' will allow your business to see more data, integrate it with other data, and make decisions faster than ever. And, in doing that, open incredible new opportunities for commercial growth and levels of employment.

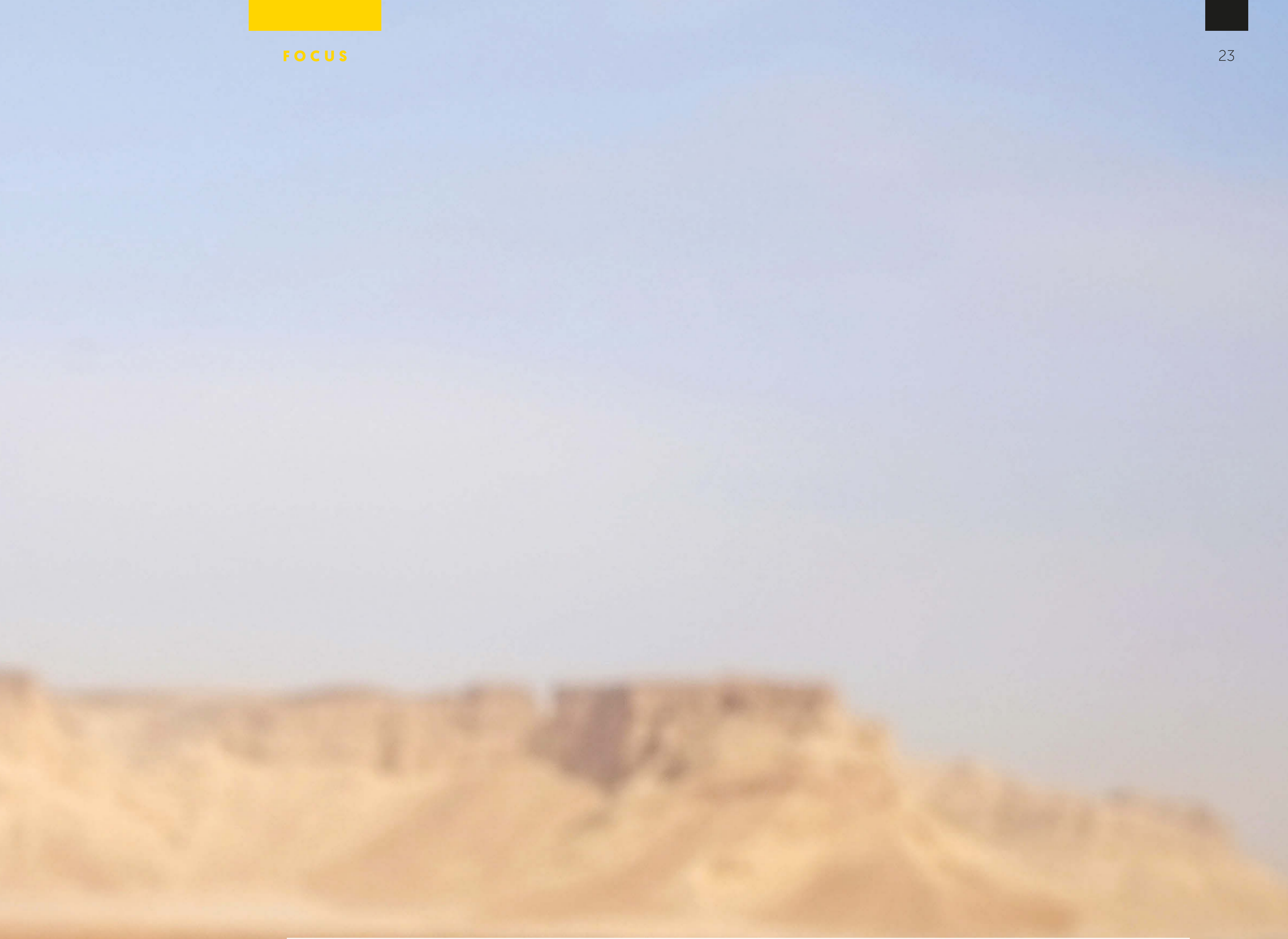
In *What To Do When Machines Do Everything*, a recent book I co-authored with Malcolm Frank and Paul Roehrig, we argue – counterintuitively to some – that in ten years, employment levels in the Western world will be higher than they are today. For some people that's a head-scratcher. But in our vision, as in Topol's, AI is the next generation of tool that – as tools have always done – allow people to do things faster, easier and more proficiently that they could without tools. AI and automation will only have a net negative effect on jobs if – and this is a huge 'if' – we can't find new things to do.

Dr Riddell's microscope allowed people a panoply of new things to do – thank heavens. Our new tools – in medicine and every other industry – will allow us to grapple with a world that is denser, more complex, and faster than ever before. From that algorithm (Dn x Cn x Sn) emerges the future of all our work. Leeches need not apply.

— Ben Pring leads Cognizant's Center for the Future of Work and is a co-author of the book *What To Do When Machines Do Everything*

“Well, if droids could *think*, there’d be none of us here, would there?”

Ben Kenobi has it right, say **Terence Tse**, **Mark Esposito**, **Danny Goh** and **Hajime Hotta**



"It's a trap," Admiral Ackbar famously said in *Return of the Jedi*, when he realized that the rebel fleet that was supposed to be launching a surprise attack on the new Death Star had gone straight into the path of the Imperial forces. Exactly the same can be said of the way many businesses and media outlets have recently portrayed artificial intelligence (AI).

Companies have been providing non-stop reminders that robots are taking over an increasing number of jobs, leading us to ever larger-scale unemployment. The recent opening of Amazon Go has taken this issue to new heights. Through Amazon Go, customers can just pick up the items they want to buy and walk out, and a receipt pops up on their phone. In a stroke, cashiers are no longer required.

Recent studies on AI-led unemployment make depressing reading. A key report points out that some 47% of US jobs will be automated in the near future. Another study suggests that 45% of the daily tasks currently done by humans could be automated if current trends continue. In our recent book, *Understanding How the Future Unfolds: Using Drive to Harness the Power of Today's Megatrends*, we mentioned the case of a chief financial officer at an investment bank. He was given the task of reducing the size of his staff by 80%, as off-the-shelf digital technologies could be doing the jobs occupied by humans. From this vantage point, it seems that, in the near future, human beings will become the horses of the past.

The bad news does not seem to stop here though: it isn't just the job markets that are under threat; to some, it seems that mankind itself is besieged by intelligent machines. Elon Musk called the prospect of AI "our greatest existential threat", and Bill Gates echoes this sentiment. The late Professor Stephen Hawking, meanwhile, said that creating AI is the biggest event in human history – and also the last.

AI's true colours

We don't presume to be qualified to dismiss the opinions of these great thinkers. But what we can do is highlight the reality of AI right now. Despite the doomsday views, the reality is that the current capability of AI is actually so limited that the threat of a machine-dominated world remains a concept that belongs to a galaxy far, far away.

Despite the endless media coverage on how clever computers are, it is important to understand that there isn't really that

Intelligence implies the ability to think. But AI does not think

much intelligence in AI. Intelligence refers to one's capacity for logic, understanding, self-awareness, learning, emotional knowledge, planning, creativity and problem-solving. Yet, at the moment, machines can do very few of these things. Intelligence implies the ability to think. But AI does not think.

The true ability of AI lies in the way that it processes a huge amount of data sources and then, based on this, makes the right guesses in terms of decision output. Over time, the more the machines perform the same task, the more they can adjust their information processing and, consequently, the better they become at guessing. This is pretty much how machines 'learn'.

One may argue that machines these days can read text, see images and hear natural speech with unprecedented levels of accuracy. For instance, at our AI solutions company Nexus Frontier Tech, our intelligent scanner can already achieve 99% accuracy in reading texts, whether they are typed or handwritten, and whether they are presented in digital or physical form. This makes machines look very capable and smart. Yet, under the hood, the mechanism is not very different from how our brain works (hence the fact that AI development right now is mostly based on artificial neural networks).

Our brains work like this: we draw various data inputs from multiple sources and then consider whether or not this received information is valuable to our decision, before we process it to generate an output (an opinion/view/decision). In a similar fashion, machines take the input data from different places, organize it, assign a weight to the input, do the calculations and then churn out possible answers.

We can see, then, that machines do not and cannot provide definitive answers. In fact, they do not even 'know' the answers at all, given that all they are doing is weighing information and ideas from different sources and then providing the statically most probable right answer. A mistake made by the famous AI computer IBM Watson in the US game show *Jeopardy!* speaks volumes about this. At the end of the first day of the competition, the category for 'Final Jeopardy' was 'US Cities', and the clue was: "Its largest airport was named for a World War II hero; its second largest, for a World War II battle." The answer is, 'What is Chicago (O'Hare and Midway).' Watson guessed, "What is Toronto?????" Wrong city. Wrong country.

There are many reasons why Watson was confused by this question, including grammatical structure, the presence of a city in Illinois named Toronto and the Toronto Blue Jays playing baseball in the American League. As a result, Watson's confidence level was incredibly low: 14%... Watson knew that it didn't know the answer, as indicated by the five question marks...

What makes AI more powerful than ever is the fact that humans can train the machines by feeding them with answers (so-called supervised learning). With this newly ingested information, they can adjust the weighting next time, thereby increasing the accuracy of their responses over time – just as our brains do.

The fact that machine learning is based on improving its abilities to guess the right answers contrasts strongly with previous attempts at creating AI. Scientists once believed that the best path to coming up with machine intelligence was programming. However, this approach failed, ultimately leading to the so-called 'AI winter', because there were far too many rules that humans had to teach the machines to enable them to predict answers accurately. It was not until the recent emergence of probabilistic computing (to replace the deterministic approach) that AI received a second – and certainly much better – chance.

What AI can actually do

In reality, AI is therefore rather different to the way many people perceive it. Hence, for executives who are considering employing AI, it is important to recognize that, instead of an almighty means to transform a business with the power to confer a brand new competitive edge, AI is, at the moment, nothing much more than a tool that supports existing business processes. In this sense, in the current business environment at least, it is not as much about AI as IA – 'intelligent assets' or 'assistance'. It just helps us approach business in smarter ways – in particular, dealing with routine and standardized tasks. This is why most companies are only using AI in pockets rather than in full business transformations. And the sporadic deployments come predominantly in the form of smarter ideas to cut costs (e.g. insurance companies being able to locate and analyse pictures of car accident damage to assess the size of claims), or better ways of helping customers (including using speech recognition to replace telephone PIN codes).

In short, the way AI has been shaping businesses is mostly restricted to intelligent automation – enhancing standardized business processes using AI. Like any other sort of digital transformation, the key to success in employing AI technologies is not digital but transformational.

So, for any newly acquired AI technologies to excel, changing the existing processes and workflows, and/or developing new ones, is a must. This, in turn, means that new teams and organizational structures will also have to be introduced. People's fear of losing their jobs will have to be allayed. Staff will need to be convinced of the value of the new AI technology

THE CHALLENGES OF LAUNCHING AN AI PROJECT

It was the famous economist Professor Dan Ariely who once said: "Big data is like teenage sex: everyone talks about it, nobody really knows how to do it, everyone thinks everyone else is doing it, so everyone claims they are doing it." We believe this also rings true for AI. Despite the few technologically avant-garde companies like Google and Facebook in the US, and Tencent and Alibaba in China, the take-up of AI technologies among many other companies remains low. Why?

One reason, in our experience, is unfamiliarity. While blue-sky strategic thinking involving AI is easy, it can be trickier at an operational level. Indeed, working out what the technology can *actually* bring is often elusive, as it requires clear answers to the following questions:

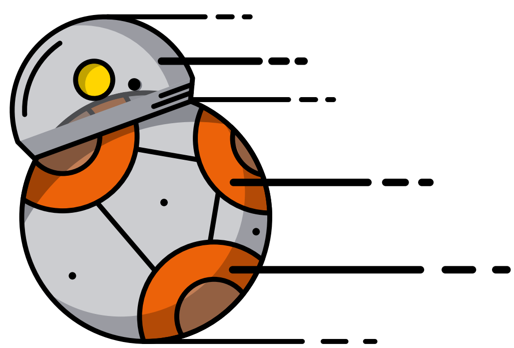
- What specific functions can various AI products perform?
- What benefits can be created?
- What business issues can AI really tackle?
- What is the exact business objective that AI should be achieving?
- Is the workflow of the process to be automated properly mapped out?
- And, if not, will there be resources allocated to make sure it is?

These are some of the reasons why we always recommend that our clients engage in projects that have narrow and clearly defined business objectives when it comes to AI.

On top of this, the technical aspect of AI can be rather daunting. It poses a somewhat circular argument: without having a good grasp of the technology, it is difficult to figure out what business objectives to reach; and without knowing the specific aims to be achieved, it is not easy to see what kind of AI technologies are needed and how they would work. Stick to small initiatives that address specific single pain points. Do not go overboard with big complex projects.

A bigger challenge, however, is on the human rather than the technology side. In its current incarnation, AI is nothing more than a tool. And like all business tools, it is only truly effective when the right business processes are built around it. Hence, executives need to be ready to modify existing processes and workflows, and perhaps even build new ones. Moreover, they will have to find and keep the right people – those who can tackle business and technology issues. Inevitably, these executives will have to be able to work with both business and technology managers to ensure the smooth development, implementation and maintenance of the new capabilities.

Last but not least, the need to introduce brand new technologies and additional (sometimes even disruptive) processes often translates into a significant amount of work; this is so much so that companies sometimes stick to what they know, leading to inertia. Executives who are interested in taking their companies to the next level will therefore have to overcome this temptation.



being implemented. Corporate culture may have to change. The success of machines, therefore, lies squarely in the success of how the human activities surrounding the new technology are organized. What AI can actually do mostly depends on what humans can actually do (see above).

The winner: alliance

It is interesting to see how Hollywood portrays AI. Back to *Star Wars*. In the films, AI-driven – and even self-aware – droids like R2-D2 are best at assisting humans to fly X-wings or escape from the Death Star. Even in such a technologically advanced world, machines do not replace humans.

We think the same can be said of our world right now. There is no doubt that automation led by AI and robotics will eliminate many jobs in the future. Routine work, be it white- or blue-collar, can be expected to be taken up by machines. But it is also time to dispel the myth around AI to see what it can actually do as a tool. Only in this way can we really hold honest conversations about how humans and machines can forge a new alliance.

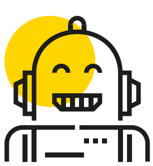
— Terence Tse is a cofounder and managing director of Nexus Frontier Tech, specializing in AI solutions, and associate professor at ESCP Europe. Mark Esposito is a member of the teaching faculty at Harvard University's Division of Continuing Education, and professor of business and economics at Hult International Business School. Danny Goh is a serial entrepreneur, and the partner and commercial director of Nexus Frontier Tech. Hajime Hotta is chief AI scientist at Nexus Frontier Tech


HONDA

We can remember it for you wholesale

AI is – slowly – progressing while humans are fighting yesterday's war, writes **Liz Mellon**

Artificial intelligence is with us. And it is here to stay. Duke Corporate Education held a conference in London on 22 March 2018 to consider its impact on the future of work. As the host, Samantha Simmonds of the BBC, joked: "It's exciting and scary, but we'll be OK as long as robots can't climb stairs." Her throwaway quip goes to the heart of the debate.



Clunky and laughable

At one level, we can watch science fiction movies predicting that AI will end the world as we know it (think domination and overthrow). Yet at another level, the reality is that current AI developments are mostly clunky and somewhat laughable. There was a good example in the cheery little Sambot touring the room, who opened the proceedings by welcoming guests. Its facial recognition system designated most female participants male and about 30 years older than their real age. See what I mean? Hilarious. What support or threat can AI possibly be?

A slow start

It's true that AI has been off to a slow start, but the pace is accelerating.

We can see how automation (of customer service processes, or routine processing work) could reduce costs and increase unemployment across a range of industries, just as it already has in the car manufacturing industry. Some say that 50% of jobs could be replaced in the next ten years. The powerful conference opening session reinforced this gloomy view. Actors representing a claims adjuster (who has already lost his job to automation), a young B tech (who worries that his skills are already outdated) and a chief executive (who has used automated processes and systems to reduce costs in her medical instrument manufacturing company) posed

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some very real questions about the future of work when AI, as we all hope, takes over the drudgery.

Ethics

However, they also touched on one of the bigger issues: ethics. If AI is only as ethical as the programmer, how do we ensure that AI – as it becomes increasingly able to learn for itself – is a force for good, not evil? How do we harness it to increase the wellbeing of humans – rather than annihilate us?

Liquid leadership

Nick Jankel's keynote speech reminded the audience of how much has already changed, even at this early stage in AI development. In 1937, a company could expect a 75-year lifecycle. This has reduced to 14 years by this year, 2018. By 2027, 75% of the Fortune 500 will be new names and brands. The pace of change is breathtaking and shows no signs of slowing down. New business models abound, and ownership of resources no longer guarantees a successful business. For example, Uber is the largest taxi company in the world, yet owns no taxis; and ASOS operates a similar model in the retail fashion sector. WeWork, the US company that provides shared workspaces and services, was founded in 2010 and is already valued at $20 billion. Tesla manufactures solar roof tiles that are not only visually attractive, but also cheaper than normal tiles. Phenomenal wealth is being created by entrepreneurs who grasp the new realities, from leveraging new technology to saving our planet. Of course, the 'Fourth Industrial Revolution' comprises many breath-taking new technologies and developments, such as Big Data, 3D-printing (a house was recently printed inside 24 hours), nanotechnology, blockchain and cryptocurrencies; but robotics, machine-learning and AI play their part. Better informed customers demand more, better and different – personalized service.

Yet, says Jankel, so far all this change is bringing more stress than reward, especially for the Millennials who will inherit this future. He reports that Millennials are stressed by climate change, resource scarcity, emergent diseases, terror campaigns and political instability – to the extent that 50% report being kept awake at night by worry. And the danger with fear is that it immobilizes us, keeps us in old patterns of thinking and behaving at just the moment when we need to be at our most creative, to grasp new opportunities.

Jankel recommends three things. The first is to recognize the business signs of industrial-age thinking. Where products are becoming commodities, it takes a huge effort to reap a marginal increase in return on investment; the business is churning rather than changing and customer complaints are on the increase. These ailments signal the need to think differently, to stop working harder and to start thinking smarter. The second is to build a workplace where people feel safe to be themselves, where they don't feel as if they might be replaced by a cheaper robot at any moment, but where they have permission to reflect and be creative, helping to co-create a better future for the business. Rather than getting stuck in working harder at an outmoded business model, they will have the creativity to find new and more productive ways forward. This is the thesis for building and retaining the human difference, leveraging what humans do best. Being clear about the purpose of the organization – why it is in business, not just what it provides – can also help employees feel more connected to it.

And third, Jankel recommends combined thinking, rather than looking at polar opposites (what Duke CE has for years called 'Yes, and' thinking). Don't believe that you must drop everything and adopt the Fourth Industrial Revolution wholesale. While some new business model companies have done just that, there is still space for many third-industrial-age business ideas. For example, there is a role for both empowerment and leadership; for top-down and bottom-up thinking; for open plan offices to ease communication and a separate office for the leader so she has time to reflect. Making opposites work together and solving dilemmas are creative acts and further reinforce the human difference.

AI, still in its infancy, can retain more read information, can process data faster, diagnose illness earlier and more accurately and is a powerful research engine. AI can handle and crunch data and draw logical conclusions. It cannot daydream, think inductively or problem-solve. Jankel's view is that humans need to enhance these vital capabilities, rather than becoming so stressed that we lose our distinctive human difference. And organizations need to foster transparency around data and the trust to allow people to self-organize and problem-solve together, leveraging all the diversity at their disposal.

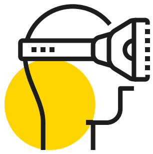
HAPPINESS

The conference concluded in typical Duke CE experiential style, with participants learning in 30 minutes to sing, play and perform Pharrell Williams' 2013 song, *Happy*. After all, isn't that what all we humans really want? As for what AI may want or need, that remains to be discovered.

If AI is only as ethical as the programmer, how do we ensure it becomes a force for good?

AI immersion – back to ethics

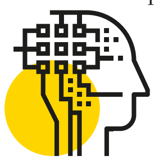
Conference participants visited three rooms to discuss the following ideas in more depth;



building an organization led by purpose; which new jobs might emerge to replace existing jobs in a future AI world; and AI itself. It quickly became apparent that those working in the AI industry see the gap between humans and AI vanishing over the next 15 years. In their view, the human difference is not sustainable.

Memory bots

Let's start with how AI is being used today. A conference participant, a partner in a law



firm, explained that it can take six months in mergers & acquisitions work to research, collate and compare documents. This linear data processing task can be halved in time by using robots, which can scan documents at ten seconds a page. So robots are efficient at reducing drudgery, which is what we all want from them. The challenge is that lawyers operate an apprentice model and trainees learn their craft through such legwork, so eliminating it simultaneously undermines the whole learning system. How will lawyers need to be trained differently in the future?

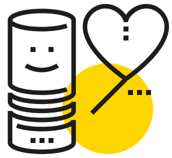
Another example was recently employing a virtual receptionist in a hotel in Tokyo. Have you seen those advertising or information stands in airports, where a human shape is animated by a video of a talking human (they featured in the movie *Minority Report* as early as 2002)? That's the format. The receptionist robot fared okay at the straightforward task of checking people in (although it takes it two seconds to process answers to questions, which feels like an age to a waiting human), but was hopeless at problem-solving (e.g. there's a leak in my room).

So far, so familiar; back to robots as clunky and amusing. But Jonny Poole, senior animatronic engineer at Robots of London, which also offers Pepper, the hotel concierge, says that his firm is already working on a highly realistic face for a robot, and is convinced that they can be taught empathy. Look at Sophia, the creation from Hanson Robotics, for an example of this today.

Danny Goh, partner and commercial director of Nexus Frontier Tech, describes robots today as pre-recorded data boxes. He demonstrated an attractive, animated woman on a screen who gave very full and speedy answers to questions posed to her, but was still essentially spouting analytics.

AlphaGo (Alphabet Inc's Google DeepMind computer, which first beat a human at the game Go in 2015) is not exactly thinking for itself, it is still programmed. All the variations of moves are known, it just thinks faster than the opponent using knowledge from thousands of brains.

Emotional recognition



Yet Danny believes that AI will have increased emotional recognition by 2030. He can see the day already when AI will perform human and emotional work, such as healthcare and education. He describes Dolly the sheep as "a step into God's territory – we are not there yet with AI", with the implication that we will be one day.

What worries him about this is ethics. What if AI, charged with teaching children, picks up the unconscious bias of its programmer? Deep learning models are created by researchers with their own biases. So, not only are we in danger of sharing the distinctive human difference of empathy with AI as it develops – we may also be adding unhelpful aspects of human personality, like bias. AI may become more like humans than we currently expect.

What does this mean for future leadership?

An intergenerational panel, from a newly employed Millennial to a seasoned chief executive, debated what this brave new world will need from its leaders. The Millennial wanted to be judged on her output, not on inputs or processes, as she described a culture at her workplace where being present, rather than effective, still counts. She also wanted to see a world where technology is embraced not just to cut costs, but to allow employees flexibility. The Gen X participant agreed that schools and workplaces should continue to reward knowledge – rather than the ability to research and process – and presence. She wanted to see more empowerment in the workplace, with less micromanagement, where people feel free to speak from the heart, the one measure of a human workplace. And finally, the Baby Boomer believed that leaders should guide – not dictate to – others, share decisions and recognize that people are the heart of any organization.

All in all, rather a depressing picture of the state of leadership today, offering a view that doesn't seem to have changed much in the last 30 years. It left this author wondering how ready we are to tackle the challenges of the Fourth Industrial Revolution when we still seem to be grappling with the command and control leadership legacy of the past.

— Dr Liz Mellon is an executive director at Duke Corporate Education in the UK, and chair of the editorial board of *Dialogue*

Dolly the sheep was a step into God's territory – we are not there yet with AI

AI: inside and out

The ability to harness AI disruption at the core and edge of your business is critical to your future, write **Mohit Garg** and **Kate Sweetman**

We recently finished an offsite with the leaders of a US-based company doing business in almost 100 countries around the globe. Their industry is not a digital leader, and neither is their firm. The sense of unease on the topic of AI and the digital world was palpable. Here are the worries that we heard:

- Do we risk being eclipsed by competitors who understand AI's possibilities better than we do?
- Can competitors adapt more effectively to the digital revolution than we can?
- Where are the points of leverage in our business? Where do we begin?

AI is gathering steam, and it's the right time to confess your ignorance and start asking these questions. Many companies have already supplemented their operations with virtual assistants that compose eerily human emails to schedule meetings. On a more strategic level, the recommendation engines that have helped propel Netflix and Amazon to the peaks of capitalist glory are becoming available to existing firms.

What do you need to know? And what opportunities does AI offer you? We have scoped the current and near-future state of AI, and offer our findings to non-technical leaders and managers to develop the confidence to move forward.

The essential finding: even in these early days of AI, your business should be looking for opportunities at the core and at the edge.

Deploying AI technologies: now and near term

Highly sophisticated AI applications may move from the labs to mainstream over the next decade. In the short term, the lowest hanging AI fruit is going to be picked in roles where the intelligence of a two-year-old child is adequate, in order to reduce costs, automate repetitive error-prone activities or replace humans in hazardous environments. In other cases, AI is being applied with highly sophisticated models that require years of training and R&D. These models far exceed the capabilities of the smartest human, but only for focused specific tasks. Here are a few examples:

Biotech

Breakthroughs here require labouring through a sequence of options. A machine learning toolbox built into the experimental setup can look at experiment results and algorithmically decide which experiment to do next, and even deduce the general outcome of a series of experiments.

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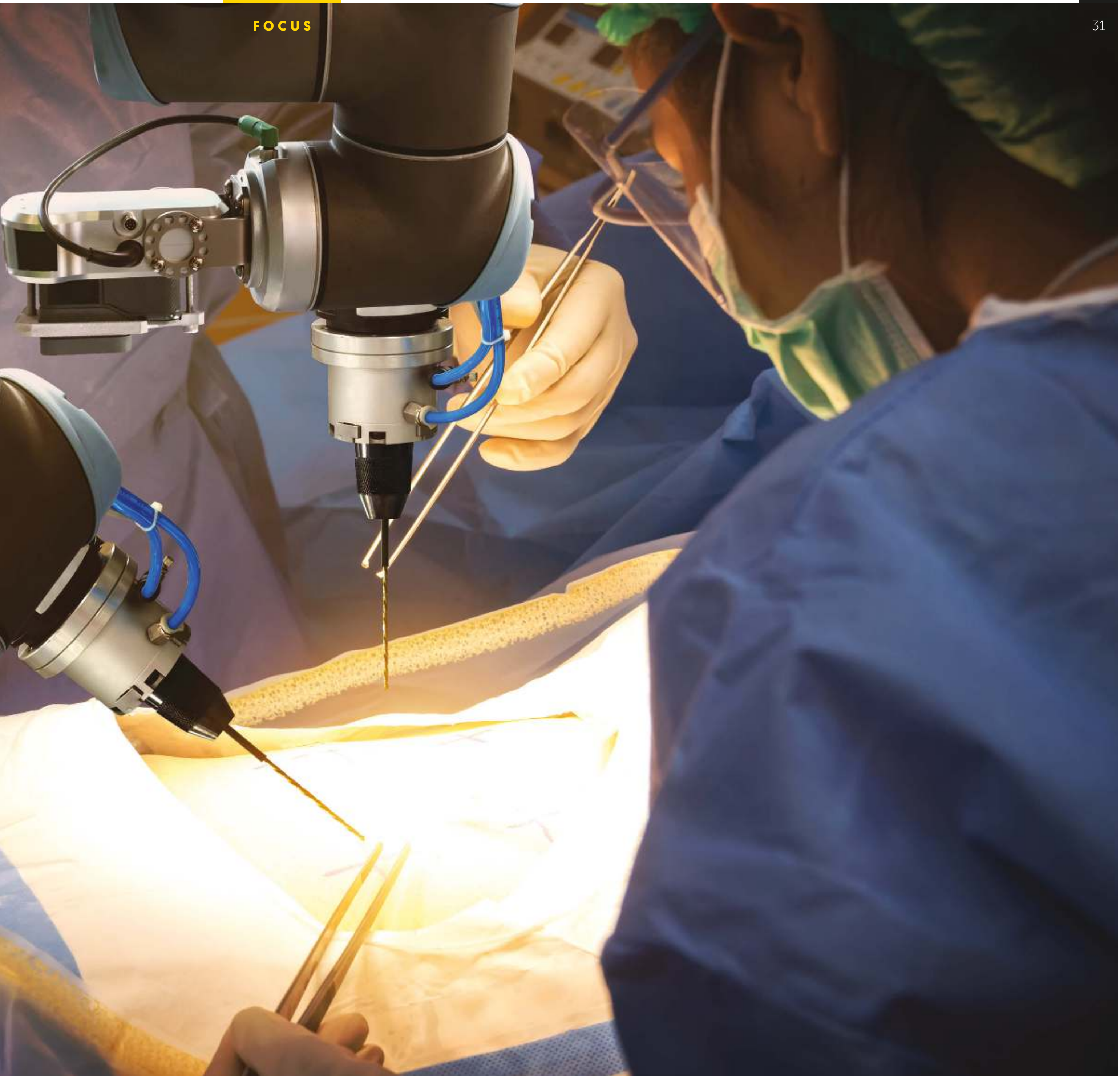

Even in these early days of AI, your business should be looking for opportunities

Healthcare
Machine learning algorithms have shown promise in disease diagnosis (for example, early detection of breast cancer). Machine learning can also be used to understand risk factors for disease in large populations. For example, Medecision identified eight variables to predict avoidable hospitalizations in diabetes patients. AI software outperformed pathologists when predicting overall survival in patients with brain cancer.

Customer support
It is predicted that by 2020, more than 85% of all customer support communications will be conducted without engaging any customer service representatives.

Fraud detection
This is a high potential field. PayPal, for example, is using machine learning to fight money laundering. Its AI tools can precisely distinguish legitimate from fraudulent transactions.

Automotive
Smart cars will likely be roadworthy by 2025. Fully integrated into the Internet of Things, the smart car will learn about its owner and its environment (adjusting temperature, audio, seat

THE IMPACT OF AI

Key Degree of Impact in Next Two Years ■ Low ■ Medium ■ High

ELEMENTS OF VALUE CHAIN	CORE	EDGE
R&D	R&D advances at the Core of a business drive great value and are the hardest to automate. AI will provide breakthroughs that are not humanly possible due to their size and complexity - but not in the next two years	External vendors deliver innovation that make business run more smoothly. For example, Walmart uses autonomous robots to scan inventory in its stores
Manufacturing	High-volume manufacturing is likely to have already been automated over the last few decades. It is likely to be further optimized by the introduction of augmented reality and robotics	Manufacturing at the Edge could be considered as the production of packaging, spares and accessories. Low-volume custom manufacturing also stands to benefit significantly from increased automation and precision
Sales	Strategic selling will be augmented by AI, but it is unlikely to replace highly consultative solution-selling in the short term. Today, there is not enough codified data that can train the AI algorithms for every industry's specific context when it comes to high-value selling	Programmatic selling, wherein the entire sales cycle – right from lead generation, pitching and closing – can be codified into a set of context-based decision-making, is a very strong candidate for the application of AI
Marketing	Large datasets of customer behaviours will drive Core marketing decision-making. Marketing strategies will become even more programmatic as AI is applied to large datasets of behaviour, engagement and historical sales data	A new breed of optimization tools will emerge to make marketers more productive – ranging from automated content generation, programmatic ads, better forecasting and bot-enabled personalized customer conversations
HR	Core HR strategies around recruiting and performance management will be enhanced by recommendation engines that will establish patterns of what drives better outcomes. But this is likely to be most beneficial to large organizations who possess the scale and historical data	AI-driven tools will emerge for the optimization of recruitment and hiring, compensation and benefits, training and development, legal compliance, discipline, and employment termination. For example – AI-based chat systems and AI-analysis of video interviews can save significant time and effort in the shortlisting process
Finance	Core finance functions at corporate level that require judgement will continue to be human-driven. However, financial services, trading and investments can be handled by algorithms that will continue to refine	Finance professionals will be made more productive, augmented and then replaced
Customer Service/ Relations	Core customer services functions at the corporate level such as retention strategies, customer education and customer marketing are likely to benefit from AI-driven insights and pattern-matching from large volumes of historical data	AI-driven customer support will grow in importance as the technology improves, e.g. the refrigerator will order its own replacement part. Most durables will switch to an annual maintenance subscription model which will be more or less autonomous in nature

If AI were a cruise ship, improvements at the core would move it faster in the right direction

position automatically), report – and even fix – problems, drive itself, and offer real-time advice about traffic and road conditions.

Supply chain

Intelligence in logistics and shipping has become centre-stage within supply chain management. Faster and more accurate shipping reduces lead times and expenses, adds environmentally friendly elements, reduces labour costs, and widens the gap between competitors.

Trucking

If autonomous vehicles are developed to their full potential, logistics optimization for the supply-chain industry would be astronomical: a driverless truck can drive nearly 24 hours a day, doubling the output of the US transportation network at 25% of the cost.

How can AI support your business?

Even if you are not in the tech business, AI can be used at the core of your business to help to drive it, or at the edge simply to make it easier to do business.

If AI were a cruise ship, improvements at the core would move it faster in the right direction, while improvements at the edge might make the deck less slippery.

AI at the core (strategy)

AI at the core aligns the business more strongly with market fundamentals because it can better inform the vital decisions around what to produce, for whom and how to get it there. AI does this by mashing up large data sets from macro variables, field data, inventory data and, as we all now know, from sources like Cambridge Analytica and social media data. The heuristics resemble the meteorological models that forecast weather from large datasets consisting of weather signals and ocean currents. In financial services, AI has enabled core activities such as automated equity trading, fraud detection and data security. In pharmaceuticals, AI is helping to develop devices, find new therapeutic targets, design drugs and more.

AI at the edge (tactics)

AI at the edge can enhance almost all functions in a business and save time and energy for more value-added work. Imagine, for example, the productivity of a field sales rep whose mobile Alexa handles all the CRM administrivia through simple and easy voice commands. AI is increasingly being used in recruiting, predictive maintenance and improving customer support service quality. According to estimates based on the work that IBM Watson labs has done with its customers, businesses can reduce customer service costs up to 30% by implementing conversational solutions like virtual agents and chatbots. Given the low cost of creating an AI-enabled app today, thousands of tech startups are picking niches, creating apps for our work and personal lives. These apps promise to save our time, costs or help us make smarter decisions. In the table opposite we have identified current and potential AI uses in the value chain.

Are you ready?

Today, almost all applications of AI are based on machine learning, but moving towards the more sophisticated model of deep learning. Commercial technology is still a long stretch away from truly autonomous self-learning, where you introduce an AI agent into the stream of business-as-usual and AI develops its own models. When that happens, we will be closer to singularity, when AI meets or exceeds the intelligence of an adult human. But the point is that AI is here now, and more is coming. Whether it helps or hurts your business is largely up to you and your willingness to get your organization to take on the challenge. The earlier you engage, the better placed you will be when the inevitable next wave of sophistication arrives.

— Mohit Garg is co-founder and chief executive of Proxce, a technology platform that enables Internet-of-Things devices. Kate Sweetman is founding principal and chief client officer of the SweetmanCragun Group

LEARN THE LINGO: SOME HELPFUL DEFINITIONS

Artificial Intelligence, or AI, is the leap from humans telling computers what to do in step-by-step instructions to computers learning on their own (through a process called deep learning). AI was truly born when IBM's Deep Blue definitively beat world champion chess master Garry Kasparov in 1997 – a game requiring strategy, foresight and logic. Today, IBM's Watson can expertly perform tasks such as analysing radiology images. Physicians in rural India can have chest films read by leading experts in London, Paris or Rome. Because of advances in computational power, AI enables:

Speech Recognition Microsoft has demonstrated speech software that transcribes spoken words into English text with an error rate of 7%, translates the English into Chinese-language text, and then simulates the English speaker's voice uttering them in Mandarin. Google used deep learning to cut further the error rate on speech recognition in its latest Android mobile software.
Machine Vision Google's deep-learning system, shown 10 million images from YouTube videos of the entire world of cats, proved almost twice as good as any previous image recognition effort at identifying cats as cats.
Facial Recognition Google (FaceNet) and Facebook (DeepFace) for facial recognition. Apple's Emotient to read faces for emotion.
Online Search and Tracking Web searches, online questionnaires, customer feedback forms – they all help gather information about the market, customers and future business prospects. Websites that 'remember' you, visit-to-visit and device-to-device and curate relevant content for you personally.
Recommendation Engines Netflix, Amazon and Pandora all use AI to determine which movies to recommend, products to highlight and songs to play.
Personal Assistants Apple's Siri and Amazon's Alexa and Echo bypass typing to speak directly to your Bot and let it do the work.
Chatterbots: talkbot, chatbot, Bot, chatterbox. Artificial Conversational Entity is a computer program which conducts a conversation via auditory or textual methods. IBM's Watson is chatterbot royalty.
AI as a Service (AIaaS) 'Middleware' intermediaries customize the link between any business and the world's most sophisticated AI platforms, like Amazon's Web Services. In so doing, they tap into both Big Data and the processing power that they contain.

A cut above

Chanel US senior fashion executive of 20 years' service Susan Clatworthy says vulnerability is strength

WRITING
Ben Walker

PHOTOGRAPHY
Matt Greenslade

The snow is pounding down. Or, rather, it's not. Susan Clatworthy got out of Dodge. She left New York and headed home to Connecticut in anticipation of a promised blizzard. The skies remain stubbornly clear. "What's interesting is that they are talking about 10-12 inches of snow and the reality is we have nothing," she says. "They keep on with the craziness: 'when you wake up in the morning there will be a foot of it'. To be honest, I'm sceptical. They often exaggerate. Maybe it's just a slow news day."

The hollow drama over the weather is all too much for a tough Midwestern girl to take. "Where I was raised, snow was just a way of life," she says. "So, I'm sorry, but what's the big deal? Everyone here has hunkered down and it's another 'snow day' at the schools. For working women, it's just incredibly hard to work out what to do, unless you are blessed with a grandparent or friend who lives next door. I talk a lot about work ethic, but even if you have an amazing work ethic you sometimes just can't figure it out. Many employers are not that sympathetic."

Clatworthy says her experience with Chanel was different. The French luxury house employs many women in the sorts of gainful, creative roles that Clatworthy, who has just retired, has relished and thrived on for years. As head of fashion merchandising for Chanel US, Clatworthy has enjoyed a decorated and rarefied career woven with the daily thrill of the international fashion business. Yet the stoic, matter-of-fact girl from Columbus, Ohio, still fills her designer boots. "Chanel tries to be female-friendly, family-friendly, mother-friendly, because you know, when it snows, when your children are sick, what else are you supposed to do?"

Her practicality is born of a deliberate honesty that Clatworthy pursues in herself and seeks in others. Yet her determination to root her feet on the ground has sometimes worked against her own interests; her modesty endearing but unwarranted. When young and applying for a job, her potential employer inquired how much she expected to earn. She wrote $2.25 an hour on the application form. "I didn't want to seem too expensive or presumptuous," she recalls. When her mother found out, she insisted that Clatworthy return to the employer and tell them she had made a mistake. "And, so I did," recalls Clatworthy. "The ladies at the desk had obviously reviewed my application and were chuckling when I came in because they had an immediate idea of what the change was going to be. At that moment, it seemed as if they genuinely appreciated who I was, along with my eagerness, innocence – and apparent bravery. Long story short, I got the job."

Putting the person first

It was an early learning in what Clatworthy memorably brands "hiring the DNA not the MBA", noting that the two are not mutually exclusive. Here was a young woman who had messed up her application form, submitting derisory earning expectations that might easily have been interpreted as her failing to value her own worth. Yet her response, to march down to the employer's offices and own up, said something more profound about her.

How open are leaders to giving someone a good old-fashioned 'A' for effort? Not every act will lead to the perfect result

Later in life, when she got the job at Chanel, she says, "I wasn't the best candidate on paper". But she showed up. "They respected who I was – beyond what I was going to deliver – they saw something in me, the person," she says. "I saw that throughout my career. There were times when I got promoted to positions over and above people who were in the competitive race with me but who hadn't developed that human touch, that appreciation for people and others. They were just dogs with a bone. They kind of came at it with whatever it takes to deliver. They didn't care – to be frank – who they stepped on along the way. That's never been my MO. And the company saw that about me."

Did she ever feel that she traded a little success for being nice? "You know what? No. Because the business happened anyway. You have to ask yourself what success looks like. For me it's always been about engagement, empowerment of people, helping people be their best self. The business then happens." She draws an acute comparison between serving her employees and Chanel's boutique staff serving their customers. "At Chanel, I talked about service first and sales will follow," she says. "I believe that if you give the service, if you are gracious and connect, they will come to you – because you made a remarkable memory for them."

Still, behind the personal warmth and the people-first attitude, she found enough steel to carve an upward path. She forged her way through the industry, starting at Bloomingdales and enjoying spells at Donna Karan and Liz Claiborne between her two stints at Chanel (her first spell at the French luxury house was in the early 1990s). Yet she wasn't always a natural ladder-climber. Another early-career exchange with her mother became a turning point, leading her to the view that opportunities should be appreciated, not declined.

"I was working at a department store and told her that I'd been offered a position as a delicatessen buyer, and she said, 'Susan that's just fantastic, this is your first real promotion, your first real job with a title!'" But the young Clatworthy had already told the company that she was unsure about taking it. "My mother looked at me and she said, 'how dare you? How dare you tell the president of this company, who has chosen you above all others, that you don't want the job that he has for you?'" Clatworthy Sr reframed it as a moral question rather than a vocational dilemma. "My mother told me: 'Go in tomorrow morning and tell them, 'thank you for believing in me, thank you for choosing me, I will not disappoint you, I will do a great job'.'"

Vulnerability is strength

Her mother's reluctance to unthinkingly take her daughter's side in workplace matters served Clatworthy well. It was her mother, too, who helped Clatworthy develop another of her guiding lights – that professionals should recognize and concede their vulnerability, so that they might learn to mitigate it. She recalls an unflattering – and unsuccessful – pay review early in her career. The young Clatworthy stomped home, mad at her boss, Cindy, and immediately imparted the conversation to her mother. "The review was very nice about how I worked with people and how passionate I was," she recalls, "but on the flip side, Cindy said, 'you don't really understand this business, you are not really getting it and I don't see you trying hard enough at that, and you aren't connecting how we make money here'. I was incensed. She gave me no raise and set me on my merry way."

Having heard this account, her mother looked back at her over the dinner table very calmly and said, "Well, do you understand the business?" Clatworthy admitted that she didn't. In the months that followed, Clatworthy, with Cindy's mentoring, worked tirelessly until she did. The honesty shown by Cindy, and the vulnerability – eventually – demonstrated by Clatworthy led directly to her development. So why aren't more leaders honest and prepared to show their own vulnerability?

"Leaders should lead by example, but so many of them don't," she says. "Most leaders won't show their own vulnerability. But they should, because only by doing that can they create a culture where other people are prepared to show theirs. There isn't a leader in the world that doesn't talk about 'safe to fail', 'okay to take chances' – but how many of those leaders – really – are okay when those chances run amok? How open are they to giving someone a good old-fashioned 'A' for effort? Not every act will lead to the perfect result.

Only the very greatest leaders today talk openly about how their failures lead to successes. People can only do that if they feel safe to do it. And that's about company culture – a cultural world that leaders should create, but often don't."

Humans' determination to lock themselves inside a digital fortress has exacerbated the malaise, Clatworthy argues. She has strong views on the march of technology, contending that it has reduced humans' ability to communicate their hopes and fears. "Connecting is what humans are supposed to be about," she says. "Yet it's dogs and cats who get all the credit for unconditional love – and they are the ones that are not tied into technology! Every dog and cat owner in the world has a better relationship with their pet than they do with some of their colleagues. That's a big responsibility for cats and dogs, as upon their shoulders rides the happiness of every family in the United States!"

Every dog and cat owner in the world has a better relationship with their pet than they do with some of their colleagues

She implores people to learn again the joy of face-to-face contact; talking to one another; making the human difference in a rampantly digitized world. "The human touch is getting lost," she says. "I know that the technological revolution is everyone's future, but the pendulum has swung so far; it's time for us to come back to the centre. There is all this energy around boosting science, technology, engineering and mathematics in schools, but I think we need to have a rethink about that and come back to humanities, anthropology, psychology and the study of human behaviour. Because what makes up the human condition is heart, body and mind – kind moments, gentle touches, gracious hellos and long, hard belly-laughs. That is humanity. That is connecting authentically."

Not that she professes to have all the answers. Now, upon retirement (Clatworthy granted her valedictory interview to *Dialogue*), she describes herself as "still a big work in progress". "I set out to take control of me," she says, "but I'm still me. I still have some of the challenges I had when I was 21. The difference is I can laugh at myself a little more, I'm more self-aware, I can move through it."

She glances outside. It's still not snowing in Connecticut; maybe it is in Ohio. It's striking how clearly Clatworthy recalls her past. She blinks and she's back there. In some ways, she never left.

— Ben Walker is editor of *Dialogue*


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Kate Cooper is head of research, policy and standards at the Institute of Leadership & Management

When clients begin to discriminate on grounds of pay parity, businesses will undoubtedly work harder to close the gap

KATE COOPER

The UK's transparency policy will create a virtuous circle

Pay gap reporting will help productivity

To London, where the gender pay gap is big news. On 4 April, all UK companies, charities and public sector bodies with more than 250 employees had to submit their gender pay gap figures – the difference between the average earnings of their male and female staff.

Former deputy leader of the UK Labour Party, Harriet Harman, proposed the initiative when the centre-left party was last in power in the early 2000s. It met with considerable resistance from her cabinet colleagues – and even the equality sector. Resistance often comes from where we least expect it. Harman persisted, insisting that forcible transparency was vital to equality. Her clause remained in the legislation, which finally came into force this spring.

Initial analysis of the data reveals the stark disparity that more than three-quarters of UK companies pay men more, on average, than women. These findings are publicly available and, by being so easy to understand, provide organizations with clear targets for improvement and empower individuals. Women, particularly when job seeking, can consider what a large pay gap reveals about the culture of an organization.

Many companies rushed to justify their pay gaps. But the time and energy spent in defence contributes to maintaining the status quo. It also avoids the real issue, which is the "so what?" This question must be asked – and answered – if the gap is to be narrowed and, eventually, eliminated.

Irrespective of the moral argument for equal pay for equal work, research repeatedly shows that there is a clear business case for diversity (McKinsey 2015). Leaders must do all they can to facilitate this by creating equitable and inclusive recruitment, retention and reward policies.

A pleasing by-product of the legislation is the requirement for British companies to publish the average hourly rate for a job. Standardizing the hourly rate, irrespective of the person doing the job, helps to address many inequalities. Those involved with recruitment can take this opportunity to lose the legacy of a higher or lower salary that a new employee may bring with them – and pay for the job, not the person.

A recurrent theme in our own research is the great value people place on flexible working. This may mean hours spread differently across a week, but it might also mean fewer hours at work. Clear and transparent communication of equitable hourly rates will contribute to pay parity between part-time and full-time employees. A person working fewer hours per week should receive the same hourly rate as a full-time employee doing the same job. This parity is both rational and ethical because doing more hours does not guarantee better quality and should not attract a higher rate of pay. It might even be that the law of diminishing returns applies to those working more hours.

Whenever a supposedly disadvantaged group receives attention and, in this case, direct action, it invariably draws comment from those concerned with the interests of other less privileged groups. The demand for gender pay parity and establishing rates for the job, not the person doing it, should inevitably have a positive impact elsewhere.

Campaigners who highlight injustice experienced by one group – whether that is discrimination because of social class, ethnicity, religion, disability or sexual orientation – need not be wary that the current focus on gender will diminish their profile. It will enhance it. The right to equal reward is not only a woman's right, but the right of all groups who are discriminated against and whose contribution and potential are not fully appreciated.

Gender may turn out to be merely the first of many ways in which we explore pay, and opportunity, disparities. Ultimately, though, it may be customers who force businesses to address pay gaps. When clients begin to discriminate on grounds of pay parity, businesses will undoubtedly work harder to close the gap. She who pays the piper, calls the tune.


STAFF REVIEWS
keep
shut

The strange death of employee feedback

That giving fair feedback is challenging is no reason not to do it, write **Sergey Gorbatov** and **Angela Lane**

It's not easy being fair. Giving balanced feedback is fundamental to business, yet all too many managers find doing so incredibly difficult.

There is a vast body of evidence, research and advice on giving feedback. Yet it makes little impact – some 90% of managers, employees and HR professionals are unhappy with their performance management practices. Given this, it is little surprise that more and more organizations are reviewing their performance-management systems, looking for greater simplicity and added value.

Yet having analysed the available academic and practitioner literature, we urge HR practitioners to consider the scientific and empirical evidence about feedback before implementing changes to their performance-management practices, because the discussion on the contribution of performance-management processes to the provision of feedback has become tainted by prejudices.

Managers are not entirely to blame, but they are without doubt complicit. Just look at the many reasons managers give for rejecting performance feedback.

- Few managers truly believe that feedback is important for the productivity of their business. They may accept that feedback is useful in the development of individual and organizational capabilities in the long-term, but their focus is on immediate business results
- Political and relationship obstacles get in the way. Managers often withhold feedback, or distort it to be unjustly positive or negative – appraisals get inflated or deflated. Misleading employees about their performance is commonplace
- Managers may be eager to develop their team members, but do not know how. They lack a focused, disciplined means of collecting evidence, and choosing the right words and ways to deliver the message
- Everybody has a point of view and their own theories of how performance at work should be measured and managed. Hence, managers may ditch evidence-based guidance in favour of homegrown fantasies about performance and development

All these factors can be mitigated (see table p43). A feedback culture, where individuals continuously receive, solicit and use formal and informal feedback to improve their job performance, is possible, given three conditions:

1 Feedback is of high quality
2 Its importance is emphasized in the organization
3 There is sufficient support for using feedback

Companies tend to rethink their performance-management systems because they are failing to deliver the one thing they are supposed to be doing – increasing individual and organizational performance.

Research shows that performance appraisal without regular feedback is not sufficient – appraisals must be supported by feedback, otherwise their effectiveness is considerably lower. Simply changing the performance management system, abandoning performance rankings and ratings, or moving from an annual appraisal frequency won't solve the fundamental issue. All such so-called 'solutions' are not worthy of the name – they are effectively throwing the baby out with the bathwater. In a 2016 *McKinsey Quarterly* article, authors Ewenstein, Hancock and Komm noted that systems designed by HR today do not support leaders in providing useful and timely feedback to their employees.

Getting HR back on the right performance review track

Performance-management systems are often criticized for not increasing performance. Blaming the system, many are abandoning more structured, traditional processes in favour of less structured approaches. But performance depends on fair, focused – and frequent – feedback.

The role of HR departments is to ensure leaders deliver such well-structured feedback by designing solutions that 'manage' the complexity, not simply remove it because we don't like it or can't solve it. Of the top few dozens of companies listed in Glassdoor's 'Best Place to Work in 2017' award, hardly any have abandoned ratings systems. Yet the most commonly mentioned plus points of working at such places include 'steep learning curve' and 'professional development' – implying that employees find the existing systems helpful. That said, the actual system is the easy piece to change, while the more difficult and important component is developing the right culture and manager behaviours.

When managers have the right beliefs about feedback, their job becomes so much easier. The truth is that we change and update our beliefs about how this world works all the time. A danger of that is that we are also more likely to be influenced by the 'bright, shiny objects' or 'trends *du jour*' – psychologists call these 'salience' and 'recency' effects. HR must guard organizations and their leaders from such cognitive biases and work hard on building beliefs based on proven scientific evidence.

Traditional cognitive psychology tells us that 'belief updating' has a sequential nature. We receive information piece by piece, then we form impressions that grow and change over time, and if we sufficiently repeat the same process with similar information, it becomes a belief. In her latest book *Act Like a Leader, Think Like a Leader*,

HR's role is to ensure leaders deliver such enlightened feedback by designing solutions that 'manage' the complexity, not simply remove it because we don't like it or can't solve it

COMMENTARY

New approaches to performance management

The field of performance management has been in turmoil lately. Consultants get rich. Employees get confused. Leaders get frustrated. Why? Following a small number of high-profile companies abandoning traditional performance management (including Adobe, GE and Accenture), HR executives have positively run to catch this trend to show that they, too, can be on the cusp of the wave. We have seen many examples of similarly attractive propositions – emotional intelligence, authentic leadership, Millennials – but emerging evidence proves that those approaches are either not scientifically robust, or utopian, given the realities of the organizational life.

What causes people to latch on to soundbites, or half-truths, or even conveniently distorted facts? Why does a phrase such as 'employees don't like ratings' become a call to redesign approaches to performance management without considering the science?

We aren't necessarily arguing for ratings – an expert panel debate at the 2015 Society for Industrial and Organizational Psychology conference showed that there are as many advantages of doing away with performance ratings as there are drawbacks. But we are arguing for a pause before jumping into a hasty performance-management redesign.

FIXING FEEDBACK

Let us look at the most common problems in the manager-employee performance-discussion relationship, collected from the literature analysis and our professional experience, as well as some potential remedies to redress them.

DIAGNOSIS	SYMPTOMS	TREATMENT
Managers do not have a long-term interest in employee development	– Feedback conversations are avoided or delayed – Feedback is distorted	– Ensure managers' accountability for employee development is part of your company's workforce philosophy – Link managers' performance assessment and rewards to how well they develop others – Increase transparency of your talent management practices, compelling managers to comply
Managers focus on short-term business objectives, while investment in human capital is deprioritized	– Employee development is paid lip service – Feedback sessions take place as part of formal performance process but no meaningful and useful information is given to change performance	– If your organization tracks employee engagement, focus on items that measure manager effectiveness. Hold managers accountable for these – Formally define the manager's role in employee development, and communicate it widely
Managers are not good at assessing performance	– All subordinates get similar treatment in performance conversations – Subordinates focus on the evaluation of their performance and not on the way forward – Employees are given the benefit of the doubt	– Over-communicate the organizational standards for assessing performance, which are simple yet comprehensive – Provide relevant tools, training and support to the managers
Managers avoid difficult conversations	– Too much or too little feedback is given – Feedback sessions appear artificial and their impact is reduced – Nurturing style – 'Sugar-coating' and inflation of the impact of individual contributions	– Provide regular training and guidance on having conversations about employee performance and the importance of having a growth mindset – Equip managers with simple tools that help evaluate employees' performance, and shape tailored feedback messages

Herminia Ibarra reverses the long-held opinion that we need to think and believe certain things before we behave in ways that are consistent with those beliefs. She brings to the fore the idea of 'outsight': behaving like a leader first will lead you to start thinking like one. This brings us to an updated formula that explains how people come to hold certain beliefs: "I know" – "I say" – "I do" – "I believe". Using it, we develop the messaging for building feedback culture in the organizations:

"I know"
HR must start by equipping organizations with the facts about performance feedback

"I say"
HR must design smart talent processes that provide practical support to leaders to craft quality feedback and require them to share it

"I do"
HR must make the process easy and repeatable. Having made it easy, there must be 'teeth' in the process – consequences for not doing it

"I believe"
This is hard work. There is great pressure to satisfy myriad stakeholders who have a vested interest in short-term performance and current relationships. Yet organizations benefit from staying on message, and not abandoning processes in response to short-term trends or fads. With consistency, come results. With results, comes confidence

Human performance is complex. There is, however, no shortage of scientific evidence on what increases performance. Feedback is one element. It lends itself perfectly to a structured approach, which connects feedback to strategy, to considerations of what and how, to context, and to a learning outcome.

Good feedback is a crucial element in individual and organizational performance. It is time to support it with improvements; not shortcuts.

— Sergey Gorbatov is adjunct professor at IE Business School and director general manager of development at AbbVie in Madrid, Spain. Angela Lane is vice president of talent and development at AbbVie in Chicago, Illinois. This article represents the authors' personal opinions and not those of their employers

The imagination imperative

Routine thinking leads nowhere in times of change, writes **Pete Gerend**

Do you believe leaders are inherently imaginative?

Is it possible that leaders emerge because they are somehow better equipped to see things that the average person cannot? Or do the best leaders acquire tools that allow them to constantly work to expand their imaginations?

Last year, I worked with the top 80 HR people from a global financial services company. Part of this work entailed walking the group through an exercise using a strategy cascade developed by Robert Martin & AG Lafley. The first step of the framework is to 'define your winning aspiration'. Around this I asked each leader to develop a point of view on the destination their organization was hoping to reach.

After a few minutes, one of the leaders raised his hand.

"I'm not sure what I'm supposed to do," he said. "We don't have a clearly defined destination."

A troubling statement indeed. "What do you mean?" I asked.

"My team is just responsible for compensation and benefits. We outline the plans for people across the organization. We don't have a vision."

I was more than a little surprised. And more than a little worried. This company has tens of thousands of employees worldwide. Interpreting the company's vision through the scope of how he and his team approaches supporting those employees for their hard work – compensation and benefits – would affect firm culture and employee retention, and would be an impactful magnification of the overall corporate vision.

We went back and forth a few more times and I learned that not only had he never created a vision for his team, neither had he any role

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models internally who'd done anything similar. He'd been in HR at the company for more than 15 years. To his mind, compensation and benefits were only about execution: do the analysis and then implement the plan. Everything about his experience in his area of expertise had brought him to the place where he believed no vision was required.

I've seen this pattern repeated in countless organizations across different industries. Leaders at the senior-most levels have learned to operate in a particular way through patterns that are hard to see and even harder to change. According to one senior vice president: "Our senior executives don't know how to lead in the new environment. On some level they get it intellectually but they don't have the experience, mental models or role models to change. At lower levels, we're all busy doing more of what's worked for the last 150 years because that seems like the way to get ahead. That's a risk now because so much is changing."

Often, particularly in hierarchical, technical companies, leaders are limited by the siloed and linear manner in which they have generated success. They've mimicked – often unintentionally – the successful leaders who preceded them, reinforcing the systems of the past, and neglecting the opportunities to leverage their imagination to create a vision for something different and potentially better.

The challenge with that, of course, is that the world is constantly changing. Leaders without the imagination needed to solve new problems present a clear corporate risk. It takes imagination to shape the visions that will allow for the requisite changes to meet the challenges of new client and customer preferences, digital disruption, expectations around diversity and inclusion, and a changing workforce. Such shifts are completely upending operating models in many industries.

For example, in the area of HR compensation and benefits, employees – and, more importantly, those highly coveted potential employees companies are competing for – want and need vastly different things from their employers today. They need their employers to imagine with them a new reality. As a result, corporations need to be developing new approaches to competitive benefits (i.e. flexible work arrangements, paternity leave, part-time gigs, different insurance arrangements, etc.). The executive who sees his role as: "...just responsible for compensation and benefits...we don't have a vision," is not developing the necessary imagination skills to help his company compete in that new reality.

Here are three concrete, actionable ideas on how to spark this necessary shift to imaginative leadership:

During times of change, leaders need to see and create new possibilities with imaginative leadership

1 GET OUT OF THE OFFICE

Go visit your newest clients, customers and partners in your value chain. Listen to what's important to them. Ask them to tell you stories. With one of our insurance clients, we set up day-long immersive visits for senior executives with Millennials to hear how they thought about security. It turns out that their views were much more short-term than the executives ever thought possible. The immersions and open conversations helped the executives begin to imagine new ways to provide useful products and services to an important market segment.

2 LOOK UNDERNEATH THE HOOD

When you keep running into the same challenge over and over again, it's important to see where your beliefs and behaviours are getting in the way. With another client, there was an expressed desire for greater collaboration. The chief executive advocated it and people understood that it mattered. However, it was not happening. We heard stories from 20 top leaders and mapped the patterns in the stories to see what was really going on. It turns out that both leadership beliefs (like independence and conflict aversion) and structures (like individually oriented incentive plans) served as barriers to the leaders' ability to even see that meaningful collaboration was even possible.

3 INVITE DIFFERENT PERSPECTIVES

Different people with different experiences can bring new ways of tackling problems. Too often, in the busyness of our day-to-day lives, we default to including the same people. Recently, a senior leader at a major foundation was struggling to get compelling applications for a new grant offering. An external collaborator suggested that he engage a group of young people from outside the organization. In less than an hour, working with the leader, the small team came up with a crowdsourced process that leveraged new collaboration tools. The result was both an improvement in speed and in the quality of the ideas.

Most of us have been conditioned by years of effort to execute the work in front of us, and it's easy to follow the patterns that have been established over our careers. That behaviour is fine during times of stability. But during times of change, leaders need to see and create new possibilities. In order to do that, we have to get out of our established routines and break free of the ways of thinking that confine us.

— Pete Gerend is a global managing director at Duke Corporate Education and visiting professor in psychology and neuroscience at Duke University

Vivek Wadhwa is distinguished fellow at Carnegie Mellon University's College of Engineering and author of *Your Happiness Was Hacked*

VIVEK WADHWA

A digital skeleton key poses a clear and present danger

Forget AI. Quantums are the real threat

There's an old maths problem called the travelling salesman. The salesman has to visit a designated set of cities – only once each – then return to his base in the first city. The answer to the puzzle lies in plotting the most efficient route possible. Like many great maths problems, it becomes exponentially more difficult as the setter ramps up the variables. It is child's play to plot a route between two or three cities. It gets a little harder by cities four and five. Once the itinerary reaches 22 sites, it would take a modern laptop 1,000 years to solve.

A quantum computer could plot the route within minutes. Rather than solving problems as conventional processors do, with their conventional algorithms which are based on binary combinations of zeros and ones, quantums can hold a value of zero and one simultaneously. A human analogy would be cracking a combination padlock by trying every combination at the same time.

> It is akin to cracking a padlock by trying every combination simultaneously

Quantum machines sound like the hackneyed product of science fiction writers' overactive imagination. Yet they are almost real. IBM, Google, Microsoft and Intel are preciously close to developing a fully working model. IBM already offers an early version to its cloud clients.

So what? The advance of computing power is surely something to be welcomed? Not always. The lock analogy is particularly apt because it extends into the possible uses of a quantum computer. If such a machine can solve a 22-city salesman problem in minutes, how long will it take to crack confidential email servers, password databases and corporate bank accounts? There are a finite amount of combinations possible, and a quantum could try them all in a heartbeat.

The consequences for a national government that lags in the quantum computing race are breathtaking. A malign foreign power could hold a digital skeleton key to its companies' treasuries, its citizens' bank accounts and the personal information of millions. Passwords are already cracked daily by human hackers. Imagine the prospects for a machine that can try billions of combinations in a few seconds.

Like much about the advance of technology, there are many benefits. Inaccurate weather forecasts might soon become a thing of the past. The search for a game-changing cancer drug might at last be within our reach. Even intelligent life on other planets might be found, as quantum computers are able to contact trillions of planets in short order.

Yet quantum computing presents a serious threat, not least because the world is not ready for it. Much of the business focus has been on the march of artificial 'intelligence', yet too few eyes have centred on essentially dumb machines that can test an incalculable number of combinations in a single moment.

There has been some progress in creating systems that are 'quantum safe' – digital fortresses that cannot be picked by a skeleton key acting at light speed. But there remains a huge challenge in rolling out these countermeasures to existing databases.

The technology sector, like most industries, likes a deadline. The last major mathematical maelstrom to be visited upon the industry was the Y2K bug – which was at least accompanied by a crystal-clear time of impact (the year 2000). There is no such deadline for quantum computing. Will it be ready in ten years, five years, 18 months?

The greatest danger is that many international systems are not ready for the onslaught. It remains very possible that an advanced power uses its quantum force to sweep up all the world's data – while other countries are still struggling with the salesman's route from cities five to six.

Machines. Why we don’t trust them

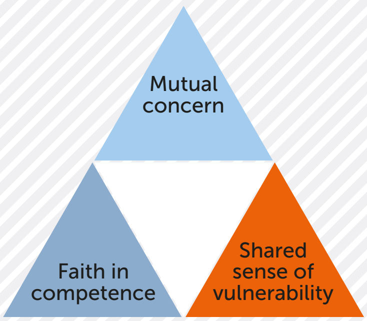
Until humans learn to respect the decisions made by robots, their utility will be limited, writes **Kurt Gray**

The radar told its own story. A major storm was heading our way. While I was still at college, I did some work for a geological surveying company, searching for natural gas supplies in the northern Canadian wilderness. Many of the sites we worked on could be accessed only by helicopter. The weather was intensely cold even when it was dry. In winter, in a snowstorm, it was downright dangerous.

The radio flickered. It was our chopper pilot with bad news. The wind and snow would make flying the helicopter perilous, he told us. Ian, our crew chief, had a choice: fly back to base with high winds and low visibility, or stay in the bush overnight with neither food nor shelter. He opted for the latter. We waited until morning for the storm to pass, huddling together around a small fire in the cold darkness. Yet at no point did I blame Ian for his decision. I trusted him implicitly that the alternative – the flight – could have been a whole lot worse.

Now imagine the same scenario 25 years in the future. Would Ian – a living, breathing human being be making that call? Quite possibly not. Risk assessment, particularly when the risks are directly connected to measurable, predictable factors such as short-term meteorological conditions, is being rapidly farmed out to robots. I wonder if I would have trusted “Ianbot” to make the same decision? Despite the fact that it would have weighed up the odds of death by freezing versus death by flying and come to a similar conclusion, I would probably have rejected its decision. Why? Humans seldom trust machines.

PYRAMID OF TRUST



The empathy factor

The evidence, including my own research, shows that humans are unwilling to trust robots – with their lives or otherwise. This lack of faith in AI has potentially huge consequences for the next few decades. Like an ostensibly competent employee whom, for whatever reason, you do not trust, they are of limited utility. We risk investing billions to make robots with incredible processing power, but to whom we give only the most mundane of tasks.

The problem comes from empathy, or perceived lack of it. My research shows that humans are almost universally disinclined to credit machines with any notion of ‘feeling’. The calculations made by Ian and Ianbot would be largely similar – assessing the probability of tragedy via exposure versus a snowbound chopper flight. Yet because Ian can feel for my team’s plight and Ianbot cannot, we are much keener to take our chances with the human.

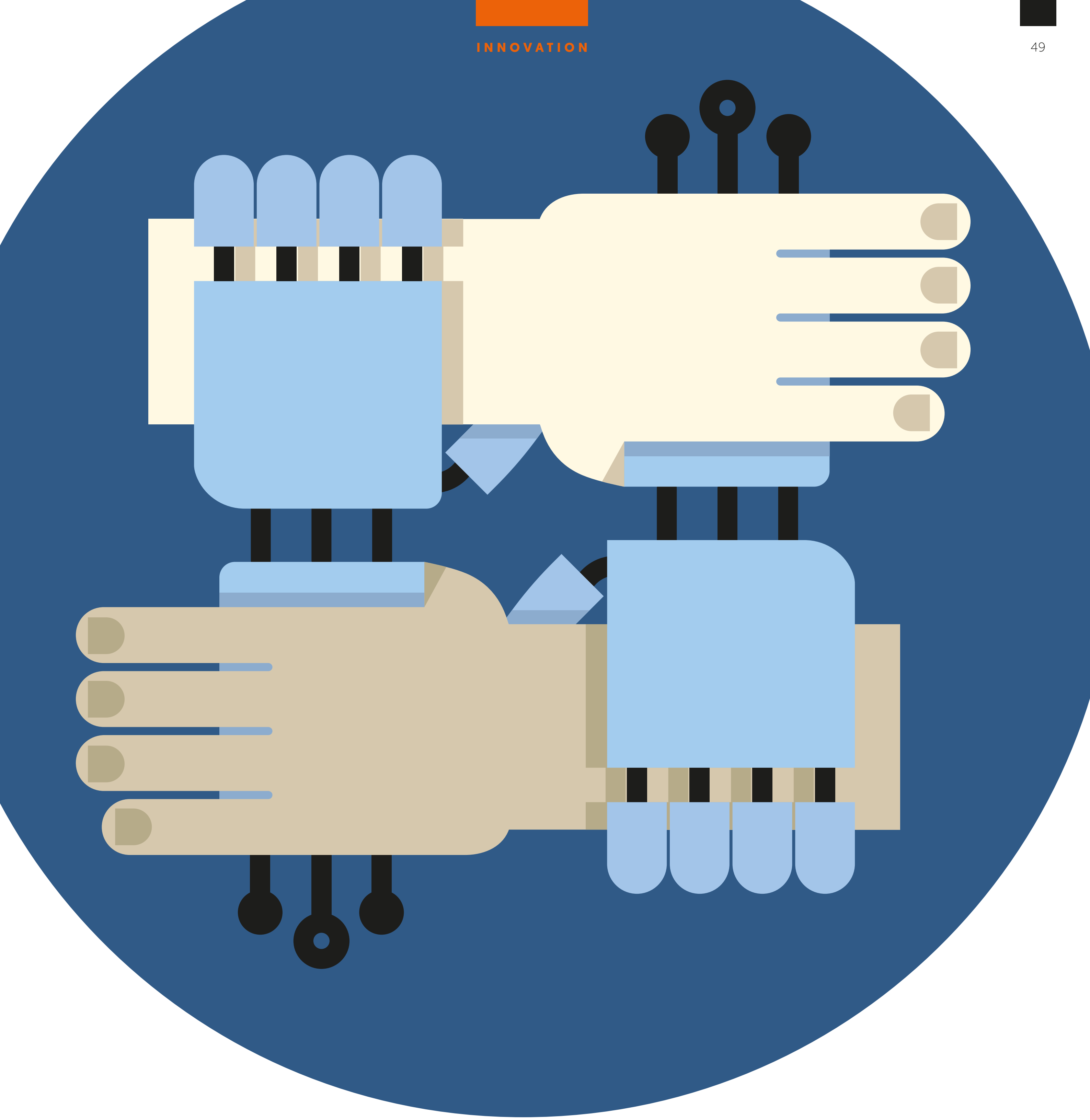
To be a trusted team member, you need at least three qualities: mutual concern, a shared sense of vulnerability, and faith in competence. Of these three crucial factors, mutual concern is the most fundamental – unless you are convinced your boss, colleague or supplier cares for your own wellbeing, you are unlikely to trust him (see graphic below left). Humans know that robots – currently at least – don’t genuinely feel that concern (although they may express it), so trust is hard to come by.

Partly to gain trust, humans act irrationally – a leader of a regiment might offer to take on a very risky solo mission himself, for example. In a more mundane business setting, a senior manager might deliberately pick up a meeting with an unhappy, volatile client despite the fact that doing so would leave her exposed to criticism and perhaps incur damage to her reputation. In the *patois* of business life, we call it ‘taking one for the team’.

This ultra-human strategy works as a powerful facilitator of trust because it taps into the second point of our pyramid – a shared sense of vulnerability. The manager who meets the volatile client is vulnerable. She might be reported by the client to her superiors; she might even lose her job. Because her team members know this, they are more like to credit her with their trust. A machine, which cannot feel the dismay of censure or rejection, has nothing to lose by taking such a risk.

Fickle masters

Yet despite our misgivings about machines, we have a strange predilection for believing them to be omnipotent – at least in the short-term. Handed a new technology, humans tend at first to think it can do everything: they have an overblown faith in its competency.



Sadly, this faith is as fragile as it is exaggerated. It seems that as soon as the technology makes one key mistake, its human masters are prone to abandoning it altogether. The technology rapidly descends from being perceived as being able to do everything, to being able to do nothing. Whereas managers are often sanguine about their human employees making some mistakes as long as they learn from them, they rarely afford such courtesy to AI. The utility of robots will be limited until we learn to trust them, and that is a long way off. Until robots can prove to us that they can feel, they will remain outside our circle.

Yet AI remains hugely useful. Have I changed my view about the fictional Ianbot making a life or death call? Not really. I would still prefer a human being to make the final decision. But I recognize that AI – while limited – is powerful. Had we benefited in those days from meteorological algorithms capable of forecasting snowstorms several days out, I probably wouldn't have travelled there in the first place.

— Dr Kurt Gray is associate professor of psychology and neuroscience at the University of North Carolina

Towards the human city

Technological solutions alone won't solve the world's problems, writes **Jonathan Reichental**

The story of the human journey doesn't end well for us or the planet. The final chapters are unpleasant, and arrive far too early. That is at least my prediction should we fail to confront a series of sobering and time-sensitive choices.

In our brief human journey, we've travelled quickly from caves and jungle to concrete and steel. Today, more than half of all humans live in a city. By mid-century that number will exceed 70%. Our destiny has millions of us packed tightly into a dense maze of manufactured infrastructure. The downsides of this urbanization are clear. Yet cities have generally served humanity relatively well, helping to lift billions out of poverty and making possible a staggering array of conveniences, from running water to high-speed internet. Without a doubt, the future belongs to cities.

Cities generate most of the world's GDP. They are becoming the new centres of power, increasingly drawing it away from national governments. In just a few centuries, significant tragedies notwithstanding, cities have redefined the human experience.

At what cost has this prosperity been delivered? We've pounded our earth with increasing speed and scale to mine the fuels to power our urban marvels. We've pushed our natural ecosystem beyond its capacity to function normally to feed the growing billions of urbanites. We're spewing toxic chemicals and waste into our rivers, oceans, and the air we breathe. This pollution kills millions of us every year.

Our multigenerational investment in infrastructure is in tatters; in many instances transportation networks barely function; the environment is a mess; and we've been delivered the ultimate punishment in the form of a climate crisis. In its unfortunate extreme, our human behaviour has had dire consequences.

That's our shared story so far. If you're keeping score, I'm not sure if we're still winning. But I'm an optimist. All of this is fixable. We can win. Since we created this mess in cities, we're going to fix it in cities. The fate of our planet and thus our human destiny rests largely on what we decide to do over the next few decades. We're in charge.

Since we created this mess in cities, we're going to fix it in cities

Einstein said, "We can't solve problems by using the same kind of thinking we used when we created them." We're going to need a whole new set of tools, and frankly, more importantly, behaviours – a central theme I'll return to shortly. We'll need to invent and deploy new technologies that don't yet exist. We'll need bold ambition and unusual entrepreneurial risk-taking in both the private and public sectors. Small ideas, incremental steps and half measures simply won't cut it. Put another way, let's not waste our time with those. Time is not on our side.

I'm confident the necessary technology will emerge. We're seeing some of it already. Low-cost sensors, the Internet of Things (IoT), data-driven decision-making, autonomous vehicles, drones, solar, and so much more. Technologists promise us a better future. They'll tell us they can sell us platforms that will make our cities smarter. Some of it will. Much of it won't. Why? Isn't technological innovation the antidote to every ill we see in the world? Not on its own. And not when it comes to our cities. For this we'll need an alliance of human and machine.

There's a tendency towards technology-centric solutions. It's a compelling convenience. But city solutions that don't mix the human experience with technology to augment it will fail or – at best – marginally succeed. We must make people again the central context of our future city planning efforts. For example, we built our modern cities around cars, not around humans. How different would they look and function today had we insisted on building cars and the attendant infrastructure using human-centred design?

Let's return to the theme of behaviours. My observations suggest that we're currently inclined to build technological solutions that focus on fixing issues in the context in which they appear. For example, we won't reduce the cost and environmental impact of carbon-based energy in the long-term by producing more of it and attempting to make it cleaner. Instead we must continue to explore and adopt alternative sources of energy that are inherently more abundant and environmentally friendly. Then we must incentivize new behaviours like buying electric cars

and replacing our lightbulbs with more energy-efficient ones. Next we must codify and regulate it. That's when we can make a difference. Technological solutions in isolation are doomed to fail us.

Yet we know how to progress because we've faced great human dangers before, and conquered them. We know that we must innovate. This time though, the challenges are far bigger. They are existential and have greater urgency. The human race is almost eight-billion-strong and rapidly headed towards a peak of 11 billion. What will it take to radically shift our calculus? We need a massive mobilization of community engagement, from the smallest villages, to the growing list of mega-cities. We can look to the environmental movement, or positive hacktivism and citizen scientists as examples. We'll need more empowered and risk-taking public-private partnerships. We'll need to figure out how to systematize this engagement and do it at scale.

The story of civilization has always been about the story of people. Let's put them back in the centre of our city design. Technology will remain our greatest tool, but the human experience will remain at the core.

I'm an optimist. I know we'll do the right thing. But we'll need you and your organization to participate. Our future depends on it.

— Dr Jonathan Reichental is chief information officer for the City of Palo Alto, California

Phil Young PhD is an MBA professor and corporate education consultant and instructor

PHIL YOUNG

Everyone needs to understand why profit is measured in different ways

Acronyms aren't as simple as A, B, C

Some years ago, when I was attending an academic conference at a regional university, I decided to visit their bookstore during a break in the proceedings.

To my surprise, in the section of the store selling baseball caps and sweatshirts with the college name and logo, I spotted a pile of T-shirts that read: "I Love EBIT!" (accompanied by a red heart). I had a good chuckle about what I supposed was a neat in-joke for the school's business majors. Granted, earnings before interest and taxes (also called operating profit or operating income) is a familiar acronym to finance students and professionals alike. But my experience indicates that this very important financial measure often needs to be clarified and explained to non-financial managers and professionals. The same goes for a related term EBITDA.

There are three basic measures of profit: gross, operating and net. Gross profit is revenue minus costs. Operating profit is revenue minus costs minus expenses. Net profit is revenue minus costs minus expenses minus interest and taxes. In financial reporting and analysis, 'earnings', 'profit' and 'income' are often used interchangeably. Therefore, what is EBIT or earnings before subtracting interest and taxes? Right! It is none other than operating profit or operating income. So why do finance and accounting professionals confuse non-financial people by throwing in another term and its accompanying acronym? I don't know. But I do know that if non-financial people are confused by the interchangeable use of these terms, they might also be confused about the crucial issue behind them: what companies and their people need to do to improve these metrics.

An acronym related to EBIT, namely EBITDA, can be even more of a mystery to non-financial managers and professionals. EBITDA stands for earnings before interest, taxes, depreciation and amortization. Because both depreciation and amortization are non-cash expenditures, EBITDA is a simple measure of a company's operating cash flow.

For the senior leaders of a company that uses EBIT or EBITDA as a key measure of performance, it is important to ensure that their employees at least understand the meaning of these terms. Otherwise it maybe not be easy for them to understand how and why they can make an impact on these measures. For example, if the financial goal is an improvement in a company's EBIT margin (sometimes referred to as margin expansion) then their employees should be ready to do what is needed to control all costs and expenses while revenue is increasing. If a company chooses EBITDA rather than EBIT, then their employees should focus on variable costs and expenses rather than on the fixed costs and expenses in the form of depreciation and amortization.

Here's another variation to the EBIT acronym that I came across in a recent client engagement: this particular client uses EBITA, or earnings before interest, taxes, and amortization, as a measure of its business units' performance. Depreciation is the accrued (non-cash) cost of using of tangible assets, such as plant and equipment. Amortization is the accrued cost of using intangible assets, such as software and intellectual property. The client that uses this measure of performance has a lot of tangible assets and also has a lot of intangible assets because of some major acquisitions. Because amortization is an expense stemming from corporate-level decisions, the company decided to exclude it in the measure of the daily operating performance of their business units.

Financial leaders have a plethora of options at their fingertips, yet their aim must be to choose a measure that best reflects the goals of the business. That done, they must ensure that non-financial teams understand the term you choose. If they don't, they are unlikely to grasp the goals of the business either.

Leaders must ensure non-financial teams understand financial measuring terms used in their organization

How to survive a minefield

There are traps associated with the 'fail fast, fail cheap' principle. Here's how financial firms can avoid them, writes **Camelia Ram**

Negative outcomes tend to stimulate the search for causes, whereas good outcomes tend to elicit little cognitive activity

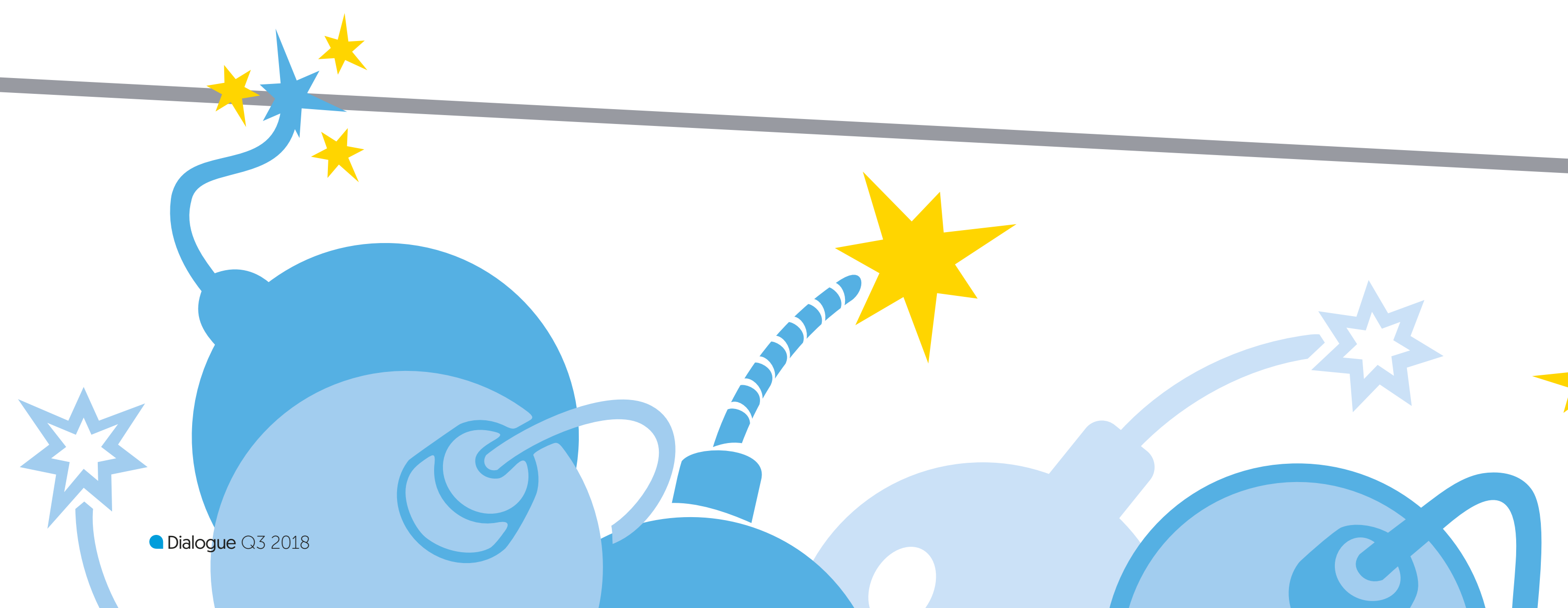
Negative emotions exert an important and powerful influence on actions. Psychological studies show that we tend to regret things that we do not get to act upon. On one hand, this knowledge can stimulate action over inaction. On the other hand, perceived obstacles, painful emotions and past experiences can trigger a protective stance. This is harmful at individual and organizational levels, as it inhibits learning from mistakes and choosing more effectively in future.

This phenomenon is particularly pronounced among traditional financial services players. Historically, banks have capably integrated new technology into their processes and systems. However, the financial crisis resulted in preoccupation with regulatory concerns. Innovation became a distant priority, and the image of the trusted banker was tarnished. Meanwhile, Google, WhatsApp and Amazon set a new bar for customer service. The banks have lagged. Now, the gap in service is being filled by several fintech companies. Peer-to-peer lenders to robo-advisors are competing on transparency, cost and efficient, timely service. The incumbent players in financial services, and indeed any sector defined by strong regulations and hierarchical structures, recognize that they need to fail cheap and fast. Yet many continue to struggle. So what are the key traps into which traditional players are prone to fall? And how might those traps be overcome?

TRAP 1

Planning for the future based on what worked in the past

For many of those who sit on the boards of banking and capital markets companies, there is no mandatory retirement age for directors, which leads to many serving well into their seventies. In a world of increased complexity, ambiguity and inequality, there is inherent risk that what customers value most is overlooked in favour of an approach where the company believes it knows what is best. The bias towards protecting legacy may lead to missed opportunities because outdated ways of doing



things are championed as part of brand identity. Protecting legacy is therefore confused with respecting legacy. The latter creates space for the right kind of failure while inventing the future. Projects where you know upfront that you do not know whether it will work create the space to learn as much as possible at as low a cost as possible. One example of this was the pilot project between OnDeck Capital and JPMorgan Chase on a digital banking small business lending product in early 2016. Chase, the main US banking unit, offered branding and funds. OnDeck provided the platform for almost real-time approvals and same, or next-day funding. In 2017, the partnership was extended for another four years.

TRAP 2

Decisions based on risk-avoidance

It has been shown that decision-makers who expect to have choices scrutinized with hindsight, such as physicians, chief executives and politicians who work within performance cultures, have a tendency not to take risks. This is perhaps due to the potentially irreversible damage to personal and institutional reputation, given the nature of the high-stakes decisions they take. Confirmation bias may also take hold in such situations, resulting in decisions being made based on information that supports a preferred view at the expense of alternative, equally valid information. Yet, it has also been shown that it may only take some simple and subtle manipulations to increase curiosity and overcome regret aversion. One such mechanism is to focus on no more than three 'big ideas' that will be true years from now, and enforce execution of those big ideas. For Amazon's consumer business, these are low prices, fast delivery and vast selection.

TRAP 3

Allowing negative outcomes to stall action

It has been shown that negative outcomes tend to stimulate the search for causes, whereas good outcomes tend to elicit little cognitive activity. The concept of regret can be especially helpful to risk-avoiding decision-makers in better understanding what is at stake.

Regret is the difference between the maximum achievable performance across all options, and the expected performance of a given option. While partnerships between banks and fintech startups can be fraught with challenges, when one considers the potential for long-term gain in terms of enabling access to billions of financially underserved individuals, there is little anticipated regret.

For example, MicroBank, a subsidiary of Caixa Bank, and Entrepreneurial Finance Lab Global, collaborated on a psychometric scoring model and machine-learning to assess creditworthiness. The new model led to an improvement in approval rates of credit requests by 50-60% compared to traditional risk models.

Fortune favours the active

The inclination to avoid risks can be circumvented in two main ways.

First is to recognize that doing nothing may incur regret in the long-term, while action now increases the odds of success over time.

Second is to invest resources with clear parameters on objectives, measures and timeframes.

Banks would do well to focus on better products, efficient delivery and low cost to create a financial system that works for everyone.

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Confessions of a power couple

Repairing the finance and sales relationship in business is key to success, writes **Kirsten Levermore**

Sales won't listen to me, whines Finance. Finance doesn't understand me, retorts Sales. It's a classic relationship problem. And it may be why half of US chief financial officers and executives believe inadequate sales talent is the number one barrier to revenue growth in 2018.

Coming to light as part of the 2018 CFO Sentiment Study, an annual survey by The CFO Alliance of senior financial executives in the US, the conclusion that more than 50% of finance executives lose sleep over sales could serve as the first step in reparations between the departments, and improved collaboration and top line revenue.

Trust issues

According to the 2018 CFO Sentiment Study:

- More than half of top-level finance executives believe current performance, lack of competency and 'thin' bench strength of existing sales talent is the key barrier to overcome in order to meet or exceed revenue growth objectives in 2018
- Two-thirds of US finance executives would like to upgrade current sales talent and sales support staff
- Some 77% feel their enterprises are less than effective at converting qualified leads to sales
- Only 36% of respondents find their enterprise is 'very effective' at securing and ensuring the loyalty of their current customers and clients

Yet finance departments' underwhelming opinion of sales divisions is balanced by a thriving hope for better performance. The survey also reports an overwhelming majority of finance executives believe better hiring and motivation of sales talent is critical to success.

I think the results are indicative that finance doesn't think it is collaborating well enough to aid sales in its efforts. Finance doesn't want to be a roadblock, but a catalyst to accelerate

THE 2018 CFO SENTIMENT STUDY

Now in its eighth year, the CFO Sentiment Study is conducted annually by New York-based The CFO Alliance and cloud applications provider Workday, and aims to capture the views of US-headquartered chief financial officers and top finance executives through 15-minute-long online interviews, with in-depth questions on subjects ranging from hopes and fears, to challenges and resulting strategies.

Of 500 surveyed, roughly 70% hold 'chief financial officer' titles, and 20% occupy positions at enterprises with annual revenues greater than $250 million, employing between 50 and 1,000 full-time employees.

Participants work in a range of industries

Business and tech enabled services	Non-profit
Construction	Real estate
Education	Retail
Financial services	Social media/digital marketing/ publishing
Food and beverage	Technology, SaaS, mobility
Healthcare	Transportation, logistics and warehousing
Life sciences/pharmaceuticals/ biotech	
Manufacturing *(consumer goods and industrial)*	

We need to talk

According to the 'solutions' questions in the study, finance chiefs pledge to join forces with sales from here on in, and work together on a more regular basis. Indeed, collaboration is already in full flow in some companies, with more than 40% of respondents already working cross-departmentally with sales, account management, strategy, operations, human resources and technology teams.

Furthermore, finance intends to take a real interest in sales' day-to-day work and challenges: almost half of finance executives would like to actively participate in account management, meaning client and store visits, improved people skills, and relationship-building skills – all of which could help number-orientated finance bosses better understand their sales counterparts and, in turn, encourage sales to incorporate their goals into strategies.

Reconcilable differences

Attempting to bridge the gap in the immediate future, the sentiment study reports the majority of finance executives plan to adjust how they measure the success of sales and marketing, moving from a traditional return on investment (ROI) metric to a return on objective (ROO) metric. The hope is that this will quantify and qualify the extent to which the enterprise has achieved an objective, as opposed to achieving a specific revenue figure. Whether this approach will find traction among more hardcore accounting and finance executives remains to be seen.

THE TROUBLE WITH SALES

2/3 of US finance executives would like to upgrade current sales talent

77% feel their enterprises are less than effective at converting qualified leads to sales

36% find their enterprise is 'very effective' at securing and ensuring the loyalty of their current customers

We can work this out

"I think the results are indicative that finance doesn't think it is collaborating well enough to aid sales in its efforts," says CFO Alliance president Greg Wood. "Our survey shows there's going to be significant investment in finance automation this year, as finance tries to put fewer handcuffs on the sales function – things like making it easier for sales to report and update its systems are on the agenda. It wants to know what sales need regarding analytics, fintech, dashboards, content etc. Finance doesn't want to be a roadblock, but a catalyst to accelerate."

Yet the lack of faith in existing sales talent is going to remain a sore point for the two departments, Wood notes: "From listening to our members, there is some concern about sales talent – whether someone who has worked in sales for ten years is the best person to sell tomorrow's cloud technology, for example. But finance has concerns about the suitability of existing talent throughout their organizations. And I think that creating the best teams for the best projects and accounts is something its technology investments and working with multiple teams is going to address."

Whether it is a question of two very different types of people, goals and strategies, or if someone simply needs to "try harder", results like these indicate 2018 may be characterized by the interaction between the finance/sales power couple, for better or for worse. And, with tensions brewing and stock markets zigzagging, it could be time to work on their relationship – before it spills onto the balance sheets.

— Kirsten Levermore is assistant editor of *Dialogue*

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Giles Lury is director at The Value Engineers and author of *How Coca-Cola Took Over the World: and 100 More Amazing Stories About the World's Greatest Brands*

GILES LURY

Why should marketing be easy?

Keep it complex, stupid

"We find cognitive effort at least mildly unpleasant and avoid it as much as possible." I reread this quote about 'System 2 thinking' from Professor Daniel Kahneman's *Thinking, Fast and Slow* recently, and realized how this may in fact be one of the causes of the dangerous oversimplification that we can see in much of modern marketing.

'Simplification is good and complexity is bad' seems to be today's marketing mantra. "In an over-communicated world you need an over-simplified message," suggested Ries and Trout in their famous book *Positioning: The Battle for Your Mind*. The marketing world latched on to the notion in the blink of an eye. Nowadays we look for single-minded propositions. We try to reduce things to "the one thing that…". We search for the big idea or the killer application.

As Faris Yakob, author of *Paid Attention* puts it, "We always look for the super simple 'insight' even in areas that are amazingly complex, like cognitive research. We are biased towards simplicity because we only ever encounter complexity in the real world." In other words we want to KISS – keep it simple, stupid.

This all fits with Kahneman's theory of 'System 1' and 'System 2' thinking. System 1 produces the fast, intuitive, more emotionally led reactions and instantaneous decisions that govern most of our lives and how we behave. It helps explain how we can do so much without really thinking about it; in a marketing context it explains how we can shop so fast – we're on 'autopilot'. System 2 is the slower, more deliberate and rationally led type of thinking involved in focus, deliberation, reasoning or analysis – such as calculating a complex maths problem.

System 1 is therefore easy, takes little effort and often happens subconsciously so it is more appealing (if we even bother to think about it). System 2 however, as the earlier quote suggests, takes effort and can be difficult, so is "mildly unpleasant".

But here's the rub: marketing isn't simple. Managing a brand in today's complex – even chaotic – world isn't simple. Quantum physics isn't simple, nor is the human brain or consumer behaviour.

Today's brands need depth and variety. Managing a brand is complex and difficult. Modern brands have multiple products and services, they need to cross boundaries of categories, countries and consumer groups. They need to engage different stakeholder groups with different messages and experiences at different times, in different places and across different media. Do you really believe one size will fit all? For example, is the BBC just about 'the news'? No, part of its proposition is to 'inform', but it also has a massive role in entertainment and education. The BBC isn't schizophrenic or difficult to understand: it 'informs, educates and entertains'… with authority, integrity and occasional brilliance. As Oscar Wilde put it in *The Importance of Being Earnest*: "The pure and simple truth is rarely pure and never simple."

The search for oversimplification has become so ingrained in marketing practice it is like an addiction, a System 1 addiction – making things appear easier and quicker. It's an addiction that affects many aspects of marketing jobs, from brand positioning to proposition development, from insights to innovation. It's time marketers kicked the 'habit' and engaged in more System 2 thinking. This should help address some of the issues and underlying tenets on which the search for oversimplification is based.

One of these is binary thinking – the idea that all arguments can be boiled down to a simple, two-way choice between something that is right and something that is wrong; that there is only one right answer. It is ingrained in us from our schooldays: 2+2=4. It's black or white. Unfortunately, in reality, in the world, as in marketing, it is shades of grey and all of the colours under the sun.

I'm not completely against simplification but I think Einstein probably got it right when he advocated, "simplify everything as much as possible …but not more." And that means marketers must engage System 2 thinking: embrace multiplicity and keep it complex, stupid.

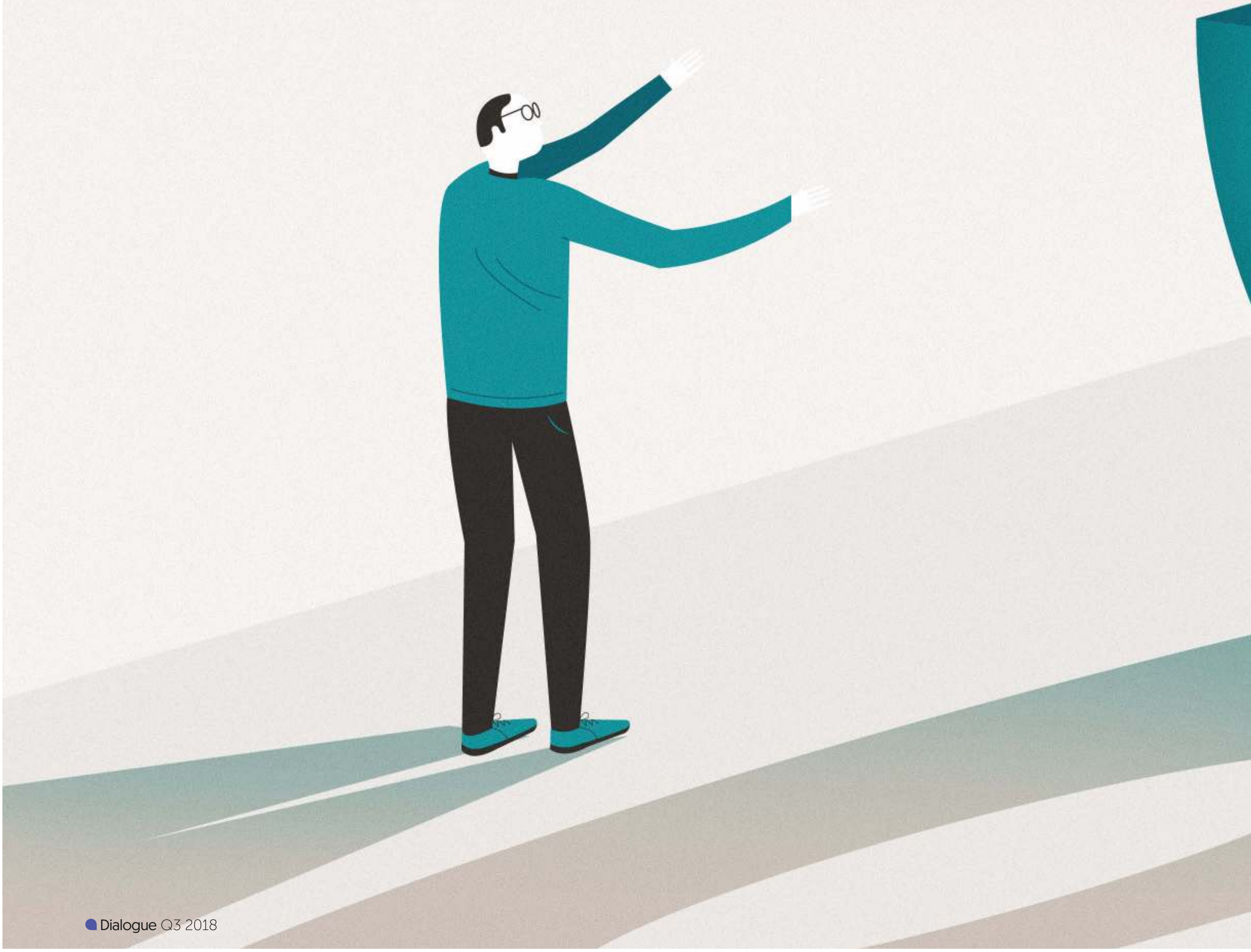
"The pure and simple truth is rarely pure and never simple" – Oscar Wilde

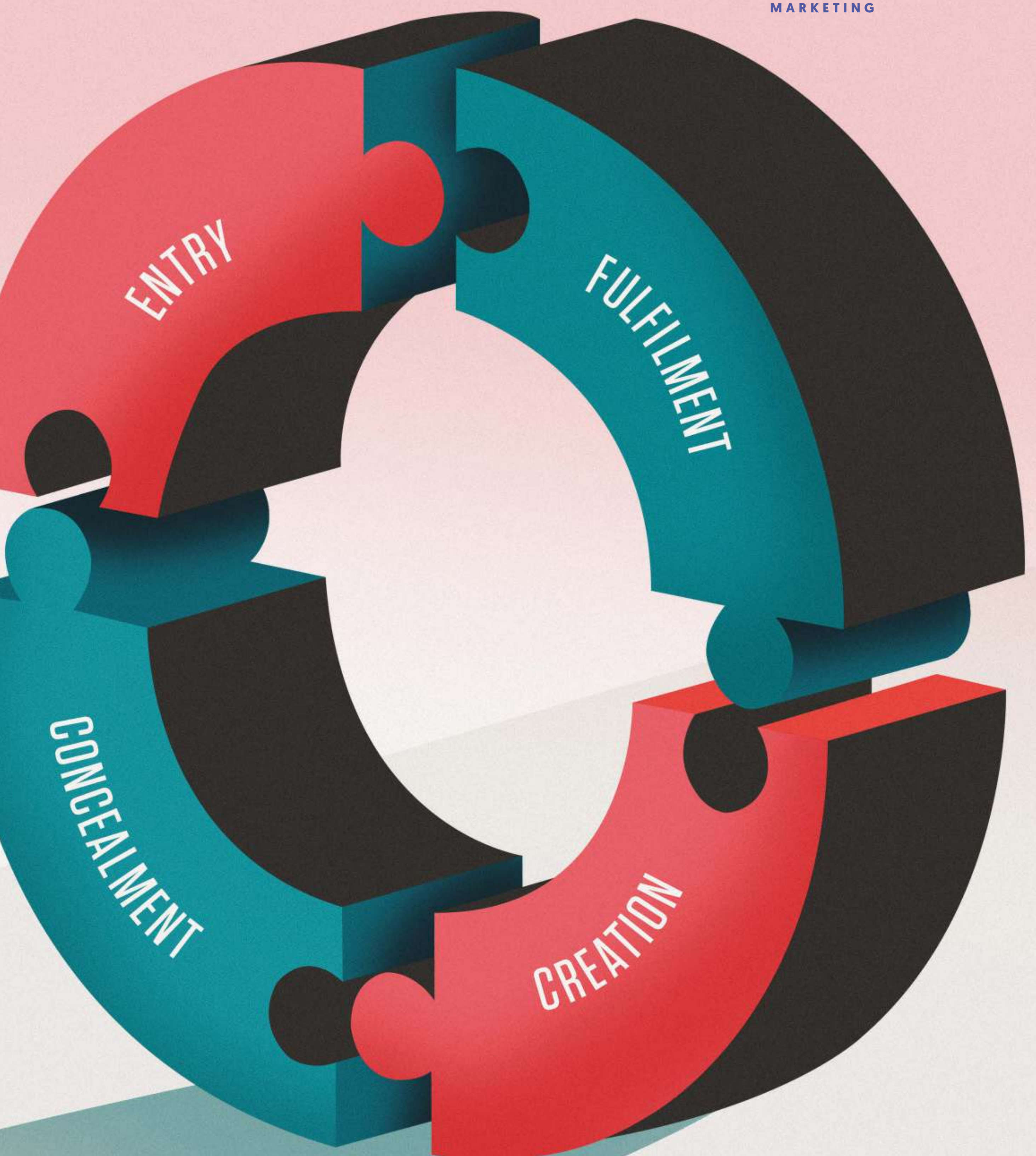
Entrepreneurialism the Drucker way

Peter Drucker knew how to build a business

WRITING
William A Cohen

ILLUSTRATION
Neil Stevens





Peter Drucker was the father of modern management – and a high-priced consultant to major corporations, billing as much as $10,000 for a few hours' work. Yet he made millions for businesses, so was worth every penny.

Drucker was quite different from other consultants. He applied four unique strategies to build his own career as well as his clients' organizations. They are not mutually exclusive, and more than one can be used at the same time. ▸

1 THE ENTRY STRATEGY

Dominance of a new market, new industries or unserved markets

The basic idea here is very simple. You enter and dominate a market or industry before anybody else does. While an unserved market is not new, serving it properly might be.

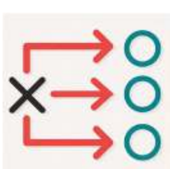
While during work for General Motors (GM) and writing *Concept of the Corporation*, Drucker discovered that management was considered almost an accidental activity. You could be in finance, accounting, personnel, production, sales, and so forth, but there was no department of management. When Drucker went to a bookstore to buy books on management that could help him with this early study, the shelves, unlike today, bore only a couple of volumes. Drucker set out to fill that unfilled need. After several years of study, practice and writing, he dominated the market for books about management. He reasoned that – to dominate the market – his books had to supply something that was missing. His books essentially established the field of modern management. He developed a market that was not being served effectively.

2 THE FULFILMENT STRATEGY

Creating a new market by supplying something that is missing

Drucker thought that there were two basic ways to supply the missing ingredient.

- Imitate an established success, but do so in a creative way that fills in the missing ingredient. He called this 'creative imitation'
- Find a product that has potential but is currently unsuccessful. He gave this the rather imaginative term of 'entrepreneurial judo'



Drucker consulting was like no other. He asked questions of his clients and forced them to provide the answers. Almost all consultants have the clients ask them questions and they assume it's their business to provide the answers. Drucker assumed that the client was in a much better position to provide an answer than he was. After all, his client was the expert in his own business – Drucker was not.

He asked two questions of Jack Welch (whom *Fortune* named 'manager of the century' in 1999) shortly after Welch became chief executive of General Electric (GE). "Are there businesses GE would not be involved in if you could do something – and if so, what are you going to do about it?"

Drucker told his students that, rather than bring his knowledge and experience to consulting assignments, he brought his ignorance. He charged as much as $10,000 a day for this 'ignorance'.

Steve Jobs of Apple recognized the need for the home computer and used the first strategy successfully. But the IBM empire struck back. It developed a computer operating system and a computer that became the standard in the industry. IBM's computer was not a technological breakthrough. What IBM did do was create a reliable machine that worked well, and capitalized on the IBM name and distribution system. Most importantly, it allowed anyone to write software for its system, something Apple didn't allow for its computers. With this strategy, IBM took over leadership of the market within two years. So, supplying the missing ingredient works – but so does creative imitation.

3 THE CONCEALMENT STRATEGY

Finding and occupying a specialized niche

Drucker called the third strategy 'occupying a specialized ecological niche'. According to Drucker, this can make a marketer immune from competition altogether – because the whole point is to be inconspicuous, or to be in a market of what appears to be limited potential, so that no one else is likely to compete until it's too late.

Drucker saw three distinct ways for implementing this approach. First, he suggested gaining a tollgate position. In other words, you control an essential piece of something needed by competitors, such that would-be competitors cannot do business without your product or service. Sierra Engineering did this by being the only company that could manufacture a unique valve for aviators' oxygen breathing-masks. If you wanted to sell oxygen breathing-masks, you needed that valve.

The other two ways to occupy a specialized ecological niche is to either have a specialty skill, or to work in a specialty market. Life is so specialized today, it is not difficult to acquire a specialty in which few can compete in a specific market. Once a chiropractor was a chiropractor, just as a doctor of medicine was a doctor of medicine. Today's professions are more niche and precise. For example, if you want a board-certified upper cervical chiropractor, there are fewer than 100 such individuals in the world.

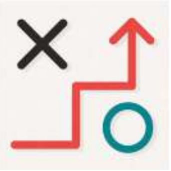
Drucker found products that had potential but were currently unsuccessful – he called this entrepreneurial judo

4 THE CREATION STRATEGY

Changing the financial characteristics of the situation

There are four ways of implementing this strategy, all having the ultimate objective of creating a customer. These are:

- Creating satisfaction
- Pricing in accordance with the customer's needs
- Adapting to the customer's social and economic reality
- Delivering what represents true value to the customer



Creating customer satisfaction

The ice cream cone might fall into this category, although stories abound as to who first came up with the idea. The first patent was issued in 1903 to an Italian immigrant called Italo Marchioni. Marchioni conceived the idea as early as 1896 to solve the problem of his customers breaking or walking off accidentally with the glassware that he had used to hold their ice-cream. He increased satisfaction by enabling them to eat the container. The number of ways to increase satisfaction are infinite. The US Post Office Department made it easier to ship packages by providing free boxes for priority shipping, and convenience to the shipper by charging a flat-rate price according to box size instead of weight. They encapsulated this in the slogan, "If it fits, it ships" – and dramatically increased sales.

Changing how something is priced

A price change works. Drucker said that pricing should be done in accordance with the needs of the customer and what the customer buys, not what the supplier sells.

Who would have thought that cameras would essentially be given to the customer along with the film? The customer really wants the photos. And so, customers today can buy a throwaway camera, film, and developed photos at an economical price.

With the advent of digital cameras and cameras built into mobile phones, there is no need for separate photo storage. Of course, pricing is used to encourage glossies, CDs, or imprinting your photos on cards, coffee mugs or other items. The pricing has changed from what the seller provides – camera, film, developing and the like – to what the buyer really wants. That's the key to this strategy.

Adapting to the customer's social and economic reality

Some marketers speak of the 'irrational customer'. Drucker said that there was no such thing. He stated that the marketer should assume that the customer is always rational, even though this reality may be far different from the marketer's.

Mary Kay Ash, the famed founder of cosmetics giant Mary Kay, told the story about buying her first new car on her birthday. She bought a different car to the one she wanted because a salesman from another dealership was more courteous and helpful. Why do potential customers sometimes buy the most expensive product? In their reality it is always the best product. And it is the customer's reality that counts.

Delivering true value

True value, like quality, is up to the customer, not the marketer. This is critical because customers, or organizational buyers, don't purchase a product or service. They purchase satisfaction of a want or need. This means it is their value.

Some companies spend millions providing additions that they think represent more value and are appreciated by the customer. Unfortunately, the customer may not think that these represent value. To a teenage girl, value might be defined primarily by fashion. Comfort might come a poor second. To the same teenage girl's mother, value may be represented by durability. To her father, value might be defined by price. Drucker knew that each customer has their own reality. That's why it's so important to do the market research.

— This article is adapted from the book *Peter Drucker's Way to the Top* by William A Cohen (LID, 2018)

The truth is out there

Reading between the lines has never been so easy, writes **Kirsten Levermore**

Since the dawn of marketing, we have longed to know what customers really think of us.

The modern incarnation of opinion-mining can now bring us the emotion behind the words of surveys, online reviews, forums, customer care calls and more, at a scale we could only have dreamed of, and at the speed of a broadband connection.

Mindreading may be near. But real value still requires work.

Text and speech analytics tools match the words, phrases and punctuation we use in social media, comments, forums, helplines, reviews and more to determine 'emotion' or 'feeling'. Words with a positive connotation are given one score, words with negative or neutral tones, different scores. These numbers can reveal truthfully how effective a campaign, latest product or most recent piece of content has been received.

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Prove it

Market researcher Winkle builds emotional profiles of reactions to campaigns, brands and pieces of content all over the world. Its chief research officer Phil Sandy tells *Dialogue* about a recent project to produce hard evidence of the importance of emotion in sales success.

"Winkle looked at more than two million reviews across 15 different categories," he says. "Using sales data for the products mentioned in the reviews, we were able to identify, from the way people were writing the review – so, not relying on a star rating or emoji rating – those with words demonstrating high signs of excitement early after launch correlate highly, not only with higher rating scores, but also with client data for successful products. Likewise, the products that had high signs of frustration and more negative emotions were products that didn't survive. So this big pot of data has been great for giving us hard proof of something we had always believed anyway: looking at emotional drivers is critical."

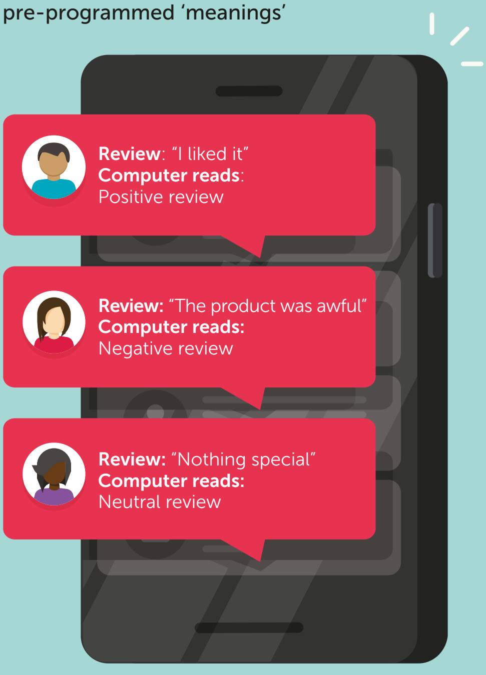
I shall not tell lies

If we already knew about emotion in marketing, then where is the value in sentiment analysis?

Founder of Speak with Persuasion, and digital marketing expert, Bas van den Beld, suggests that sentiment analysis is significantly more valuable than direct market research because of a simple truth: people lie.

MEANING MACHINES

Sentiment text analysis sees machines look for target words and patterns, and match them to pre-programmed 'meanings'



"In most surveys or in response to direct questions, people think they should give you the answer you want to hear. Sentiment analysis stops that," he says.

Sandy agrees.

"Natural language is not self-reported," he says. "Emotional analytics engines read between the lines by looking at all the language people are using, looking at the connecting language, the nuances, the style, and from there we can work out how they're feeling about something."

The environment in which the public react, for example, outside of a focus group or survey, is also a key benefit of sentiment analysis, Sandy adds.

"Out in the wild, in unprompted conversations, there is no reason for reviewers not to be honest. The danger when you recruit someone is that they also often feel they want to say something nice when you ask them their opinion."

> Sentiment analysis is significantly more valuable than direct market research, because people lie

Scale it up

Global social media marketing platform Socialbakers is no stranger to sentiment analytics. In fact, chief of strategy Moses Velasco points out, it's an age-old marketing tool, just on a new scale.

"'Positive', 'negative' and 'neutral' aspects of perception in relation to you go as far back as the customer review, even as far back as word of mouth. Digital just gives us an opportunity to collect it and work with it at scale, and measure and manage it a bit more effectively."

And with the internet-wide scale available, sentiment analysis could also mean the end of recruiting testers and survey respondents.

"Instead of a couple of hundred people, you could find a couple of thousand reviews, extract the themes behind the sentiment of those reviews and build the key emotional profile of them," Sandy proposes. "That has a robustness of its own that is difficult to match quickly and cheaply by conventional means."

Changing perceptions

"If you want to change your perception in the marketplace, you first need to understand it," Velasco says. "Using sentiment analysis, you can understand how the market sees you and their perception of us, and, hey, you have a benchmark from which any other content, activity, events you host, or things you do, have something to be measured against. I think it's great to have that initial waypoint."

Sentiment analysis is also very good for digging into metrics, he notes.

"It allows us to measure performance metrics, yes. But marketers can also use it as a way to understand not only if they are gaining numbers, but if those numbers are positive, negative or neutral.

"Research we are doing at Socialbakers is highlighting that a huge percentage of sentiment analysis is always neutral. So, the analysis helps marketers really focus in on the positive or the negative.

"You can also really slice it and dice it in terms of how your messaging is being perceived by your customers in a particular region, channel and so on."

A tool, not a worker

One thing many in the field agree on is that opinion-mining is not the be-all-and-end-all of marketing. Rather, it is an essential tool in your arsenal. Velasco puts it eloquently: "Sentiment analysis is extremely important, but I wouldn't say it is a core KPI. What's more important is marketers aligning their content, messaging and objectives with what they want to accomplish in the marketplace.

"When we look at a lot of the metrics across social media, you'll see metrics like, 'I reached 100,000 people.' Marketers love big metrics. You know, 'I want to have a million in reach, and I want to have a gazillion in interactions' and so on. But if you complement those metrics with sentiment analysis, you really bring those numbers into context. 'Yes, I reached 100,000 people and it was 78% positive, 12% neutral and 10% negative' – now the meaning of those big numbers starts to make sense."

— Kirsten Levermore is assistant editor of *Dialogue*

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Patrick Woodman is head of research and advocacy at the Chartered Management Institute

PATRICK WOODMAN

The backlash against management information is a worrying trend

Data doesn't deserve this opprobrium

It's a common management complaint. Information overload is the bane of our data-rich age. No longer is the accounts statement the only source of metrics that matters; no longer does useful information arrive only at the end of the month. We can tap into countless data sources, giving us unprecedented information about our products and services, about customer and consumer behaviours, and increasingly about the functioning of our organizations. Yes, there's a lot on offer. But too much data? Give me a break.

These uncharted oceans of data do of course carry very real risks. Paralysis by analysis is one: there is always the temptation, faced with a tough call, to reach for more data. But management prevarication is nothing new. A decent decision made at the right time is still worth more than an unattainably 'perfect' call months, days or even hours too late.

The impact on our health and wellbeing is also increasingly evident. Our data portals travel in our pockets, making it hard to switch off, leading to long working hours and high levels of perceived work intensity. And there are thorny issues for business – and public policy-makers – to resolve, not least data security and personal privacy. Companies need to be careful what they capture, why, and how it is used.

But while we're witnessing a backlash against data giants like Facebook and Google, the reality is that the data revolution is only just beginning. Information on our physical world and how we interact with it offers enormous opportunities. Device sensors offer car or aeroplane manufacturers new ways to improve the performance of their products. Personal sensors help us manage our health and fitness.

Information on our physical world and how we interact with it offers enormous opportunities

But data is also starting to tell us much more about how our organizations function as human and social entities. In this space, there is no doubt that many businesses would benefit from more data and better analysis. Efforts to improve metrics for the management of businesses' 'human capital' – their people – have been fitful and faltering, but there is little doubt as to their potential.

New data can catalyse significant new conversations within businesses, and across the market and society too. Take the spotlight put on gender diversity and inclusion in business in recent years. Tracking the number of women in FTSE 100 boardrooms provided a stick to prod company chairmen. And March 2018 saw some 10,000 large employers across the UK obliged to report on how they pay men and women under the new gender pay-gap reporting regulations.

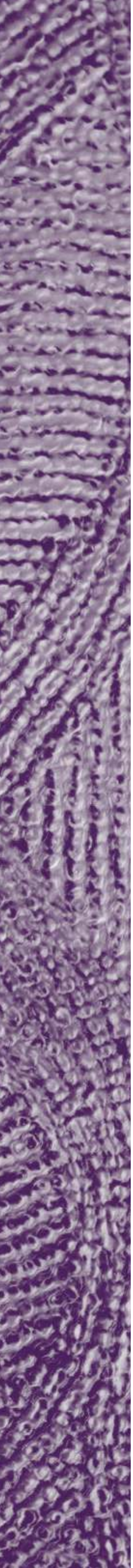
That flood of data has instigated an unprecedented discussion. It's happening in the pages of the press. It's happening on social media, of course. But it's also happening between friends, between colleagues – and between employees and their employers, as senior executives are asked to account for what the data has shown.

As with any data, the numbers are only the start. It has enabled a more sophisticated discussion of the issue and has pointed to the deep underlying issue: that the gender pay gap as we know it today, some 27% among managers, is inseparable from the failure of organizations over many years to ensure that women are equally likely to progress into senior leadership roles. What matters now is what employers do in response to that data. The debate will demand maturity from employers: sometimes the right action for long-term success will result in a short-term widening of the gap, like hiring more women into junior engineering roles in male-dominated sectors.

So what else might data shed a light on? In the wake of gender, the BAME (black, Asian and minority ethnic) progression and pay gap is rising up the agenda. Most employers can also do much more to understand the real drivers of employee engagement; to drive talent attraction and retention; and to understand the links between management culture and performance.

Handled right, this data will continue to drive productivity gains, and can help inform better management and leadership.


iPhone
8GB



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Behind Project Purple

There is much to learn from the iPhone – the most successful project in tech history, writes **Antonio Nieto-Rodriguez**

With day-to-day operations remorselessly being taken over by robots and artificial intelligence, projects are becoming the new norm for creating value and staying in business. Yet, organizations and governments increasingly struggle to deliver the potential benefits of their projects.

Several studies have tried to estimate the value destruction of this shortcoming. A survey of 300 chief information officers in the UK and the US calculated that businesses waste £37 billion per year on failed agile IT projects. Research by *The Economist* and the Project Management Institute found that every 20 seconds, $1 million is wasted due to poor project performance. That's nearly $2 trillion every year – equivalent to the GDP of Brazil.

I have spent years analysing the mechanics of successful and less successful projects, and have spent 20 years working in the frontline of projects. I have discovered that, regardless of the project, the industry, the company, profit or non-profit, public or private sector, there are 12 variables that influence and determine project success.

From the hundreds of projects I have analysed, there are few that stand out. One of them is what in 2004 was codenamed Project Purple, the creation of the iPhone. Since its debut in 2007 the iPhone has become both a cultural and economic phenomenon, replacing BlackBerry and Nokia as the most ubiquitous smartphone and turning the entire global telecoms market upside down. And this from a company with no previous significant experience in the mobile phone industry!

According to one estimate, Apple spent $150 million developing the iPhone (excluding the cost of the ideation phase). That $150 million certainly ranks Project Purple as one of the best investments ever. "There are very few products that have boosted the financials of a company in the way that the iPhone has for Apple," says Ian Fogg, head of mobile at research firm IHS. Apple sold 1.4 million iPhones in 2007 and more than 201 million units worldwide in 2016. In total, it has sold more than one billion iPhones worldwide from 2007 to 2016.

In the first quarter of 2017, iPhone sales accounted for more than 69% of Apple's total revenue, generating more than $54 billion in revenues on an estimated profit margin of greater than 50%. In ten years, Apple's revenue grew from $8 billion in 2004 to more than $215 billion in 2016.

Let's scrutinize Purple Project through the lens of some elements of the project success framework to better understand how it was seamlessly executed.

LESSON 1

EXPERIMENT

Try things out until you are ready to launch a formal project

Like most Apple success stories, the iPhone can trace its roots back to Steve Jobs. Shortly after the first iPod was released in 2002, Jobs began thinking about an Apple phone and, in 2005, he personally negotiated a partnership with mobile network AT&T, then known as Cingular, to develop the product. Yet the project failed to get going. In fact, there were as many as five different phones or phone-related initiatives bubbling up at Apple by the middle of the 2000s — from tiny research endeavours to a flop partnership with Motorola on the ROKR phone (which some described as the first iTunes phone).

What is noteworthy is that Apple didn't launch a formal and full-scale project to develop the first concepts of the iPhone. The ideation phase was kept low-profile, with limited investments and small teams experimenting.

Most organizations have the bad habit of launching a full-blown project for every idea they generate, creating a vast quantity of projects which, most of the time, end up at a dead-end, wasting precious company resources.

LESSON 2

PROJECT SPONSOR

Find one that is engaged, dedicated, driving and inspiring

Numerous members of the Apple executive team tried, for several years, to convince Steve Jobs that producing a phone was a great idea. But Jobs was sceptical and rejected it many times. Linked to the previous point, Jobs' attitude shows how an executive sponsor should behave: being a powerful source of inspiration, a fierce curator of good ideas, yet not afraid of rejecting the bad or half-baked ones.

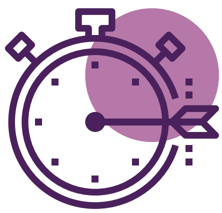
Once Jobs' scepticism was overcome, he was fully engaged, and dedicated approximately 40% of his time to supervise and support the different project teams. Executive sponsors are key to ensure that resources are allocated for transversal initiatives, that decisions are taken when problems arise, that executives stay aligned and the organization remains behind the strategic project. There is no area more important for project success that ongoing executive support. Yet, I come across many organizations in which every executive sponsors 10 to 20 strategic initiatives. This means that they dedicate less than one hour per month to overseeing them. This is a guarantee for project disaster.

LESSON 3

TIME

Realize the power of a stretched and fixed finish line, a frantic race to meet an impossible go-live date

The iPhone project was officially launched at the end of 2004. More precisely, it was late on the evening of 7 November 2004, after receiving an email from vice president Michael Bell explaining why Apple should make the phone, that Steve Jobs said: "Okay, I think we should go do it."



On 29 June 2007, at the annual Macworld trade show, the first iPhone was released. That is exactly two-and-a-half years to produce a revolutionary phone, the first smartphone, by a company that had not produced phones before.

The last months of the project, as Macworld approached, became a frantic race to get the iPhone ready for launch. Anniversaries were missed, holidays cancelled and family lives disrupted. And for what? "Sorry, that's classified information."

Project Purple is a great example of the power of establishing a fixed deadline, the pressure it creates on the team, ensuring everyone is 100% focused on the project, making them go the extra mile.

LESSON 4

HUMAN RESOURCES

Convene the most talented team, the best of the best, with full-time dedication

The project team was one of the most talented groups of individuals in recent history. The best engineers, the best programmers, the best designers were selected to join the team. And not

Very few products have boosted the financials of a company the way the iPhone has for Apple

Designers would often create mock-ups of a single design element up to 50 times until it met Jobs' standards

part-time, one- or half-a-day-a-week, as most companies do with their strategic projects. The chosen people were fully discharged from all their duties and were assigned full-time to the project, effective immediately. Project Purple became their life.

"We're starting a new project," Scott Forstall, head of the iPhone software division, explained to potential team members. "It's so secret, I can't even tell you what that new project is. I cannot tell you who you will work for. What I can tell you is if you choose to accept this role, you're going to work harder than you ever have in your entire life. You're going to have to give up nights and weekends probably for a couple years as we make this product."

Forstall added that Jobs told him: "You can have anyone in the company in your team."

As with the technicians, Jobs decided to put the best leadership team together too. He began with the legendary Jony Ive, designer of the iPod and MacBook, putting him in charge of the look of the handset.

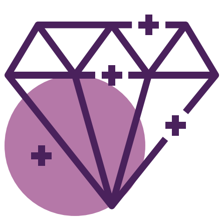
"It was clear that a lot of the best engineers from the best teams had been slurped over to this mysterious team," recalls Evan Doll, who was then a software engineer at Apple.

And their lives would never be the same – at least, not for the next two-and-a-half years. Not only would they be working overtime to produce the most influential piece of consumer technology of their generation, but they'd be doing little else. Their personal lives would disappear, and they wouldn't be able to talk about what they were working on.

LESSON 5

QUALITY

Be obsessed with it



One of Apple's greatest strengths is that it makes its products look and feel easy to use. There was nothing easy about making the iPhone – its inventors say the process was often nerve-wracking.

Jobs wanted to see a demo of everything. Designers would often create mock-ups of a single design element – such as a button on the iPhone – up to 50 times until it met his stellar quality standards.

At several points throughout the project, when things were not going well and the quality of the iPhone was not reached, Steve Jobs gave the team an ultimatum: "Two weeks to show progress with the operating system, or have the project assigned to another group." Everybody knew that he was not kidding.

LESSON 6

RISK

Manage project risk proactively

"Steve wanted to do a phone, and he wanted to do it as fast as he could," Richard Williamson, an Apple director of software, said. But which phone? And how to manage the risk of not achieving the intent of the project?

One of the high risks was the fact that Apple had no experience in producing a phone. The learning curve could take many more years than initially planned. To address the development risks, the project team looked at the different options. They came up with two main possibilities: (a) transform the celebrated iPod into a phone (the easier path), or (b) transform the established Mac into a small touch-tablet that made calls.

The two phone projects were split into tracks, code-named P1 and P2, respectively. Both were top secret. P1 was the iPod phone. P2 was the still-experimental hybrid of multi-touch technology and Mac software. Instead of choosing one of them and taking the risk of having made the wrong choice, they decided to work on both prototypes in parallel. This was a proactive way of mitigating one of the major risks of Project Purple.

The iPhone formula

If you are thinking of launching a strategic project, or are currently doing so, take note of these invaluable lessons from Steve Jobs:

1. Push back on ideas until they are mature to launch a full-scale project
2. Dedicate at least 20% of your time to support the project
3. Set an ambitious goal with a clear fixed deadline
4. Select the best talent, take them out of their full-time job, allow them to focus 100%
5. Quality – testing, iterations – of the end product/solution should be an obsession

I guarantee that your chances of success will increase considerably.

— Antonio Nieto-Rodriguez is one of the world's leading experts in project management and strategy implementation. His work has been recognized by Thinkers50, winning the award Ideas into Practice. He is author of *The Focused Organization*

The data set

Millennials and their challenging anti-hierarchical ethos make them ideal recruits to a data-driven business culture, writes **Graham Hogg**

Millennials are unlike preceding generations. They view the world differently and have redefined the meaning of success, personally and professionally.

In some cases, this has led to misunderstanding among the different generations coexisting in today's workplace. Increasingly, however, business leaders are realizing this generation's unique competencies and perspective, and employers are looking for ways to harness their strengths.

I go further in my recent book, *Seeing Around Corners*, that this discovery-driven orientation of Millennials and willingness to challenge the norm is a key ingredient to building data-driven cultures in teams.

Millennials will make up approximately half the workforce by 2020 and so will make up a large part of the teams in most organizations. It will be a leader's responsibility to attract Millennials to the company and to keep them there.

But the problem with Millennials is that they lack engagement at work. A Gallup study completed in 2015 showed that only 29% of Millennials are engaged at work, while 16% are actively disengaged. The remaining 55% remain in a purgatory of mediocre levels of engagement. When people aren't fully engaged, they demonstrate this by quickly leaving for another company.

Foster a collaborative environment everyday

Millennials can thrive in a data-driven culture because they love collaboration. This isn't about coffee and beanbags; this is about the way that we interact with each other in meetings. Millennials routinely rank corporate culture as a major factor in how well they feel engaged.

They want to work across teams and departments, and don't respect corporate planning cycles or business unit silos. This is welcome, because such structures serve only to compromise innovation. Organizations should cultivate and encourage these collaboration and cross-functional development opportunities, not only to get the most out of the future workforce, but to build an effective data culture.

Unlocking the value of data is a team sport

The skill that teams will need to unlock the value of their data will be identifying the gaps in their understanding: "What do we need to know?" When we connect these questions to advanced analytical skills, organizations can then fuel adaptability and innovation.

This starts with effective collaboration, the number-one attribute for Millennials in the workplace, according to a Microsoft study. We have all read that Millennials are unsociable, that they sit by their screens and pay no attention to people. Whether this is true or not, leaders need to get them into challenging debates within teams and to engage with data.

And, contrary to the belief that Millennials are digitally isolated, the research above shows that most respondents said "good team collaboration" was the most valuable attribute in their ideal workplace.

As I discovered during my military career facing constantly changing and vastly complex environments: adaptability trumps efficiency every time

Build messy teams

Millennials don't relate to annual plans or planning processes, and certainly don't respond to flashing red, amber or green lights on a dashboard that relate to their boss's metrics. These systems and ways of working were born from a manufacturing and industrial environment that frankly no longer exists. As I discovered during my military career facing constantly changing and vastly complex environments: adaptability trumps efficiency every time.

When their leaders communicate frequently and consistently, and provide good feedback, Millennial employees are found to be more engaged than those from Generation X or the Baby Boom. Feedback is key: making sure everyone shares understanding; staging interactive discussion and debate rather than issuing orders. Millennials want to feel that they are contributing to the

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development of the organization by adding to its understanding, innovation and important discussions.

I discuss at length in *Seeing Around Corners* the importance of teams using purpose as the handrail for data discovery, aligning to what's important every day:

- What are we seeing in our world?
- What does it mean to be great here?
- Why will people want to work with us?
- Who do we serve?
- How can we drive value for them?

Millennials place high importance on the purpose of the organization that they work for. They want to feel part of something larger than themselves – like us all. What is significant for this demographic is that if they don't sense a connection to this, they vote with their feet.

Creating the right working environment

"No action, activity or process is more central to a healthy organization than the meeting … this is where values are established, discussed and lived…"
Patrick Lencioni, author, *The Advantage*

This isn't about having fewer meetings but improving them. With the best technology and data talent available, establishing an effective data meeting culture is crucial for success. For the data analysts, it's about understanding the mission and all the analysis that has led up to it. For frontline teams, it's about getting to the most meaningful insights to inform mission-critical decision-making. Both teams must ask questions in this iterative discussion to gather as much context as possible and build situational understanding. When trust is built and the teams come together with a common purpose, it is hard to tell the difference between the two parties. Getting data meetings right:

- Broadens team understanding of future clients, customers, market needs and pains
- Identifies bias, groupthink and flawed assumptions
- Avoids the tendency to jump to the wrong conclusion because of the loudest voice
- Connects relevant data to the most important business challenges and priorities

Data meetings are not like regular check-ins or planning conversations; they should feel different from the start. Teams should be scrutinizing and challenging thoughts, ideas and assumptions to consider the perspectives of data talent and external players. The best business leaders open themselves up to be challenged not only by their own teams, but also by analysts from outside the core team who are providing insights.

I frequently engaged with senior military commanders who would stage an 'alternative thinking team' tasked to deliberately challenge current thinking. This broke silos and harnessed the cognitive diversity of the organization.

And finally…

Leadership has a critical role to play in building a data-driven culture and to get the best from talent entering the workforce.

They need to maintain an enthusiasm to:

1. Have kick-ass meetings – where diverse talent is connected by a unifying purpose
2. Ask better questions of data – grounded in gaps in our understanding
3. Share the fruits of your labour across the organization and unlock the value multiplier effect

This presents an exciting opportunity for organizations and their new workforce as they start on a path of data discovery, with Millennials pushing us forward to see around corners.

— Graham Hogg is chief executive and cofounder of Connectworxs, which connects data to value inside enterprise organizations

How to be a trend spotter

Successful leaders analyse the world outside their window, writes **Joe DiVanna**

Trends in customer behaviour and technology are moving faster than most organizations can cope with. Anticipating them, tracking changes and reacting in time to make substantive revenues are major challenges.

The future of an organization's profitability and sustainability is determined by many factors – some of which are beyond the control of the organization.

Yet how senior management assesses macroeconomic adjustments, demographic shifts, technological advances and new levels of customer demands – based on behaviours and other social dynamics – will determine their organization's long-term viability.

Thus, senior managers need to find more efficient ways of interpreting the world around them and prioritizing the application of resources to remain competitive. Here's how…

QUALITATIVE TREND SPOTTING

Listen to your customers: collect ideas

The least costly way to gain market intelligence is to create a dialogue with your customers. The goal is to discover customer preferences, needs and wants. Above all, try to quantify the frequency at which they engage with your company. Rising frequencies are strong indicators that leaders should give a trend greater attention. Equally, falling frequencies are also strongly indicative that more investigation is required.

Once preferences are identified they must be consolidated into similar and dissimilar properties (segmentation). These become the basis of new products or, at least, identify gaps in the existing product portfolio. Customers' frequency of engagement with their supplier helps to determine the relevance of a trend to an organization's value proposition. Customer trends can be placed in three broad categories:

- consumer lifestyle/lifestage (subtle shifts in behaviours and attitudes)
- consumer products (indicating a new preference)
- consumer engagement (frequency or intensity of the experience)

Take a good look at your competitors: collect solutions
In today's internet world, companies are transparent in what they offer to customers. Reviewing the product portfolio of your competition can provide insight into gaps in their capabilities. This insight can be converted to opportunities. Spotting service gaps can also be a simple three-step process:

1 Go to one outlet (or online) of your own company (unannounced) and simply open an account or get a new product

2 Go to a competitor's outlet (or online) and open an account

3 Assess the difference in the two experiences – how long did it take, how did the process feel, how knowledgeable was the customer service representative (or how intuitive was it, if online)?

Look beyond your industry: develop your corporate radar
With greater frequency, trends starting in one industry migrate to other industries or across disciplines within the same industry. In many cases, trends start in industries with greater exposure to end consumers, and over time migrate directly or are adapted to other unrelated industries. It's essential to identify and anticipate these trends to create and leverage

opportunities. Equally, it's essential to keep an eye on new technologies with transferable use to identify the best ways to leapfrog competitors by offering a unique new product and service.

Blank-sheet your product portfolio: reinvent the future

Ask yourself, 'If I were starting my organization today, what would I do to put me out of business?' The key is to momentarily forget about the current product portfolio, and focus on developing a value proposition for each customer segment. What do customers need, want, desire and aspire to? Next, factor into the process the trends, noting rate of customer adoption and other societal and technological factors. Once you have mapped customers' requirements to a suite of products, then perform a gap analysis with your current product portfolio. The difference between the two marks your path to the future.

Get multiple perspectives: more eyes, more opportunities

Due to the nature of their compartmentalized design, organizations naturally develop a silo mentality. This occurs when business processes are clearly defined and management places key performance indicators that reflect the activities of the process that link it to the performance of the people performing the operations. Thus, the focus is not on collaboration across organizational hierarchies, but on the efficiency of the business unit. People within the business unit develop products which, over time, become less reflective of the organization's ability to deliver value holistically. A good benchmark of product development is getting people from unrelated departments to participate in the design – they may know something that you don't know.

Convert organizational energy: capitalize on opportunities quickly

Trendspotting needs to be everyone's job. So how do people in the organization get the information to the right people. What is the process for internal dialogue? Insight to trends is not confined to the senior team. People throughout the organization can identify trends and new ways to add to the customer value proposition. The key to capitalizing on trends is to reduce the time to market – by establishing a process to quickly seize the opportunity to mitigate an organizational challenge.

In senior management vernacular 'trend' means: a vague direction in which unknown things are doing things we don't understand and can't comprehend

THE ACTION AGENDA

1. Create a process so everyone in the organization is the eyes and ears to spotting trends
2. Develop a process of evaluating the relative value of a trend to customers' needs, wants or desires
3. Assess gaps in the current product portfolio (volume / profit / pricing)
4. Evaluate the organization's ability (skills, management and infrastructure) to deliver new products
5. Enable cross-organizational collaboration in the design, evaluation and implementation
6. Establish who owns the process (operations enabler) and who owns the product (portfolio manager)

QUANTITATIVE TREND COMMERCIALIZATION

Before betting the organization's future on a new value proposition, trends need to be placed in a comprehensive internal and external context. When does a trend become a trend worth investing in and capitalizing upon? The classic definition of a trend is "a general direction in which something is developing or changing". In senior management vernacular this sounds like, "a vague direction in which unknown things are doing things we don't understand and can't comprehend"; this translates to "a risky risk". And one thing that prevents organizations from quickly capitalizing on trends is that magic word 'risk'. As senior managers are typically risk-averse, this is a tricky scenario, which is why in many cases product innovation often comes from outside the organization.

To get smarter, senior management teams need to take risks wisely when it comes to product innovation. One key element that determines a trend is how many times something occurs (frequency). Another factor is, does the product or service add direct or indirect value to customers? If customers find it valuable, they will do it more often. In addition, if the product or service provides direct value the next question is "how much would they be willing to pay?" If the answer is "not much", then the next question is "why?" There are two reasons for this: 1) the feature, function or service is already being provided on the market and has been commoditized by competitors, 2) customers do not see it as a necessity.

To course-correct this, senior managers need to create a matrix where the rows represent customer segments and the columns represent product features/functions. At the intersection points a series of questions needs to be explored. "What is the volume of transactions, now – in future?", "can incentives be created to increase volume?", "at what volume do we achieve our profit objectives?", and "can we develop a migration strategy to move customers to this point?"

COMMERCIALIZATION AND CAPITALIZING ON OPPORTUNITIES

Not all products will achieve high profitability, which is the nature of retail/product transaction processing. What is valuable today will be commoditized tomorrow and devalued over time. For example, merchants do not like to pay credit card merchant fees even though accepting credit cards is infinitely lower cost to them than

To err is human; to derail innovation takes a whole organization

handling and transporting cash. Over time, they forgot how much manual effort, time and cost the old way was and how efficient the new way has become. The same is true with customers. Therefore, products need be placed in the context of their lifecycle (volume/time). The key to commercialization is to manage dynamically the value proposition/product line as a portfolio of value. The ability to capitalize on trends is proportional to how an organization manages the overall value delivery to customers.

The final step is to ask if the organization has the capability to deliver what customers need – once we know what it is they need. Within the organization, we often insulate ourselves from other parts of the organization simply because our time is constrained (silo mentality). For example, in the fast-paced world of technology, customers become smarter than customer service representatives simply because they are using the products with greater frequency. Thus, intra-organizational learning is key.

To err is human; to derail innovation takes an organization. Have you ever been in a meeting to look at a trend to hear "that will never work in our organization" or "our customers won't like that", only to find out soon after that the competition is doing those things? Few financial institutions are trendsetters or early adopters that capitalize on customer or social trends. This is due to two primary reasons: 1) ownership and responsibility and 2) resources versus results. To capitalize on most trends today requires cross-organizational collaboration, which is often counter to budget accountability for departmental costs. As a result, ownership of the process of commercializing a trend often rests with justifying who is going to pay for the investment, which in the vast majority of cases is not the group initiating the change.

Developing a global view is simply the first step in the process of identifying trends. Once you have identified those trends, you must discover their relative value to your customers and your organization, and set in motion a process of commercialization which results in capitalizing on the opportunities they present.

— Joe DiVanna is a member of the Duke Corporate Education educator network, a Møller By-Fellow of Churchill College, University of Cambridge, and author of *Strategic Thinking in Tactical Times*

Fallen hero

The fate of Brazil is once again unclear as hero of the people and hotly tipped candidate in the upcoming presidential election, former President Lula, is found guilty of corruption and money laundering as part of an investigation into state oil company Petrobras, dubbed 'Operation Car Wash'

FACTFILE BRAZIL

Land area
3,227,096 sq mi
[8,358,140 sq km]

Official languages
Portuguese

Population
207, 353, 391

GNI per capita
$14, 810

Capital
Brasília

Life expectancy
78 Women

Major religions
Catholicism

71 Men

Brazil's first working-class president, metalworker and trade union activist, Luiz Inácio Lula da Silva (aka Lula), has seen plans to hold office for the third time derailed after his arrest in April 2018. Well-liked across the country, Lula's incarceration means a scramble between remaining candidates before the October elections – and another disappointment for Brazil's political history

Incarcerated

12

Number of years President Lula is serving in prison. Until the election court rules otherwise, Lula is still allowed to campaign from behind bars

Bad decisions

6

Corruption trials President Lula is still to face

Selling out

3.1 million

Brazilian reals worth of bribes President Lula accepted from engineering firm OAS SA in return for his help winning contracts with state oil company Petrobras

THE GREATER GOOD

+10 million

People President Lula lifted from poverty in his first two terms in office. Lula's first two terms of presidency also saw Brazil's longest period of economic growth in 30 years, resulting in numerous social programmes

WIDESPREAD PLAGUE

1,000+

Arrest warrants issued in the course of Operation Car Wash, one of the largest anti-corruption investigations the world has ever seen. Total resources diverted from the public treasury is estimated in the billions of Brazilian reals

I will comply with the [arrest] order and all of you will become Lula...I'm not above the law. If I didn't believe in the law, I wouldn't have started a political party. I would have started a revolution

Former President Lula to his supporters

You can't negotiate a pardon for a man who stole millions

Former President Lula speaking about the first Brazilian president ever impeached for corruption, Collor de Mello, in 1992

Only death will take me off the streets

Former President Lula speaking about his conviction

STANDOFF

2 Days former President Lula spent barricaded in a steelworkers' union building surrounded by supporters after missing his court deadline

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PUBLISHING

Published in the United Kingdom by LID Publishing
Studio 204,
16 Baldwins Gardens,
London,
EC1.

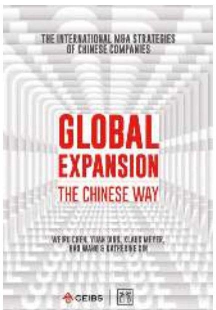
ISSN 2053-4361

Printed by Pensord
www.pensord.co.uk

Dialogue

The China blueprints

China is taking over the world. **Kirsten Levermore** learns how – and why



Global Expansion: The Chinese Way
Katherine Xin, Yuan Ding, Weiru Chen, Klaus Meyer & Gao Wang
Published by LID

bit.ly/globalexpansionbook

Between 2000 and 2007, China's outward foreign direct investment (FDI) rose 17-fold. During the global financial crisis, China's FDI grew at an annual rate of 45%.

In *Global Expansion: The Chinese Way*, leading Chinese globalization experts from the China Europe International Business School (CEIBS), Katherine Xin, Yuan Ding, Weiru Chen, Klaus Meyer and Gao Wang, discuss the rise of China in the world economy, the merger and acquisition (M&A) strategies defining Chinese expansion, and some of the risks and rewards that have been found in two decades of aggressive globalization.

Proposing a three-stage model for globalization, the authors draw on a wealth of experience and research to examine the M&A and integration strategies that have built the second-largest economy on Earth.

Acquire. Integrate. Apply

The primary purpose of Chinese companies' quick work across borders is to strengthen domestic business and China, the authors write. Noting how different this is from the West's often less ostensibly patriotic function, *Global Expansion* hypothesizes that it is down to a different view of competition:

"…while most Western companies seek to exploit competitive advantages, achieve market growth and strive for synergies in global markets, Chinese enterprises aim to compensate for their competitive weaknesses and enhance their competitive advantages in the Chinese market."

And with the support of the Chinese government with the Belt and Road initiative

and the Third Plenary Session of the 11th Central Committee of December 1978, the partnership between government, companies and the home country keeps such purpose at the forefront.

Not a handbook, but a module

Such is one of many takeaways from *Global Expansion*.

It is worth noting, however, that the book is not a handbook to 'investing like a Chinese

THE BLUEPRINT

Global Expansion **proposes a three-stage model for globalization by Chinese companies:**

1. Obtain resources and capabilities globally to offset competitive disadvantages
2. Integrate and apply newly acquired knowledge and resources to the local market
3. Expand to other overseas markets once a position of leadership in China has been gained

corporation'. You will find no 'helpful hints' or 'strategies to mimic'. What it is, however, is an in-depth economic and cultural examination of Chinese business practice in the rest of the world, richly set in context, without personal and political commentary, and featuring a plethora of case studies, including big names such as Wanda, Chervon, Haier Group and Lenovo Group.

Global Expansion's five experienced, loquacious and informed authors mean that every element, every case study and every trend is deeply researched and carefully presented. This leaves the book with a neat and well-illustrated executive-education-like finish.

Cutting no corners, *Global Expansion* is in-depth and pores over the blueprints that are bringing Chinese industry to the four corners of the Earth, offering clues as to how you might spot the mammoths of tomorrow.

A must-read for policy-makers, strategists, investors and economic history fans alike.

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Don't drown in the urgent

Mara Green puts a journal for procrastinators through its paces

The quest for greater efficiency and more freedom has led me to some strange life hacks. I journal constantly. I plan excessively. I make lists for everything. Sometimes, it leads to a less chaotic and more productive lifestyle. Sometimes, not.

Trips to the self-improvement section of any bookstore see hundreds of planners, journals and guides, each with their own distinctive style and angle. Personal development, time management, priority juggling, wellness, exercise, you name it.

My choice this year is the *Trigg Life Mapper*.

A page-a-day productivity companion, *Trigg Life Mapper* aims to help you architect and achieve your goals faster and more efficiently. Zooming out to examine the bigger picture, the turquoise leather-look journal encourages you to plan your long-term milestones for the year across four categories: self, relationships, passions and work. It then helps you stay the course by honing your attention to goals on a daily, weekly and monthly basis with a phenomenal medley of quotes from a diverse set of folks, and unique provocative questions to grow your understanding and establish new practices, habits and routines.

'Daily quad' tables ask you to establish your priorities: what is important, what can be delegated, plans for tasks you will inevitably delay, and what should be delayed. It's ideal for when you're drowning in the urgent, but failing to cross the important items off your checklist.

Being asked to sort the 'urgent' from the 'important' is part of what makes this one of the more advanced journal formats around. That also means the journal works best if this isn't your first trip to the self-help rodeo, and you already know what you are doing.

Ultimately, the journal is a great tool for the procrastinator. It is also a great guide for those trying to be more intentional in their actions, with emphasis on achievement, accountability and some gratitude. So, when you're brave enough, get ready to upgrade your to-do list and optimize your performance and productivity. You will achieve your goals. And break free from life's load!

— Mara Green is project director at Duke Corporate Education

— Trigg Life Mapper
Moving Stationery
www.thinktrigg.com

Christian Smythe is head of content & partner strategy at BlueBottleBiz

THE LEARNING CURVE WITH CHRISTIAN SMYTHE

Companies suffer from homogenous thinking. Digital learning helps brings a raft of brilliant minds together

E-learning: a passport to neurodiversity

Much work has been done in education to accommodate different skills, abilities and personalities, but many would agree that there is still a long way to go. Learning diversity – or neurodiversity – is acknowledging that people learn in different ways. On the whole, most managers accept this, but the world of work can be especially difficult for those with forms of what has previously been termed a mental disability.

Schooling begins and permeates these struggles. As Dr Thomas Armstrong has argued, "for too long it's been weighed down by a history emphasizing deficit, disorder, and dysfunction, ranging from Goddard's creation of the 'moron' in 1910 to current formulations such as Disruptive Mood Dysregulation Disorder." And while schooling and work both have a long way to go to make up these shortfalls, a solution may lie in current technology.

E-learning is as broad as traditional learning methods, so to claim it has all the answers is hubris. However, it harbours many of the additional benefits of connectivity and layering, similar to how Amazon Video gives you more than just a film, with details of the actors, location and production team.

Take dyslexia. Reading can be a long, arduous and ineffective way of transferring information to dyslexia sufferers, so implementing the same content in either audio or video form can be really useful. With virtual reality (VR) and augmented reality (AR), learning resources can become fully four-dimensional and intuitive, which can be more effective for those who struggle to learn directly from a textbook. But, what e-learning can do is still offer the textbook, and bring classroom discussions into the cloud.

What e-learning can do is still offer the textbook, and bring classroom discussions into the cloud

Imagine for one moment, you are back at school, reading Shakespeare. For many of us, we have an anthology of Shakespearean terms. Imagine that the Shakespearean dictionary you once had was next to you on a tablet. Then your class can highlight phrases of importance in the narrative, or the tutor can see who is reading what and be requested for assistance remotely. This could benefit those who struggle with mobility to get to a classroom or school, or even on those rare occasions when the weather keeps us all home. E-learning can eradicate this lost time.

Another solution is helping people who struggle with social situations, fears and anxieties. With the rise of domestic VR and AR headsets, we can put people into gentle situations, in the cloud, which can help them overcome these fears. There are cases of fear of flying being almost completely cured by using this technology. Given that, imagine what it can do to a previously unsupported child suffering from social anxiety, speech impediments; or how it can help with real-world confidence-building skills like confronting bullies or speaking up in the classroom.

All of a sudden, we can offer the previously unsupported unprecedented support to help with their issues and improve their life and potential growth, financially and as a person. Furthermore, this technology can help the elderly, aiding the combat of loneliness, isolation and depression.

Despite the excitement, there are infrastructural issues, requiring training and financial backing from companies and governments alike. But we are on the cusp of helping a new generation take a giant leap in their lives. If we all decide to act now and e-learning becomes an integral part of the learning process, no one will feel isolated and unsupported. And if everyone has access to hard- and soft-skill training, in a variety of platforms, every generation can benefit from this technological breakthrough.

Piers Cain is a management consultant

PIERS CAIN ON BOOKS

A blend of Buddism and neuroscience provides a possible antidote to management failure

A solution to dire leadership

There is an extraordinary disconnect between business leaders' view of themselves and how others see them. In 2016, McKinsey, a worldwide consulting firm, conducted a survey of 52,000 managers. While 86% rated themselves as inspiring managers and good role models, the same survey found that 82% of their employees saw their leaders as fundamentally uninspiring. These findings have been mirrored by numerous other studies in recent years. The quality of business leadership is dire.

Hougaard and Carter, the authors of *The Mind of the Leader*, believe they have a solution. They consider that employees are seeking more meaning, happiness and connectedness in their work – and it is in the interest of leaders to make this possible in order to have an engaged and productive workforce.The authors' thesis is that three qualities need to be cultivated to become better leaders: mindfulness, selflessness and compassion – and that neuroscience suggests that these can be learned, practised and enhanced. Moreover these can be applied at three levels: to understand and lead yourself, your people, and your organization. Selflessness is the combination of self-confidence and service towards the organization and its people. Compassion is the quality of having positive intentions towards others. It is 'tougher' than empathy because it recognizes that being sympathetic is not sufficient; to be effective, it must be combined with wisdom and realism. In other words, this book blends a sort of secularized version of Buddhism with neuroscience, which is then applied to the business world.

Three qualities need to be cultivated to become better leaders: mindfulness, selflessness and compassion

The book is strongest on mindfulness. Working life has become increasingly pressurized and distracting. The relentless pace of global competition, together with an 'always on' working culture facilitated by smartphones, has made it harder for people to find the mental space to make good decisions consistently. The authors recommend meditation techniques to survive the working day. They also point out that simple things – such as getting enough sleep – is critical (and may help ward off Alzheimer's disease). Open-plan offices are hardly conducive to good steady thinking and focusing. Providing 'quiet rooms' and home-working may help.

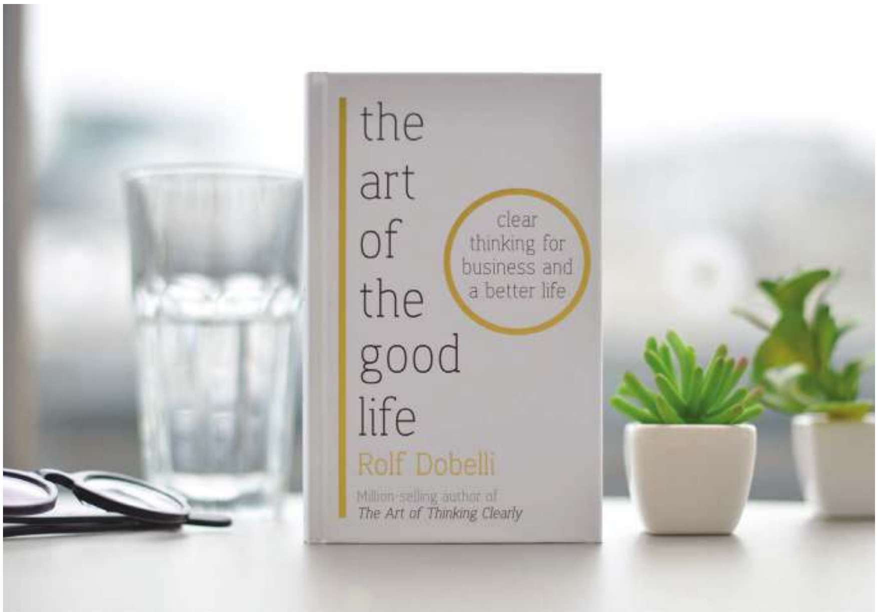
The authors make a sensible case that leaders need to become less selfish and overbearing if they wish their employees to engage more. Also, leaders have a responsibility to ensure their organizations value their people and behave with compassion. There is a clear link with equality – excessive executive pay undermines people's instinctive sense of fairness. Meanwhile, promoting diversity is good for deepening the pool of available talent. But this is hardly news –management guru Peter Drucker made these points many years ago. The problem – as Hougaard and Carter acknowledge – is that in most cases the incentives for business leaders to behave selfishly are too powerful.

A word of caution. Hougaard and Carter specialize in mindfulness. This book is based on their practice and they produce empirical evidence that their approach can work. They also claim that it is validated by science. Certainly, the authors worked with the neuroscientist Hans Melo to ensure the science quoted in the book was presented accurately. But there is more to be taken into account than the functioning of the brain – psychology is also relevant. Indeed, as recently as 2017, *Scientific American* reported that 15 prominent psychologists and cognitive scientists warned that the scientific data on the benefits of mindfulness is woefully lacking. Yet this book is a passionate plea for a more humane approach to business leadership and employee relations. And there is much to be said for that.

— The Mind of the Leader: How to Lead Yourself, Your People, and Your Organization for Extraordinary Results by Rasmus Hougaard and Jacqueline Carter, Harvard Business Review Press, 2018

Toolkit for life

Warren Buffet fans, take note: *The Art of the Good Life* will help you navigate a complex world, writes **Kirsten Levermore**



If you haven't read the first book in this series, *The Art of Thinking Clearly*, you are missing out on your most productive, fully realized life. A research-driven guide to the "pitfalls" of having a human brain, this book astounds the reader with a series of lessons in how to be more than a victim of your human instincts. It's a stellar read. So, bubbling excitement on seeing the brand new sequel, *The Art of the Good Life*, is not uncalled for. However, this is not *The Art of Thinking Clearly Vol II*. As one clever Amazon reviewer put it: if the first book explained "how to think", *The Art of the Good Life* explains "how to live".

In 52 short chapters, Swiss philosopher and entrepreneur Rolf Dobelli aims to equip the reader with the tools to better understand the world around them, thus leading to an easier, happier life.

Like the previous book, every "tool" is cleverly and clearly illustrated with metaphor and anecdote, and content is well-researched in parts, and quite speculative in others.

Indeed, *The Art of the Good Life* reads as a highly personal explanation of Dobelli's own 'rules to live by'. That is not to say it does not contain some universal gems: with decision-making, the tyranny of having a calling, and the prison of a good reputation, this book contains some striking and relatable philosophies that will likely impact your life in at least one small way. The book's true value, however, is probably only attainable by its specific audience: acolytes of Warren Buffet, executives on the move, and anyone with an investment portfolio.

This book contains some striking and relatable philosophies that will likely impact your life in at least one small way

Nevertheless, *The Art of the Good Life* is a curious venture into economic philosophy and a very good starting point for discussing what leads to a "good life" – and actionable suggestions for attaining it.

— The Art of the Good Life
Rolf Dobelli
Sceptre

APPS FOR LEADERS: SHAPR

Meet the business matchmaker, says **Perry Timms**

We're now so used to social media platforms connecting us, that social media giants, like Facebook and Instagram – 'big social' – have become either a key tool or a nuisance (or somewhere in between) for many of us.

But what about 'small social'? What about an algorithm that can help us match people with a similar geographical, professional and learning suite of interests?

Shapr does this. A simple, free app available on iOS and Google Play stores, you do the usual (sign up, create a profile) and then, once a day, the app will find matches for you – people like you, but perhaps not known to you – taking the randomness out of networking.

The app invites you to swipe and indicate a match; connect and send a message, and even meet in real-life over a coffee.

It's easy to use, relevant and simple to:

- Find that contact you might need to plug a knowledge gap and share yours with them
- Look for the next partner, hire or collaborator on a project, research venture or work assignment
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— Shapr is an iOS and Android app
— Perry Timms is an independent HR/OD practitioner, speaker, writer and CIPD adviser on social media and engagement. Follow him on Twitter @PerryTimms

KARINA ROBINSON

Total contribution reporting is an idea whose time has come

Time to measure the trust factor

It is no longer acceptable to use the phrase, "Well, that's business!" when referring to a morally dubious choice

Rumour has it that, over the generations, my family has postponed pregnancies and put weddings on hold to ensure our customary holiday at the Lorünser ski and spa hotel in the Alberg is not cancelled. Dating from 1927, this traditional guesthouse in the Austrian Alps has created such strong brand loyalty among its patrons that, unlike the snow, it doesn't melt between seasons.

That allegiance is what companies must attempt to create, now, to attract and retain talent, amid boundary-blurring and changes in investment criteria. The war for talent in financial and professional services firms is exacerbated by the appeal of 'tech', both startups and established companies, which market their coolness and their social aspirations. Meanwhile, the demarcation lines between personal life and business life are blurring on the back of the digital revolution and flexible working. It is no longer acceptable to use the phrase, "Well, that's business!" when referring to a morally dubious choice.

And investment decisions by Millennials, who stand to inherit substantial amounts from their Baby Boomer parents, are strongly linked to their values. Almost 80% of Millennials described themselves as impact investors seeking both financial and social impact returns, according to a study by Toniic, a global investing forum. The sample covered six continents. In fact, even youth who do not yet have the funds to invest, affect valuations. Witness their campaign against the ultra-powerful National Rifle Association (NRA) in the US, which has led top investors to explore excluding gun companies from some indices and ask questions about their business models.

What must all companies do? Be ahead of the curve. The tone is set from the top and, surprisingly for an era of mistrust, trust in the voices of chief executives has increased between 2017 and 2018, according to the Edelman Trust Barometer. The chief executive's most important task is to build trust, and they are expected to "take the lead on change rather than waiting for the government to impose it," the report said.

The chief executive role is a great opportunity, which needs to be allied to specific measures. Get the younger generations of staff involved in policy changes, which will give them a sense of stakeholder ownership – rather like the Lorünser "belongs" just as much to my son as it does to me and my mother, and many, many years ago to my grandfather.

The Austrian hotel, like many of its kind, is a family business, a corporate version of the family. There is a reason the traditional family unit is one of the most successful creations ever. Its in-built diversity and inclusion – the toddler and the teenager look at the world differently – is a given in a family business but needs nurturing in the corporate world.

How do you report on matters like the chief executive's increased focus on profit sustainability and a substantial growth in employee engagement and loyalty? A classic set of accounts does not reflect this. Nor does an environmental, social and governance (ESG) report. Instead, integrated reporting is the way forward.

One of the pioneers in total contribution reporting is The Crown Estate, a fascinating business which owns real-estate assets, like most of St James's in central London, as well as managing the seabed around the UK. The reporting method consists of measuring the impact of six pillars: physical resources, natural resources, financial resources, people, network and knowhow, in order to see how the business is creating value for all stakeholders.

Not every company will manage to create the Lorünser experience. But those – like The Crown Estate – that choose to take the voyage will find it will brings them as close to it as possible.

— Karina Robinson is chief executive of Robinson Hambro

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ISSN 2053-4361
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