Think: Act navigating complexity

How much do you depend on TRUST ?

Berger



navigating complexity

We shouldn't be resistant to pre-suasive techniques if they steer us correctly. We should only resist them if they are used in deceptive ways."

ROBERT CIALDINI Social scientist and author

"Leadership that builds the underpinning of confidence starts with accountability."

ROSABETH MOSS KANTER Professor of business administration at Harvard Business School

4 Think:Act 22

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"Transparency can replace part of trust. Real trust is about long-term aligned incentives, where as transparency is about espionage, it's about making sure that the other person can't violate what you want

DAN ARIELY Psychology professor and behavioral economist

"When you have a bunch of workers who are self-motivated, it just makes a better team." Think:Act 22

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EJ SNYDER US army veteran and celebrity survivalist

It's time to bring back trust, transparency and accountability, values that used to form the backbone of a humanistic society – and that of robust institutions and strong governments."

CHARLES-EDOUARD BOUÉE CEO of Roland Berger

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From underdogs to champions: What business can learn from Leicester City FC.



Think in Numbers



THE DISTANCE IN LIGHT years that the Trappist-1 solar system is from us. The recently discovered star has several Earth-like planets orbiting it, so we just might not be alone in space.

12,000 KILOMETERS. The length

of China's new freight line from Yiwu to London. The UK is looking to increase trade with China and has begun discussions for a free trade deal. China invested \$5 billion in the UK in 2014.



THE PERCENTAGE of India's currency that was replaced as part of demonetization late last year. India's growth rate is expected to drop by 0.6% as a result.



THE NUMBER OF US CARS sold in Japan in 2016. Japan sold over 17 million vehicles in the US in 2015. President Trump recently accused Japan of disadvantaging US goods. *for* Thought

Food

How should we respond to the challenges of urbanization?

BY Richard Florida

BY 2050, more than 6 billion people - two-thirds of the world's population will live in cities, compared with half today and just 15% a century ago. Ninety percent of that urban growth will occur in the developing world, especially in Asia and Africa. As I explained in a recent presentation to the United Nations Economic and Social Council, this new wave of urbanization has thus far failed to raise living standards to anywhere near the same extent that it did historically in the advanced nations. Simply put, these rapidly urbanizing parts of the world face a crisis of urbanization without economic growth.

To overcome this, cities and city building must become a priority for the UN, the advanced nations and international development agencies. This requires a better capture and use of data for predicting economic growth, recognizing best practices and training mayors, city officials and city builders on how to apply them to achieve sustainable urban economies.

These global cities – many of them yet to be built – hold vast promise, but it is not blind promise. They can tip either way. As we embark upon the greatest epoch of city building that the world has ever seen, our greatest challenge is to make sure that they tip the right way.



RICHARD FLORIDA is the author of The New Urban Crisis, published by Basic Books in 2017. He is university professor and director of cities at the Martin Prosperity Institute at the University of Toronto and a distinguished fellow at New York University's Schack Institute of Real Estate. He serves as senior editor for The Atlantic, where he co-founded and serves as editor-at-large of CityLab.

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AT A GLANCE





"Try not to become a man of *success.* Rather become a man of *value.*"

- Albert Einstein Theoretical physicist Re-Thinking Buzzwords

Get to grips with industry lingo in a flash with our stripped-down explanations of the latest jargon.

"Holacracy"

It's an agile organization structure, a new operating system that runs in circles, not in hierarchies, and it has the power to make any organization more efficient. A few big companies have taken it on.



Hold on, say the skeptics. It isn't unique and it doesn't do what it says it will. It hasn't stopped hierarchies, it's just hidden them. Plus, if you have to read a 15,000word thesis to find out how it works, it's unlikely to simplify things. The Redacted Read

Get down to business

Too busy to read strategy books? No problem: Here's Clayton Christensen's tome cut down to its essentials, in the style of the original.

HERE'S THE MAIN POINT:

Always ask yourself what job did the customer hire your product to do? It's a simple question, but it can help a company make sure it's innovating along productive lines. Let us explain. If you focus on understanding the job to be done, your strategy will no longer need to rely on luck. In fact, you'll be competing against luck while others are still counting on it.

Sounds easy, but getting a good job definition isn't. Different customers often have different reasons for buying the same product. And some are unable to articulate what they want. And even when they state a reason, their actions may tell a different story. Then again the job might not be entirely functional. Emotional and social considerations may play a role too.

So here's the thing: Close observation and research can help you uncover what the true job is that needs to be done. Then you need to focus on the description, because that can bring clarity. Here's a case study to back up the thinking. Product developers at Quicken, the financial software company, found that small business owners were adapting the product for their company books – a workaround that didn't make sense because it was missing a lot of the functionality

Competing Against Luck by Clayton Christensen, Taddy Hall, Karen Dillon and David S. Duncan. 288 pages. Harper Business. **\$29.99.**

they needed. It became clear to Quicken that customers were not looking for better accounting software. They just wanted to have the confidence that invoices were sent, cash collected, and bills paid. This insight led Quicken to launch QuickBooks, a product with less functionality for twice the price of other business software. It's gone on to be a huge hit.

So let's boil it all down to this: A product that has been designed specifically to fulfill a job to be done allows you to crawl into the skin of your customer. It says to the customer, "We get you." Read this book and you'll get it. Actual Cost

YOU BUY YOUR TICKET AND YOU'RE READY TO FLY. But have you ever thought exactly what you're paying for with the ticket price? The cost breakdown for a flight is not, perhaps, what you might first expect. Perhaps it isn't surprising where the largest proportion goes. You guessed it: <u>taxes.</u>

Ticket price

Liability insurance \$0.25 \$1.15 and other costs **Plane insurance** \$1.50 \$10 Cost of running **Crew salaries** the airline \$2.50 \$10 Fuel **Profit for the** airline \$11.50 \$13.50 **Paying off** price of Airport costs plane (landing fees, and so on) \$14 \$15.60 Aircraft maintenance **Taxes and charges** fees

Best Pr**act**ice

To meet or eat in China?

NAVIGATING BUSINESS IN CHINA ISN'T EASY. Luckily, we're here to guide you through the tricky cultural differences. If given the choice between a formal meeting or dinner as the forum for important negotiations, choose the dinner. Here's why: You may have heard about the importance of guanxi, or personal relationships, and this holds true in business. Yes, part of it is the alcohol, and endless toasting. As Henry Kissinger observed when he traveled with Richard Nixon to China: "If we drink enough Moutai, we can solve anything." Seriously, though, bonding over food is important for the food-crazed Chinese. A popular refrain in Chinese business circles is that a big CEO's best working place is the dinner table. When negotiations get stuck in the boardroom, the only place to get them going again is in the restaurant, apparently. So, enjoy those sea cucumbers and gulp down that "spicy" Moutai, a kind of Baijiu, the national liquor. And if you can't stomach that, then you're best off backing away from China.



BAIJIU is China's national liquor, and the most well-known brand is Moutai. But, be warned: Some brands are over 50 proof.



Fashion turns the tide on plastics

OCEAN SOLUTION?: Adidas has teamed up with Parley for the Oceans, an organization promoting ocean health, to transform plastic debris into must-have shoes. Adidas x Parley made from plastics salvaged from the oceans made its debut last year.



Winning Back Trust in Four Acts

Understanding the stages of grief can help a company navigate a crisis. Disbelief, anger, bargaining and acceptance play a significant part in the journey, and it takes real character and leadership to turn a major drama into a business advantage.

> BY **Peter Shadbolt** ILLUSTRATIONS BY **Martin Burgdorff**







GREEK TRAGEDIES – such as the ones by Aeschylus, Euripides and Sophocles – can tell you all you need to know about calamity. The dramatic moves from hubris to catharsis have important lessons that hold as true today as they did 2,500 years ago.

Take the Oresteia by Aeschylus. When the hero Orestes' father, Agamemnon, returns after fighting in the Trojan War, he is greeted by his unfaithful wife who plots with her lover to murder him. Orestes is thrown into a state of crisis and disbelief, but directs his anger towards action. He avenges his father's murder by killing his mother and her lover. However justified his act might seem, matricide was viewed as a crime against nature and Orestes is pursued by demons bent on revenge. Faced with this unexpected consequence, Orestes prays to those Gods who might help him. It marks the beginning of a bargaining stage for justice. In the final act of the play, the Gods accept his petition and, through an enactment of justice and legal practice, Orestes accepts his new position and exoneration as a righteous defender of honor.

BHARAT PURI, Former Head of Operations at Cadbury India

IT IS A TRAGEDY, BUT IT HAS A RESOLUTION. And it can teach today's CEOs how to handle a crisis. Whatever the fates decide to throw at your business, if you take the right steps and turn disbelief and anger into action and acceptance, then you too can reach a perfect resolution.

When crisis strikes in a Greek tragedy, much depends on the leadership of the hero. In the case of a business disaster, the CEO has to take on that heroic role and navigate disbelief and anger to progress to bargaining and acceptance.

Crisis management can be cathartic – and CEOs who have been through it say that if well-managed, disasters are often opportunities in disguise.

While the most extreme business crisis might not be as extreme as dealing with murder and revenge as it was for Orestes, nevertheless a plague of worms, a gruesome poisoning, or even an allconsuming destructive fire could suddenly wreak havoc on your brand. Read on to find out how some large companies have had to deal with just such unpredictable catastrophes.

DISBELIEF

Bharat Puri was heading up confectionary giant Cadbury's operations in India in 2003 when some worm-infested chocolate bars almost destroyed the multi-million dollar company and ruined his career.

The public relations disaster very soon became a perfect media storm. "I was traveling at that time when we had the

it com blind first infestation and, as you might appreciate, infestation is very common in food products," Puri, who is now the managing director of Pidilite Industries, says. "It is not something out of the ordinary."

"Unfortunately it became a massive incident. We were on television, we were on the national media – it was almost as if every Cadbury bar had a problem."

If nothing, he said, the crisis afforded him a deeper knowledge of the life cycle of the Indian meal moth. "By now I'm an expert on the subject," Puri says. "Basically what happens is that if the aluminum foil in the bar gets punctured, it releases this lovely odor of chocolate that attracts the meal moth. They lay their eggs in there and, 60 days later, these hatch as worms. The total number of chocolate bars affected by this type of infestation was between six and eight."

Even so, Cadbury had a massive problem on its hands. The negative publicity dragged Cadbury's sales down 40% at a time when Diwali – India's main festive season – should have seen a spike of 20%. The wildfire of bad publicity soon spread to India's regulators, who were demanding answers. "Food is a state subject in India and there are more than 20 states – each of them wanted us to prove to them we didn't have a problem," Puri says.

MEANWHILE, ANY TINY IMPERFECTION in the bars added to the furor. Even fat bloom, the unrelated result of the bar melting in transit and then being refrigerated, was perceived as being part of the infestation problem. "While I had been through situation management training, the intensity of it completely blindsided me," Puri says. "At the height of it, outside Cadbury House in Mumbai, there were any number of media vans parked around. You think, 'My God, what is happening here!' And then, of course, the politicians jump in and then we had political demonstrators outside who came to break our windows because ostensibly we were poisoning their children. Everybody jumps in - even now when I think about it, I get goose bumps." **→**

me

SURVIVING THE IMPACT During a crisis, chances are your customer is just as concerned as you are. Don't hide – go public with words of reassurance.

WHO'S THE SCAPEGOAT

Now? Trying to pass the blame may only succeed in tightening the grip of public disapproval. Take responsibility from the start.

Neil McLeod, senior consultant at crisis and reputation management company PHA Media, says that during the stages of disbelief – when the road ahead looks fraught with expensive options – it pays to look the problem straight in the eye.

Rather than going to ground or seeking advice from overly cautious legal departments, it's essential for companies to put a face to the problem and show leadership. "Consumers really have an issue with this," he says. "They want to be reassured by a CEO or someone high up in the executive chain, speaking publicly, talking to the media and saying, 'We messed up but this is what we're doing to make it right. These are the reassurances I can give you.'"

Public perception, he says, is everything when it comes to crisis management and, more often than not, only a full and truthful account can restore public confidence. "You've got to face up to it. You've got to give the facts as you know them, and you've got to have full and frank disclosure. You need to act swiftly and decisively. You need to tell people you're trying to get to the bottom of the situation. You need to make it clear that anyone who's been affected by this will be contacted, and the company will do the right thing."

At this juncture, prevaricating or seeming evasive are not options. "Quite often you'll get companies that hide," he says. "They will be advised by lawyers to be careful, they'll be told not to open themselves up to further liabilities, but when you've got to weigh up the future of a company against the threat facing it, the PR head has to speak louder than the legal department."

ANGER

Often trust can dissolve through no fault of the company. In these instances, where the business has been the victim of a large-scale crime, the temptation to turn the anger outward, to find other victims or to apportion blame, must be avoided.

In this, the Tylenol crisis of 1982 remains the gold standard. Before the

FROM ANGER TO ACTION: A CASE STUDY IN OPTIMAL CRISIS MANAGEMENT



<u>Tylenol's</u> drop in market share following reports of deaths in the Chicago area in 1982.

crisis, Tylenol, one of Johnson & Johnson's leading brands, was the most successful over-the-counter painkiller in the US. The painkiller accounted for 33% of the company's year-on-year profit growth. It accounted for 37% of market share and outsold the next four leading painkillers combined. In the autumn of 1982, for reasons still unknown, cyanide-laced capsules had been resealed into Tylenol Extra Strength packages and placed on the shelves of pharmacies in the Chicago area.

By the time the crime had been identified, seven unsuspecting consumers had died horribly and Johnson & Johnson was in the invidious position of having to explain to the world why its leading brand was suddenly killing people.

JOHNSON & JOHNSON'S THEN CHAIRMAN,

James Burke, immediately formed a sevenmember strategy team with the simple brief: "How do we protect people? How do we save the product?"

Consumers were alerted not to buy Tylenol and the company embarked on a recall of 31 million units. Within six months it reissued the painkiller with a tamper-proof seal. At a time when most companies would have regarded the case as a criminal investigation, Johnson & Johnson's initiative swung public opinion behind it. Far from being perceived as an opaque corporate monolith with a plummeting share price and a bottom line to protect, the public came to view Jøhnson & Johnson as another victim in the case.

Within two months its share price had recovered and within a year its market share, which had plunged to 7% from 37% following the poisoning, had climbed back to 30%.

Today, the Tylenol brand name is still one of the most trusted over-the-counter consumer products in America. Total cost of <u>Johnson & Johnson's</u> product recall during the 1982 tampering crisis.

million

<u>Tylenol</u> almost fully regained its market share within one year.

'First and foremost, you want to protect the customers in the marketplace in which you're operating," he says. "The financial effects of that may be significant in the short term, but what you're protecting is the long-term future of your company."

Taking the initiative, he says, is essential and framing the debate in a way that places the interests of the consumer center stage can make or break a company struggling through a crisis.

"I think you've got to get stuck in, and you've got to start leading the debate before the media leads it for you," he says. "As Warren Buffett said, it takes years to build up a reputation, and it takes minutes to destroy it."

Likewise, anger directed at a company when the business is at fault also needs to be managed keeping the same precepts in mind; work from a basis of integrity and there is little to fear.

Merlin – the parent company of the theme park Alton Towers in the UK – had first-hand experience in managing this kind of crisis in June 2015 when its rollercoaster was involved in a collision.

Engineers failed to notice a carriage that had stopped midway through the 14-loop ride. Assuming there was a problem with the computer, they overrode the stop mechanism, setting another train in motion. Sixteen people were injured in the crash, including two teenage girls who needed leg amputations. In April 2016, Merlin admitted breaching the Health and Safety Act and was fined \longrightarrow

Samsung's reported Q3 2016 drop in profits.

A SMALL PROBLEM WITH A BIG IMPACT

ANGER-PLUS

Tim Ward, chief executive of the UK's Quoted Companies Alliance, a nonprofit organization that represents small- to mid-cap companies in the UK and Europe, says that Johnson & Johnson's action was unprecedented. "It might look very sensible now, but at the time they took an incredibly brave decision. They simply said, 'We are going to take every single Tylenol container off the shelves,'" he says.

"They didn't try and blame anybody else. They just said this is how we're going to deal with the issue because customer health and safety and families come first.

"It's been used as a case study for years and shows that the company has to get on the front foot."

He says research by his alliance showed that 28% of market capitalization for listed companies in the UK was based on brand equity and reputation alone.

of <u>Samsung Galaxy Note 7</u> devices were estimated to be affected during 2016 reports of exploding batteries. *CHANG SEA-JIN, Author of* Sony vs. Samsung

£5 million (\$6 million). Merlin Corporate Affairs Director James Crampton says that while the iconic theme park had contingencies in place for just such a crisis, the company was ultimately led by doing the right thing for the people affected by the accident.

Crampton says admitting liability was an important part of the process and the company took full responsibility on the day of the incident. He adds that the company chose not to rely on long consultation with lawyers and other advisers. "We didn't underestimate the size of the incident itself," he says. "We recognized that it was a bad accident and that, more importantly, the people under our care were injured because of it."

He says Merlin Chief Executive Nick Varney immediately attended the scene at Alton Towers and took the lead in all important communications with the broader public. "At the earliest opportunity, we said to people that we admit full responsibility and we will do everything we possibly can to help those affected by this accident and we have been ever since. That's been our mantra and the rationale behind all our decision-making. It's been tough. It's been tough for a lot of people internally but it's absolutely been driven by the natural human reaction to do the right thing."

While the impact on the brand has been considerable, the company is expecting to trade at normal levels by 2018.

l levels by 2018. low-end compo Decome

Within days of releasing its Galaxy Note 7, the company found itself in one of the biggest corporate public relations disasters ever. Reports came trickling in that the device sometimes spontaneously combusted. Samsung's first response: Delay shipments in order to carry out further tests.

Samsung put technicians onto the problem but, try as they might, none of them could replicate the issue. Samsung testers concluded the problem was due to a faulty battery. They switched suppliers. The solution failed.

More reports came in of exploding phones. With more issues being reported, Samsung increased the terms of the bargain. It stopped production of the Galaxy Note 7 and issued a recall kit (complete with fire-retarding packages and special gloves) to millions of users.

ACCORDING TO CHANG SEA-JIN, PROFESSOR of business at National University of Singapore and author of *Sony vs. Samsung* - a business history that examines the divergent fortunes of the two electronics giants - Samsung has now seriously jeopardized a hard-won reputation. Its attempt to bargain with the problem could prove to have long-term consequences.

"What has to be remembered is that Samsung was a no-name brand 20 years ago," Chang says, adding that the electronics giant was once known for churning out low-end components. [Today] the company doesn't just produce smartphones nor was the Note 7 its only phone," he says. "In a connected, social media-driven world that thrives on bad news, its poor handling of the Note 7 saga has become a black mark against the Samsung name. This risks undermining key intangibles like customer loyalty, prestige, desirability and positive brand recognition. This is especially serious for a company that positions itself as the sole competitor in the premium end of the smartphone market able to take on Apple, a company widely regarded as having the most valuable brand in the world."

"It worked really hard to build its brand.

Samsung acted quickly in some senses, but in its communications it appeared guarded and slow, says Chang. "The first rule of crisis management is to communicate openly and transparently. This is even more important in the tech world, where bad news becomes viral very quickly."

Like many large companies, Chang says Samsung has a tendency towards undue secrecy and aloofness.

"For example, the first Note 7 recall in the US was launched without the required coordination with the Consumer Product Safety Commission," he says. "Likewise, the recall was initially branded an "exchange program" – attempting to put a clunky public relations spin on what, in many consumers' eyes, was the sale of a potentially dangerous product. That went from bad to worse when it became apparent the replacement phones hadn't fixed the problem."

ACCEPTANCE

Owning a problem is halfway to solving it and Cadbury's comeback showed how each small success fed into a virtuous circle. Eventually, as Bharat Puri explains, the business snatched victory from the jaws of defeat.

He says that once the company had established that there was a serious problem, it immediately launched what it called Operation Vishwas (the word \longrightarrow

BARGAINING

The recent case of Samsung, meanwhile, stands at the other end of the spectrum. Its attempt to bargain its way out of a product disaster by releasing an even more problematic and hastily thrown together fix remains an object lesson in everything to avoid. While the tech giant didn't ignore the problems it was facing, it chose to negotiate with its consumers rather than to rebuild their trust or to get in front of the problem.





A CASE OF SWEET SUCCESS: PUTTING CUSTOMERS FIRST



<u>Cadbury</u> chocolate bars infested with meal moth worms were discovered in India.



increase in sales since the 2003 incident.



for "trust" in Hindi) and began to rebuild the brand starting with its own staff.

"I think we had about 300 salespeople back then," Puri says. "I asked all of them to go out and buy 1,000 rupees' worth of chocolate from different outlets." With a brief to take the chocolate and feed it to friends and family, the salespeople were told to immediately report back to Puri if there was a problem. "Of course there weren't any problems, but it gave them a lot of confidence in the product," he says.

THE NEXT STEP WAS TO LAY down a set of principles by which the Cadbury team could act and refer back to at any time in the process. "The first principle was that we were going to do what was right by the consumer. It's a given that eventually the bureaucrats and the press would go away, but when the consumer comes back to us, then the problem is truly over," Puri says.

BULL BY THE HORNS Putting the consumer first is the shortest path to regaining confidence and turning tragedy into victory. Don't wait to take action. **DIMITRIOS TSIVRIKOS,** Consumer and business psychologist at University College London

"The second was that we wouldn't do anything that was short-term and that we would later regret. Thirdly, we made sure that all the teams were in step and that we were all on the same page. We were getting back consumer research every week and we were mining it for three simple sets of data: Would I feed it to my child? Would I gift it to somebody? Would I consume it?"

Puri lobbied for visible signs of change to Cadbury's packaging. "I said: 'Listen, we could all argue that we sell a million bars in India and six of these have been found with a problem, but the fact is that our sales are down 40% in affected areas and 20% overall. We need to show the consumer we're taking action."

New factory floor machines were installed that sealed the chocolate bars from both ends to prevent meal moth infestation. "In a multinational, normally getting capital approved is a rather long and painstaking process. In this case it was done before one evening was out," Puri says, "We realized that what we had to tell the consumer was: 'You believe there's a problem, and we've acted.'"

The real game changer, however, came after Cadbury took on Amitabh Bachchan – India's famous Bollywood actor – as brand ambassador. Puri says the star insisted on visiting the factory, a grassroots exercise that further served to build back trust.

He says their best estimates had been for the crisis to pass and for Cadbury to be back to where it was within 12 months. "Actually, in eight months we came back and today Cadbury is three times the size of what it was."

TAKE ACTION

Dimitrios Tsivrikos, consumer and business psychologist at University College London, says that leadership is everything under crisis management situations and that companies need to be seen to be connecting with their consumers if they are to reverse a negative perception.

"Recalling the product is the first step," Tsivrikos says. "I think in crisis management, the worst thing you can do is try to be sketchy about what's happening or downplay the effect."

In the case of Samsung, he says that its rival Apple would likely be watching the company closely – not purely to profit from its faltering position – but as a case study in what not to do.

"The first thing is to assess what has caused the problem, who has been affected by it and then develop the best possible vehicle to address it," Tsivrikos says. Consumers are not merely buying a product. They are also buying into the lifestyle, the context and the dream the brand is built on. "We call it brand equity and sometimes it's worth more than the assets, the technology and the people in a company combined," he says.

sketchy or downplay the effect." **CLAWING BACK A DAMAGED REPUTATION** can be a painful and expensive process. The consequences can include a plummeting share price, a quarterly profits warning and a product recall, and the shockwaves from such a corporate debacle can be felt for years.

Nevertheless, crises of the magnitude of Johnson & Johnson and the Tylenol case can provide valuable opportunities in the right hands. Within one year, Johnson & Johnson had restored its share price and its company Chairman James Burke was being hailed as a hero.

Johnson & Johnson has now risen to count itself among the world's most powerful pharmaceutical companies. Similarly, Cadbury's travails in India are now counted as one of the country's classic corporate case studies and the company still reigns supreme in one of the world's biggest markets.

WIN WISDOM

As for the opportunities the crisis offered him, Puri says the discomfort of the situation is still too fresh in his mind. "It helped us become much stronger because it suddenly makes you realize as a food company how vulnerable you are," he says. "I remember Sir John Sunderland, my chairman, telling me at the time, 'Bharat, you know, you might not realize it now, but what you've actually been through is a privilege.' My immediate thought was: 'What has the man been drinking last night!'"

There wasn't a business book for Cadbury to follow. Its crisis was unique and could have a left a nasty taste in the mouth. But good leadership turned a near catastrophe to its advantage by putting trust at the heart of the recovery and faith in the process to win back consumer confidence. Thus, the company managed to transform near tragedy into sweet success. Or, as Aeschylus sums it up best in the *Oresteia*: "There is a place where what is terrible is good ... There is advantage in the wisdom won from pain."



A CALL FOR SUSTAINABILITY Bas van Abel founded Fairphone to bring a more globally conscious smartphone to the market.

IT PAYS TO BEGOOD

Today's consumers stand behind businesses that share their values. With environmental accountability rapidly becoming a mainstream demand, these companies prove that ethical practices can also make business sense.

BY Frederick Schulenburg

HEN CRAIG SAMS AND HIS BROTHER set up Europe's first macrobiotic restaurant, the native Nebraskans were operating well outside the mainstream of 1960s London. "Seed" may have been a hit with the likes of John Lennon and the Rolling Stones, who flocked to the two-room venue in Notting Hill with its cushions on the floor and basic dish of rice and vegetables, but it was definitely an unusual enterprise.

The name, however, was prophetic. Out of Seed grew a wholesale and retail organic food business, Whole Earth Foods. This was followed by Green & Black's, a pioneering organic chocolate business set up by Sams and his wife, Jo Fairley. Sams remains involved as president and adviser to Green & Black's, which now has around £150 million (\$185 million) in sales and is part of Mondelēz, the global confectionary giant. He and Fairley receive visiting Mondelēz executives to their home on the English south coast, where they relay their vision of how a business can be run along ethical and environmentally aware lines. The story of Sams' businesses - Whole Earth Foods is now part of organics multinational Wessanen - is symptomatic of a broader shift that has seen ethical or sustainable business move from the fringes to the mainstream. From blue chip behemoths to artisanal market traders, companies now almost fall over each other to brandish their ethical credentials, now aware that their customers demand nothing less. As Paul Polman, chief executive officer at consumer goods giant Unilever, memorably said in an interview with The Guardian, the importance of this to the viability of business may prove critical: "Some companies that miss the standards of acceptable behavior to consumers will be selected out."

Polman has been one of the prominent champions for changing the way companies do business. No one doubts his commitment to taking a stance on issues such as the environment. He is as likely to kick off shareholder meetings with data on global warming as on \longrightarrow

⊕ Fairphone

The world's first modular smartphone designed to be easily repaired, Fairphone's business concept is built around product longevity, recyclable components, fair work conditions and ethically sourced materials – including precious metals. The company announced the realease of the Fairphone 2 in 2017.

"We have moved <u>beyond the</u> <u>trade-off between</u> sustainability and profitability."

Ioannis Ioannou,

Professor at London Business School

of all sales of Patagonia clothing are donated to

support the preservation and restoration of the environment on an ongoing basis.



was raised in November 2016 alone when the company donated 100% of its Black Friday retail and online sales. group sales and operating margins. Unilever is by no means alone. Scores of companies now subscribe to the principle of doing ethical business. The question is how much of this is lip service and how much is actually part of the ethos of a company and demands significant commitment and energy. While a commitment to an ethical approach might win you the support of your customers, one nagging question remains: Is it possible to make real money doing so? Niche businesses targeting affluent, high-minded customers can command higher prices or sacrifice a bit of margin; companies in more cut-throat mass market sectors do not have that luxury - or so, at least, runs the received wisdom.

Ioannis Ioannou, associate professor of strategy and entrepreneurship at London Business School, believes such thinking is well past its sell-by date. Consumers can punish those who don't subscribe to their world view, making it potentially costly to ignore changing attitudes. "We have moved beyond the trade-off between sustainability and profitability," he says.

Research he has done with George Serafeim at Harvard Business School and Robert G. Eccles at Saïd Business School found that companies judged highsustainability businesses "dramatically outperform" their low-sustainability peers in terms of stock market and accounting measures of financial performance.



Patagonia

Founded in 1973 by Yvon Chouinard (pictured), Patagonia has built an outdoor clothing empire based around ethical practices including recycled materials and fair treatment of workers. The company's "Buy Less, Buy Used" campaign had the opposite effect: It increased sales. Ioannou's research has found that firms with a high commitment to their sustainability purpose have different organizational DNA, a longer-term horizon in their external communications and are more attractive to long-term investors.

He identifies four key principles that make for successful ethical business: strong governance, which ensures that the guiding principles are spread across the business; "purposeful stakeholder engagement" to ensure support from all those involved; credible transparency; and longterm decision-making.

Doing things differently

Some companies have been putting ethics front and center of their business model for some time. Even to the extent that they are built in to how the business operates. At Patagonia, a commitment to a core set of beliefs aimed at "using business to inspire solutions to the environmental crisis" has been part of the corporate culture since the outdoor clothing company was founded in 1973. It researches the environmental impact of its production and has developed ways of working with recycled materials – for example turning plastic bottles into fleece – and recycling the garments themselves.

Patagonia also subscribes to fair trade practices regarding work conditions. It offers paid internships and donates 1% of sales to grassroots activist projects. It runs programs to support environmental initiatives, shares its marketing platforms with advocacy groups and helps to finance projects, such as an initiative to save a Chilean fishing community's land from development. This fosters a sense of community that supports the business.

For Bas van Abel, consumer attitudes have been a central part of his business, Fairphone, from the start. The maker and retailer of smartphones began out of the belief that it should be possible to make such a ubiquitous product in a way that did not involve the exploitation often associated with sourcing many of its components. "People said I was crazy," recalls the Dutchman, who originally trained as



PLANTING A SEED Craig Sams grew experience as a restaurateur into organic businesses including chocolate maker Green & Black's.

an artist and engineer. The market was dominated by big powerful players. His hunch was that consumers would respond to an alternative – and be prepared to pay for it, literally. After two rounds of crowdfunding, he has raised €21.5 million (\$23 million) from future customers.

Making the commitment

"It was scary," he remembers. "In three weeks we had raised millions and did not know how to make a phone. I was crying in bed telling my wife that I wanted out. She told me it was too late and encouraged me to continue." He did and the company has since sold 125,000 phones – tiny in terms of the overall industry, but impressive for a startup. The issue now is that while he feels they have realized some of their original goal of changing attitudes, Fairphone has reached a point where it needs help, partners who can bring oper-



Green & Black's

The maker of the first chocolate bar to get Fairtrade International's mark, Green & Black's has remained committed to ethical sourcing since it was founded in 1991. Co-founder Craig Sams (pictured) is also behind the organic company Whole Earth Foods. ational experience and finance to be able to scale up the business.

A commitment to sustainability is also increasingly important in attracting talent. "Millennials don't want to work for companies that don't share their values," says van Abel.

Sven-Oliver Pink, one of the founders of Fond of Bags, a Cologne-based company that makes and sells fashionable backpacks and bags made out of recycled plastic bottles, agrees. Getting the right staff has been critical to the growth of the five-year-old business. The company – which took on 100 new people over the last year – will not employ anyone who does not share the core beliefs underpinning the business, Pink says. The result is a committed workforce – and in a "war for talent" environment, that is a positive contributor to the health of the business.

Green & Black's says that only by building up long-term relationships with cocoa farmers could it guarantee the quality of the base product and the consistency of supply. But as Sams says, it is important not to overpromise: "You need to make sure that you have got it right before you shout too much." Allowing the marketing department to rush out messages of how ethical the business is before the operational side is sorted invites disaster, and accusations of "greenwashing."

On a more positive note, growing commercial scale can be used to improve practices in the supply chain. "We are now acquiring an importance among our suppliers," says Pink. "And that gives us the possibility to have influence."

That is critical to his mission in more ways than one. When the business started, the founders each put in €60,000 (\$64,000), with Pink borrowing his share. The associated risk made him very "egotistical" in his approach he says, ensuring that they took care to choose good suppliers who conformed to the ethical outlook of the business. Failure to do so could have presented a business risk – and left him sitting on debts. Sustainability, after all, applied as much to the economics of the business as the environmental qualities of the products it made and sold.

h News

Or do we? The rapid rise of 'fake news', spread by the most efficient network the world has ever seen, is undermining reporting and threatening democracy. When facts are called into question, who can set the record straight?

BY Carole Cadwalladr

N THE MORNING OF JANUARY 11, the world woke up to an announcement from the President Elect of the United States of America. Donald Trump had decided to respond to the accusation that a dossier had been passed to the FBI alleging he had been compromised by the Russians. Taking to Twitter he declared: "FAKE NEWS – A TOTAL POLITICAL WITCH HUNT!"

Three months earlier, that response would have been unimaginable. Not just because nobody anticipated a President Elect tweeting in caps at 2 a.m., but because "fake news" didn't exist then. Or rather, it did, we just didn't know about it.

Fake news had been virtually invisible until the biggest upset in US electoral history. It had been out there for months, it transpired, polluting the news and information ecosphere: entirely made-up stories flooding social networks – particularly Facebook – throughout the election campaign. But it was only in its aftermath that "fake news" finally broke cover and has become a defining phenomenon of our age: a propaganda tool, a hyper-aggressive competitor to mainstream news, and, as seen in the Trump tweet, a newly legitimized defense against any accusation of any sort.

In the months since the election, and long after *BuzzFeed* reported on teenagers in Macedonia making up stories about Trump for financial gain, it appears the problem is wider and deeper than anyone realized.

The fake fake news

"That's the fake fake news - the Macedonian teenagers inventing stories about Trump," says Charlie Beckett, professor of media and communications at the LSE and director of the think tank, Polis. This was the discovery that a host of sites disseminating completely fictitious stories about Donald Trump and Hillary Clinton had been created by young, tech-savvy men in one small town in Macedonia who had discovered that if they could make content go viral in the US they could monetize it through Google AdSense. "But fake news is also the hyper-partisan stuff like Breitbart." Breitbart, edited by Steven Bannon - Trump's campaign chief and now head of strategy - is a new type of news organization: a populist, right-wing website mixing news and lies and propaganda seemingly indiscriminately. "It's now expanding into Germany and Italy and France," says Beckett. "And

what they are doing is quite different, but very clever. They are taking facts and then turning them into something entirely fictitious."

He cites the example of a story that Breitbart ran that claimed a mob of 1,000 refugees had burned down a church in Germany chanting "Allahu akbar" -God is great. "That story consisted of facts that were almost completely correct but which had been strung together to create a completely false narrative." Eva Kühne-Hörmann, Justice Minister of Hesse, said at the time that the danger is that these stories spread "at incredible speed and take on lives of their own." But Beckett says it's unclear what, if any measures are possible to combat it. "Facebook has announced that it is taking certain measures to combat false news but they'd be pilloried for bias if they start censoring right-wing sites. It would be very difficult - and undesirable - for them to be drawing the line on what is and isn't political bias."

Only the beginning

Removing the financial incentive for fake news is one response, he says, "decoupling it from advertising," as some campaigns are trying to do: by pressuring companies to stop advertising on *Breitbart*. But it's clear that the election is only the beginning of the fake news phenomenon.

On President Trump's first day in office, his press secretary, Sean Spicer, took his first press conference in the White House and it became clear that fake news had become an official government tool. The crowd, said Spicer, was larger than it had been at any other inauguration – not just a lie, but a provable lie.

"There's now a trend for calling <u>anything you</u> <u>don't like</u> fake news."

Charlie Beckett, professor of media and communications at the LSE

FBI Insider: Clinton Emails Linked To Political **Pedophile Sex Ring**

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FREE MARKET **REPORTING Open** access to online publishing was once the democratizing strength of the internet. Now, we must reckon with the flipside of that freedom - liars and propagandists have a voice there, too.

Mark Zuckerburg - Dead At 32 - Denies Facebook Has Problem With Fake News - The Shovel

Facebook founder Mark Zuckerburg - who died of heart complications at his Californian home today - says the proliferation of fake news stories on the site he...

THESHOVEL.COM.AU

Established opinion, says Beckett, has been that the plurality of news media is a good thing. But now, he says, it's out of control. "There's now a trend for calling anything you don't like fake news. As Trump is doing. It's not quite as propagandist as Goebbels," he says referring to Hitler's Nazi media chief, before he trails off, "but ... "

But? "It is worrying. It's destabilizing political debate." Because in the new age of what has come to be called "platform capitalism," news is just one commodity among other commodities. On Facebook, news whether from Macedonian teenagers or The New York Times looks the same. And, in many ways, it's reflecting the structure of the internet. Its great democratizing strength was to give the marginalized a voice and access to a worldwide network. The fact that it gives liars, propagandists, neo-Nazis and Macedonian teenagers a voice too, is something that is only now starting to be reckoned with.

Is it that there's now a free market of news? That it's not what's most accurately reported, or truest, it's what's clicked on most? "It's exactly that," says Beckett. And the 'clickiest' news, it turns out, is the news that we want to believe. The news that fits into the belief system we already have. "But you can't change human nature overnight. And the advantages of the internet are still greater than the disadvantages. I would rather Breitbart is out there in the open engaging in the marketplace of ideas where it can be challenged and debated."

Tracking the impact

The idea that fake news played any part in the US election was "pretty crazy," said Facebook founder Mark Zuckerberg after the election. As more and more stories came to light - stories such as the Pope had endorsed Trump, that Hillary Clinton sold weapons to ISIS - and that they generated more views than those from The New York Times or CNN, it was Zuckerberg's flat denial of the problem that seemed pretty crazy.

But understanding how fake news travels and what impact it has is a science that is in its infancy. One of the few people trying to understand what is happening at a structural level is Jonathan Albright, assistant professor of communications at Elon University, North Carolina. He took a list of known fake news sites – 303 of them – and then used a data tool to "crawl" them. This uncovered where and how they were hyperlinked into the web's architecture. He looked at about 23,000 pages, roughly 1.3 million hyperlinks and uncovered what he claims is the structure of the fake news ecosystem.

A network of untruths

Facebook, he observes, is often cited in the argument, but it is in fact only working as an amplification system. The premium social media site helps news spread faster, but the more startling fact is that a number of small sites are putting out a huge amount of hyperlinks. The way they are linked together is a significant factor in this debate.

His map of the information cyberworld has turned into a huge system which he says is surrounding and encroaching on the mainstream news system in a "quite terrifying way." He explains that this network is strengthened with every click, link or like. His conclusion is that the network is choking the mainstream news ecosystem like an organism that is growing and getting stronger.

What Albright's research has made clear is that it's not just "news" that is at stake. It's facts, information, truth.

And in this, Trump is just one powerful node in a network of untruths. Even historical facts, documented and incontrovertible, such as the Holocaust, have become sites of "controversy." Typing "the Holocaust is" into Google's search bar, at the time of writing, brought back Google's first suggestion of "a hoax." And, incredibly, nine out of 10 of the top sites Google suggested claimed that yes, it is a hoax. Anybody googling the Holocaust was being directed – by Google – to neo-Nazi content.

Google claims its search results are simply "a reflection of content across the web" but Cathy O'Neil, a data scientist and the author of *Weapons of Math Destruction*, calls it a "co-conspirator" in league with those disseminating hate speech. She points out that no one knows how the Google or Facebook algorithms work. This is commercially protected information and, for that reason, there is no regulatory oversight in place. She notes with dismay that extreme websites would have been locked out of the debate by the

Fighting back with critical thinking and education

INFORMATION IS THE CURRENCY OF OUR WORLD. Business, politics, social discourse, international relations and more all rest on the assumption of shared, accurate information. But with "fake news" corrupting news coverage, we are now learning how that currency is being debased.

The problems are driven by as yet unaddressed structural issues in media including digital accountability for the dominant market power of big technology companies and the failed business model and economic decline of many news and information outlets.

If we are to have confidence in what we learn about the world and how it works, these structural issues require our attention.

In addition, both Russia and China have invested significantly in international media at a time when western newsrooms have faced significant cutbacks. With elections in France and Germany this year, both countries have expressed concern at Russian propaganda seeking to undermine public confidence in their political institutions.

What is to be done? We should be in no doubt that without trusted sources of reliable information, and without the media pursuing public accountability, the democratic structures of western societies will fail.

The solution has to lie in our own hands. People will have to think more critically about the information they consume and share. Society needs to renew a commitment to media education, critical thinking and literacy. Surveys show the public is often unable to distinguish between well-researched news and information from reliable sources, PR, propaganda, advertising, activism or simply gossip or innuendo. And the merging of news and opinion has left many deeply confused between facts and assertion.

If we all contribute to the environment the media reflects, then we all need to take greater responsibility for the consequences. We should place greater emphasis on transparency and accountability of media sources, on the use of evidence and data, and value rather than decry the diversity of views.



Richard Sambrook

The former director of global news at the BBC, where he worked as a journalist for 30 years, Richard Sambrook is now a professor of journalism and director of the Centre for Journalism at Cardiff University. mainstream press just a few years ago; now the gatekeepers of information are algorithms which are able to be manipulated.

What can be done to combat the lies has precipitated a mixture of introspection and despair from mainstream media, though a fightback, of sorts, has now begun. On the day after the inauguration, *The New York Times* and the *Washington Post* took a robust stance. "Slamming Media, Trump Advances Two Falsehoods," said *The New York Times*' front page.

There's a new seriousness and intent to the way that the mainstream US media has decided to cover its president. But, it's only one tiny part of a much bigger picture. The role of the two greatest information monopolies – Facebook and Google – is key. In response to the fake news furor, Facebook announced a Facebook Journalism Project in January that would "establish stronger ties between Facebook and the news industry" but for many, including journalist and media commentator Frederic Filloux, it is nothing more than a "PR stunt." Facebook needed to be seen to be responding to the problem, to reassure users and its media "partners," but its approach is, he claims, a mixture of "cynicism and naiveté."

Creating accountability

What's really needed is a far wider-reaching "algorithmic accountability," says Frank Pasquale, professor of law at Maryland University and author of *The Black Box Society*. Because in a few years, the entire news and information ecosystem has come down from being located across a handful of powerful, diverse media players to just two main gatekeepers – Google and Facebook. "I am terrified about the future of this information duopoly. People say, 'Oh the mass media is terrible, so stop criticizing Google and Facebook.' You can criticize both, but their dominant position is making the situation incalculably worse."

While news organizations are grappling with the issue, it is, arguably, time for the rest of us concerned citizens to do our bit too. One of the first politicians to take up the call for greater transparency from Google and Facebook, Britain's Shadow Industrial Minister Chi Onwurah, said at the end of 2016 that "algorithms aren't above law." It's a good phrase. What remains to be seen is whether it's true, or not.

Research has made clear that it's not just "news" that is at stake. It's facts, information, truth.

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Y THIS

When Laura Poitras, Glenn Greenwald and Ewen MacAskill flew to Hong Kong to meet Edward Snowden, they came back with an unprecedented scoop. They also got to the heart of another story – what it means to trust, for a whistleblower and a team.

BY **Ewen MacAskill**

ONLY EXPECTED TO BE IN HONG KONG FOR TWO DAYS SO I traveled light, just the clothes I was wearing and a spare set, a laptop and notebook. Two days: long enough to check out an unlikely tale that there was a US "spy" claiming to have top secret documents and ready to leak them to *The Guardian*.

In the end, I spent 10 days in Hong Kong, an extraordinarily intense period of reporting with only a pause to buy new clothes. The source turned out to be genuine, former CIA official and US National Security Agency (NSA) contractor Edward Snowden, whose revelations about surveillance were described by US and British intelligence agencies as the biggest leak in Western intelligence history.

Newspaper readers only ever see the finished product and are largely unaware of the hours wasted by reporters checking out phone calls and emails, many of them from cranks. So most reporters start with a built-in skepticism.

I was based in *The Guardian*'s New York office in May 2013 when the then US editor Janine Gibson called out across the newsroom and asked if I would go to Hong Kong the next day. There was someone claiming to be a spy and he or she \longrightarrow wanted to talk. "Sure," I replied instinctively, rarely turning down any assignment, especially one involving foreign travel.

In Janine's office, I met *The Guardian* columnist Glenn Greenwald, who wrote about US national security matters from his home in Rio de Janeiro, Brazil. Using a secure laptop Glenn showed us a few documents sent by the source to demonstrate he or she was genuine. Glenn kept saying: "Wow." I had no idea of the significance and just nodded. The diagrams looked suspiciously amateurish.

Janine's plan was that Glenn, filmmaker and journalist Laura Poitras and I would travel to Hong Kong and meet the source. Her fear was that the whole story might be a hoax. I was added to the team of Glenn and Laura mainly because I was a veteran journalist with *The Guardian* who had worked on many stories with Janine and then editor Alan Rusbridger.

Justifiable caution

Laura did not want me on board. She had valid reasons for that. More than anyone else other than Snowden, she made this story happen. She was the first person to take Snowden seriously when he first got in touch on the internet. She told him to expect only two people in Hong Kong: herself and Glenn, and feared the appearance of a third might spook him. Plus, she did not know me.

In the end, we compromised. We flew to Hong Kong together, but only Laura and Glenn went for the first meeting on Monday. I would join on Tuesday. Glenn reported back on Monday evening that he believed Snowden was genuine.

Heading over with Glenn in a taxi to meet Snowden on Tuesday morning, my fear was that he might no longer be there, snatched by the CIA before I had had a chance to speak to him. He was staying at the Mira Hotel in the middle of one of Kowloon's busiest and noisiest shopping thoroughfares. Our initial exchange in Snowden's hotel room had a whiff of panic after I asked him if he minded if I recorded the interview on my iPhone. He asked me to remove the iPhone from the room

Our initial exchange in Snowden's hotel room had <u>a whiff of panic</u>.

immediately, explaining on my return that he regarded the iPhone as a microphone that could allow the intelligence agencies to listen in on the conversation. He took other precautions too, such as placing pillows against gaps in the door to reduce the chances of someone in the corridor listening in. At the time I thought it smacked of paranoia, but I later came to view this as entirely justified. In spite of these precautions, one of the biggest surprises was how calm he appeared and how at ease he remained.

The initial conversation was very specific, with Snowden talking about secret documents he was leaking showing the scale of NSA surveillance. I found myself lost in the detail and thought the

✤The Media's Role

Depending on the source, Snowden has been cast as a hero and champion of the freedom of information or as a



traitor who has threatened the structure of democracy itself. His 2014 *Wired* cover has been called his most provocative. only way to disentangle this was to get back to journalistic basics: who, when, what, where and why?

He ran through his life story. It sounded improbable he could have done all he said he had done. He was 29 and yet he claimed he had made it into the higher ranks of the NSA, even though he had not been at university, the starting point for almost any career in the upper reaches of the government. He had been employed by the NSA in Maryland, by the CIA in Geneva, and had worked for the NSA in Japan, Maryland and then finally Hawaii at the NSA's huge listening and hacking post.

Going on instinct

Bit by bit I came to trust him: the result of an accumulation of things. He knew he would have to convince us that he was who he said he was and presented a pile of credentials, from his driving license to his intelligence IDs, though these would have been easy to fake. More reassuring was that he was not evasive about anything in his personal life, no matter how intrusive the question. I told him that every aspect of his life would be scrutinized and if he had done anything illegal or embarrassing in his life, it would be better if he told us now. He mentioned one personal incident, which we have never disclosed, but it was pretty innocuous. I thought: If this is the most embarrassing thing he thinks he has done, he's led a pretty clean life. His answers did not sound rehearsed. Crucially,

A TWO-WAY STREET After going to meet an unknown American who claimed to have some interesting "stuff," Ewen MacAskill discovered that establishing trust would run both ways.



The right blend of expertise

American journalist and documentary filmmaker Laura Poitras was the first person to take Snowden seriously. Her 2014 film *Citizenfour* offers an in-depth look at the meetings with <u>Snowden</u> in Hong Kong.

An expert on national security issues and surveillance, <u>Glenn Greenwald</u> began contributing to *The Guardian* in 2012 and was asked to join Poitras as the second member of the team *The Guardian* sent to investigate Snowden's claims.

Ewen MacAskill, a veteran journalist with *The Guardian*, became the next, unexpected addition to the team.

Although MacAskill's presence was met with initial skepticism, their mix of expertise proved invaluable. They won Snowden's trust. he did not ask for money, the usual giveaway for a hoax. Unusually too, he did not request anonymity.

In the end, as with most reporters, trust comes down to instinct. He just sounded genuine, especially when talking in detail about various NSA documents as he showed them to us on his laptop. It would have been hard but not impossible to fake such documents, but it would have

> been much harder to fake the enthusiasm with which he tried to explain the various surveillance programs to us. He was uncomfortable and coy when talking about his personal life but he became animated and voluble when talking about programs such as PRISM, which disclosed the extent to which big US tech companies cooperated with the NSA. When I returned, my wife asked me what convinced me that he was real and that is the reason I gave her: the volume of documents and the enthusiasm and knowledge he dis-

played in taking us through them.

Before I left for Hong Kong, I agreed upon a codeword with Janine which I would use on the phone if I thought the source was genuine. Now was the time to use it and so I phoned Janine.

The next day I saw Snowden again and went back over his life story in preparation for a profile of him. He unexpectedly threw a new story into the mix: that he had wanted to go to Iraq and had trained with the US Special Forces. That set off an alarm. It was the kind of thing a fantasist would come up with. He alarmed me further when he went on to say that he had to abandon training when he jumped off the top of a bunkbed and broke both legs.

I briefly panicked, thinking I would have to phone *The Guardian* and tell them to kill all publication plans. In the end though, after further questioning, strange as his story seemed, I felt he was telling the truth. It was partly that he was particularly emotional that day, having learned that NSA security had visited his home in Hawaii and spoken to his partner, Lindsay Mills. The well-being of his partner seemed to upset him more than his own safety. But what tilted the balance towards belief that he was telling the truth was just the sheer volume of documents. I was 99% sure - based on the interviews, the identification proof he had brought and the leaked documents - that he was genuine. But final confirmation came when Janine contacted the White House and the NSA to say we were planning to publish the first of the leaked documents and asked for a response. It was only when she was patched into a conference call later with representatives from the White House, the NSA, the FBI and others and was asked not to publish that we knew for sure.

Suspicion gives way to trust

On the flight to Hong Kong, Laura and Glenn barely spoke to me. Glenn softened within hours of landing and Laura soon after. I don't know for sure why she did. In a taxi into Hong Kong, Laura asked me about stories I had done. That might have helped, but I believe that what really began the thaw was just working together. We had different skills - I was a reporter, Laura a filmmaker and Glenn possessed deep knowledge of the whole national security and surveillance issue - and we melded as a team. Initial suspicions gave way to trust. The leak of US diplomatic cables in 2010 ended with WikiLeaks founder Julian Assange and the journalists involved falling out badly. By contrast, we have remained friends.

Laura, speaking at a journalistic award ceremony in New York in 2014, said we had been untested as a team before going to Hong Kong. "We each had our areas of expertise but we got on the plane never having worked together and did something and worked together in a way that was really extraordinary, and I'll be forever bound to them." She added an important rider, one that Glenn and I concurred with: She dedicated the award to the person who made the sacrifice, who had never met journalists before, but took a chance and came to trust first Laura, then Glenn and then me, and who we, in turn, came to trust implicitly: Edward Snowden.


Unusual Treasures, Unusual Banks

Unpredictable threats like climate change and global instability are leading to a rethink on how best to protect some of the world's most valuable resources. We take a look at a few of these modern-day Noah's arks redefining what we safeguard – and how we do it.

Svalb

Seeds for the Future

Blasted deep inside a mountain halfway between mainland Norway and the North Pole, the Svalbard **Global Seed Vault is** protecting the world's agricultural heritage in fail-safe permafrost conditions far above potential flood levels. The 830,000 samples of diverse crops stored here are drawn from almost every country in the world.

"Crop diversity is a fundamental foundation for the end of hunger."

Marie Haga, Executive Director of the Crop Trust



• Boxes containing diverse crop samples arrive at the Global Seed Vault from all over the world. After arrival, they are sealed in custom-made packages and stored in the vault at a temperature of -18 °C. • The vault operates on a black box system. Akin to a safety deposit box, each country or institution that deposits seeds retains ownership of their samples and is the only one who can withdraw or open their boxes.



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Art Treasures

Priceless art, ranging from antiquities to paintings by modern masters are stored in various facilities, like the one pictured below, around the world. One, the Geneva Free Port, is reported to hold over a million works of art. Officially a facility for goods in transit, it offers climate-controlled premises, security and confidentiality.



Collecting Genome Material

Launched by the Smithsonian National Museum of Natural History, the mission of the Global Genome Initiative is to gather and preserve the Earth's genomic diversity. The initiative also organizes the Global Genome Biodiversity Network to foster active collaboration across member organizations worldwide. With less than 1% of the planet's known genomes sequenced to date, potentially priceless information will be retained for future innovations in medicine, agriculture and environmental sustainability.



Ice for the Ages

The atmospheric data frozen into the world's glacial ice is invaluable in the study of global warming. That is, if it doesn't melt before scientists perfect a way of reading it. To safeguard this knowledge, the Protecting Ice Memory project has s out to create an archive o ice core samples taken from glaciers around the world. The project's first samples, extracted from Mont Blanc, are being held in Grenoble before being transported to the Concordia Research Station on Antarctica, where temperatures average -54 °C.

History has taught us that human knowledge is anything but stable. Even digital storage, assumed by many to be infallible, is fragile and will someday be rendered unreadable. But now a research team led by Robert Grass at ETH Zurich has discovered how to save data as DNA. With error-correcting algorithms and unprecedented information density, DNA may be used to protect the world's collective knowledge for a million years.





More than a Sounding Board Meret Voyles It's time

to bring the relationship between the CEO and the board out of the stone age: Wharton professor Michael Useem on the new leadership model that's steering companies to make smarter decisions.

RADITIONALLY, CORPORATE

BOARDS hired and fired the company's leaders, but otherwise stood back and let the CEO pilot the ship. In their book *Boards That Lead: When to Take Charge, When to Partner, and When to Stay Out of the Way*, Dennis Carey, Ram Charan and Michael Useem observed that, these days, more and more boards are choosing to stay on the bridge for the whole voyage.

But is steering by committee a good idea? Useem, the William and Jacalyn Egan professor of management at the Wharton School of Business in Philadelphia, explained to *Think:Act* why, despite the downside risks that board leadership creates, he believes it's a chance worth taking.

Think:Act In Boards That Lead, you argued that the role of the board has undergone a quiet revolution over the last 10 years. What's different about today's boards?

- **Michael Useem:** Over the past decade, many boards have added a second function to the traditional function of keeping an eye on management. For a host of reasons, many boards are moving towards adding a leadership function as well.
- If you ask directors what question is uppermost on their minds, historically their answer was: Is top management doing the right thing for its owners? In addition, directors now really want to work as a partner with top management, to think about how to create value.
- Board members are also getting more involved in leadership development. Many firms now ask non-executive directors to serve as mentors to top managers, and even as instructors in company leadership development programs, adding substance and not just oversight to their role.

"I think the logic is inescapable that companies that are well led by <u>executives who partner with</u> <u>their directors</u> are going to make smarter decisions."

In the past, board membership was often an almost honorific position. Does being a board member demand a bigger commitment today than a few lost rounds of golf? Yes, it definitely takes more time. In the

- US, if you're the lead director or the non-executive chair, you can be putting in well more than 200 hours a year.
- In the US, both of those roles have become much more important, much more time-consuming, and much more a matter of actually knowing the substance of what the business is doing and what the market looks like than used to be the case.

Are there any downside risks to this new model? For instance, could board members' personal investment in the strategy make them less objective about management's performance?



That's a potential Achilles' heel of this new model. As non-executive directors devote more time in helping to shape the company's strategy, they may be less able to monitor performance objectively.

Will we see term limits?

It's coming, as a way of keeping the board fresh, to give it new ideas and to ensure director independence. I think that governance is going to move in this direction as appreciation grows of the downside of having very long-term directors who may lose some of their edge as independent voices.

Could you give us an example of the kind of value this new style of board can add?

- I'll reference one that's in our book: The CEO of Gillette, the biggest player in the men's shaving market, called the CEO of Procter & Gamble and said Gillette would like to consider being acquired by Procter & Gamble.
- This was going to be one of the biggest decisions that the CEO of P&G at the time, A.G. Lafley, and his top team would be making during their tenure. They had a bunch of critical questions to answer: What was the right price? Would it make sense to bring this consumer product into the P&G family given the history of it not being there?



THE NEW BOARD Michael Useem believes that boards can play a much more constructive role than they currently do.

are asking themselves much tougher questions these days: What kind of a board member do we need that we don't have? Do we have somebody, for instance, who is knowledgeable about cybersecurity? Do we have somebody on the board who really understands global supply chains?

What should a healthy working relationship between a board and a CEO look like?

In British firms, the relationship between the chairman and the CEO is crucial. In American firms, the relationship between the lead director and the CEO has become critical as well. In both cases, the question comes down to whether the two of them are capable of collaborating closely. Are they able to divide up what they work on effectively? Do they understand each other's thinking exquisitely well? Can they call each other with no notice to receive guidance and advice? In the

Is the current chief executive of Gillette and what he knows vital to making the acquisition succeed, and if so, what will it take to retain him for at least several years? And, what will it do to the culture of Procter & Gamble to bring in a huge new division that has its own traditions?

- Fortunately, Procter & Gamble had six current or former executives on the board who had been through very large acquisitions of their own before they joined the P&G board. Whom better for the P&G chief executive to obtain informed guidance from than executives who've been through major acquisitions themselves?
- Choosing board members must also be a more serious business now. The nominations and governance committee, which is responsible for identifying future members of the board and making certain that the board procedures are strong, has become a much more important player at many companies. Nominations and governance committees

The key questions to ask your board

Is the person who is the lead director or non-executive chair a person who can lead, organize and direct the work of the board in collaboration with top management? Are they persuasive, are they decisive and are they strategic? 2 Is the board large

enough to have a critical mass of diverse expertise and experiences, but not so large that it can't function as a decision-making team? Is everybody in the boardroom contributing value not only to the monitoring function, but also to the strategy and leadership of the board and the firm?

If you were an activist investor

looking at your company, what changes would you want to make in the board and its leadership of the firm? monitoring-only era, these relationships were less significant.

But isn't it unstable to have two leaders?

Historically, very few firms have had two co-CEOs for any length of time. The fact that they're so few and far between means it's an unstable configuration. It's akin to certain atomic configurations that decay soon because they're in an unstable state. It's good to view the strong collaboration between the chief executive and board chair or lead director not as a co-relationship, but as a complementary relationship.

You've mentioned the differences between the US and the UK, but other board configurations are even more different. Do you think this model will go global?

Country traditions in governance are probably more varied for large publicly traded companies than almost any aspect of corporate management. The way boards operate in Norway, for example, is different from that in Germany, and their operation in Germany is still different than what we have in the US or UK. Over time, I think the logic is inescapable that companies that are well led by executives who partner with their directors are going to make smarter decisions and perform better in all countries.

Many countries now require boards to include a certain percentage of women. What impact does diversity have on board performance?

I believe that bringing women onto governing boards is one of those quiet revolutions that is happening in front of us. Overall, there is good evidence now that more diversity in terms of expertise, geographic location and demographic variety makes for a more consequential board.

groups =.usage:use I could attack }.< your systems.retur Steal your..ime.le secrets.0;>2.1==le 'Take your money.{' Know your moves.< I'm watching you. Right now.str.\$55. What can you do?{k |HIRE /truedit-r-s LIKEid:54348 Passı : ME_a.function(n); ep authcommand.bu **TRUST HACKERS**

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Think:Act 22 49

BY Jessica Twentyman

CTOBER 2015. EXECUTIVES AT UK-BASED PHONE AND INTERNET SERVICE PROVIDER TALKTALK made a shocking revelation: One of the company's databases, containing customers' personal information, had been breached by hackers.

The cyber criminals had accessed names, phone numbers and details of bank accounts and credit cards relating to around 157,000 individuals. When it comes to IT security, the penalties for complacency can be steep, as TalkTalk's management team discovered following their disclosure. During the financial quarter in which the attack took place, the company experienced a £15 million (\$19 million) impact on trading and lost some 95,000 customers. On top of that, it had to spend a whopping £42 million (\$53 million) in "exceptional costs" relating to the attack: restoring online capabilities, upgrading IT security, hiring consultants and offering free upgrades to disgruntled customers.

And then in October 2016, TalkTalk was slapped with a £400,000 (\$500,000) fine by the Information Commissioner's Office, a record penalty from the UK body charged with enforcing the Data Protection Act.

Others have also been hit by similar attacks. When customer information was stolen from Sony's PlayStation video games network in 2011, the company spent around \$15 million in the US settling lawsuits arising from the incident and was hit with a £250,000 (\$300,000) fine in the UK.

To avoid such minefields, companies are increasingly looking to hire so-called "white hat" hackers – skilled IT security experts who probe systems for weak spots. These white hats, also called "ethical hackers," provide an opportunity to preemptively fix vulnerabilities before they are exploited by criminals – or "black hat" hackers.

The terms "white hat" and "black hat" have their roots in the symbolism of old Western movies, where the good guys wore white hats and the villains wore black \longrightarrow

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TRUST HACKERS

ones. These terms describe an approach to IT security rooted in the idea that, in order to beat criminals at their own game, a company needs people on its side who are able to think and act like them.

They must be able to use the same tactics: find vulnerabilities in IT systems and then test them to see how they might be exploited in order to gain access to underlying databases – a process known as "penetration testing" and an important element in the ethical hacker's playbook.

A matter of intent

It boils down to intent, says US-based security analyst and white hat, Tiffany Rad: "It's how you use a tool or a skill that turns them into something bad or something good."

This is a lesson she learned from her father, who taught her how to pick locks. Far from preparing his daughter for a career as a criminal, John Strauchs, a former operations officer with the CIA, had only good intentions. "He was teaching me the importance of problem-solving ... In order to solve a problem, you need to understand how something works," says Rad. "If you know how something works, you can often find ways around it – or ways to make it work even better." With the ability to pick a lock, you could become a burglar, certainly, but also a skilled locksmith.

Rad chose the latter path, becoming a "locksmith" in IT security. In the course of her career, she has been a white hat hacker at IT security company Kaspersky Lab and at networking giant Cisco. She has used her skills to identify security flaws in the computerized gates and doors of prisons, in the sensors and meters of connected cars and in a wide range of government and corporate IT systems.

Today she works at her own startup company, Anatrope, which focuses on the security of smart, connected vehicles.

For some projects, Rad works on a micro level, investigating the firmware on a microchip for vulnerabilities. In others, she works on a macro level, probing a large corporate network for weak spots.

Most software programs contain unintentional bugs or defects in millions

"Picking a lock could make you a burglar. Or a skilled locksmith."



TIFFANY RAD, US-based security analyst and white hat hacker

of lines of code and, in some cases, intentional "backdoors" designed to let authorized parties gain access are still open to abuse.

Whatever the task, though, Rad has a first step in her game plan: talking to employees. "They're often the weakest link, because it's easy for them to respond to a 'phishing' email or share a password with an unauthorized party, with no bad intentions. Sometimes, we find vulnerabilities this way, without even looking at the company's IT systems," she says.

Another challenge for her to crack could be that the software patches issued by developers intended to plug any vulnerable IT gaps may be incorrectly applied – or never applied at all. Networking hardware such as routers, switches and firewalls may have ports left open, allowing unauthorized parties to spy on the traffic they're directing or even reroute it. Default administrator passwords on equipment and programs, provided by manufacturers, may never be changed to more secure alternatives by the end-user companies that install them.

"When we do move on to the IT systems," says Rad, "we often start with networking, looking in particular at Wi-Fi access and at those points where the public internet and private corporate networks touch," she says. "I'm also interested in the permissions that are applied to different corporate systems – does everybody who has permission to access this database of customer contacts, for example, really need to be accessing that database in the first place?"

In some cases, more sophisticated "social engineering" hack approaches may be at work. User passwords are a particular target, with holders persuaded to divulge their details to people posing as authorized parties, or by simply leaving them out in plain sight on a sticky note attached to a desktop PC, for example.

"This isn't a static environment – threats are always changing and it's a challenge for white hats to keep up with that. Every day is different."

Which is why white hats have to stay one step ahead of the criminals by keeping

TRUST HACKERS

Bounty hackers

Computer-savvy individuals with time and skills to spare may find that bug bounty programs offer a chance to make some money on the side – and sometimes big money - by scouting out flaws and glitches in corporate IT systems and flagging them up in return for a reward. Even the Pentagon is now involved. In April and May 2016, the US Department of Defense ran Hack the Pentagon, thought to be the first bug bounty program run and widely publicized – by the US federal government. This initiative was hosted and run on its behalf by HackerOne, a specialist bug bounty platform where hackers and companies meet and communicate.

Hack the Pentagon ran for 24 days, resulted in a total of 138 vulnerabilities being tackled and over \$70,000 being awarded to hackers. The highest reward was \$3,500, with the average worth \$588. It was considered such a success that the Department of Defense collaborated again with HackerOne to launch Hack the Army in November 2016, a challenge to find security flaws in the US Army's public-facing systems.

up to date on emerging threats by reading or by networking with other white hats. It's these kind of challenges that make the job compelling: "Beating hackers is a puzzle," says Rad. "And people like me love to solve a puzzle."

Despite the temptation to go rogue, white hat hackers adhere to a strict code of conduct. "The tools we use are powerful ones. Once you have that gift, you wouldn't want to give it back, but you have to be wise in how you use it," says Rad.

Thinking like a hacker

Certain industries are further along in accepting white hats than others, says Vince Warrington, an IT security advisor who has worked on projects for organizations such as Diageo and GlaxoSmithKline.

The financial services sector has a pretty good understanding of how hackers think, he says, as do the public sector bodies that guard state secrets. "[Other industries] are still in the mindset that 'We have to defend the castle,'" he says, adding that they need to come at it from the attacker mindset.

For those that have made the switch in thinking, however, maintaining an internal white hat team comes at a cost. That's not just the salaries that skilled personnel expect, says Warrington, but also the constant pressure to keep white hat skills up to speed in the face of increasingly sophisticated attacks. With that in mind, some organizations turn to third-party specialists.

For those that go down this route, there will be no shortage of offers of help – at a price. This is a crowded market, in part because many white hats have recognized that they can make more money on the open market.

There are also serious questions about trust. "There's a certain nervousness around the fact that you're giving outsiders privileged access to key systems, no matter how stringent the non-disclosure agreements you ask them to sign," says Warrington.

That makes the market for ethical hacking skills a "lemon market," says Rowland Johnson, an executive at CREST, a nonprofit providing accreditation and certification to the information security industry.

The term "lemon market" coined by Nobel Prize-winning economist George Akerlof describes a situation where sellers know more than buyers. He uses the usedcar market as a comparison, where there are good cars for sale and dodgy ones (or "lemons"). The seller knows which is which, but most buyers can't differentiate between the two.

The same applies to the market for ethical hacking, Johnson says, which is why CREST doesn't just focus on the certification of individual testers, requiring them to undergo extensive training and to re-sit exams every three years, but also the accreditation of the organizations for which they work. That involves them demonstrating appropriate policies, processes and procedures for protecting client information.

According to Johnson: "This is highly sensitive work, so companies need to be very clear exactly who they are dealing with and confident that they meet a set of extremely high standards when it comes to data protection."

Red versus blue

Some organizations take a novel approach to tackling IT security problems. This involves organizing white hats into a "red" team that works separately from the "regular forces" who manage day-to-day operations, monitor attacks and remediate security flaws – the "blue" team. The red team poses as the enemy, exploring ways to carry out attacks.

For penetration tester Gemma Moore, a founder of UK-based IT security firm Cyberis, staging this kind of exercise is the most thrilling part of the job.

It's very useful because developers of systems don't tend to think in the same way that penetration testers do, she says. "Our first thought, always, is 'How are we going to break this?' and that can be a real education for a client." And the sooner companies reap the benefits of those lessons, the better: The best defense, after all, is to hack the hackers themselves. TRUST DIGITAL FOOTPRINT

A Day in Data

7:00 AM

Big D wakes up earlier than usual. Due to a traffic jam, his smartphone automatically reset his

alarm by 30 minutes.

He takes his dog for a walk. He is wearing his fitness wristband to track his steps

7:20 AM

and heartbeat.

8:30 AM

He drives to work. Despite leaving early, he gets stuck in a jam anyway. To kill time, Big D searches for cheap last-minute vacation deals.

9:15 AM

The jam eases. Big D is already late for work and starts driving fast. A minor accident occurs. His in-car black box records his driving and sees that he was

speeding.

Y

12:30 PM

Big D walks down a busy street and looks for a place to have lunch. As he passes a McDonald's, he gets a notification in the form of a coupon delivered to his smartphone.

51% of people surveyed cited privacy as their biggest concern with



A healthy lifestyle = discounts

The data collected from wearables is used by insurance providers.

74% of people book their holidays online.

53 DAYS before the flight is when prices are lowest.

\$85,000 average iPhone user income

\$61,000 average Android user income

¥ Your iPhone raised your travel cost

Booking platforms adjust their prices based on the user's mobile device. NO.1 reason for accidents: speeding

60%

of drivers would change their habits to get an insurance discount.



Bonus for driving safely

Usage-based insurance allows clients to install a black box which records and reports their driving style. **49**%

of consumers plan their shopping trips around circulars and coupons.

82%

of customers make purchase decisions in-aisle.



Targeting consumers

iBeacon allows participating stores to send coupons to users close by.

Your digital footprint may be deeper than you realize. What does your average day tell companies about you?

ILLUSTRATION BY **Supertotto**

1:20 PM

While sitting at McDonald's, he gets a notification saying that a woman with similar interests is right behind him. Big D takes his chance and speaks to Li'l P. They arrange a date for tonight. 3:45 PM Big D goes back to his office and works

on some figures.

He is still thinking

about Li'l P. so he

visits her Facebook

profile several times.

Big D uses Uber to get a ride to dinner. It asks if he will be ready in 5 minutes. The driver already knows the destination and Big D already knows the price.

8:00 PM

11:10 PM

Big D and Li'l P hit it off.

They go to Li'l P's apartment for a coffee. Big D sees flyers with ads for baby products.

5% of Americans report finding real love online.

> 77 MINUTES is how long a typical

Tinder user spends tindering every day.

Fancy seeing you again

Happn app tells you what other users are in your area and how many times you've crossed paths. 24% of people say they would ask a person for the first date via

Facebook.



Based on your clicking behavior, social media can tell who makes your heart flutter. 5 MINUTES after your ride ends,

Uber will continue to track your movement.



Based on locations you've visited in the past, calendar notes and interests, apps can predict where you are headed next.



products are analyzed together by US retailer Target to predict customer pregnancy.

Not a secret anymore

Based on your purchases, stores send you physical flyers with specific, targeted ads.

02:12 AM

Big D is asleep in bed. His fitness wristband now records his sleep patterns. Every moment of his day offers an opportunity to collect

even more data.

Building a Robot With a Heart

BY Henrik Bork

Will the machines rise in the battle against loneliness? Kaname Hayashi offers a new solution to the epidemic of the modern age.





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GROOVE X

40%

of Japanese people are projected to be living alone by the year 2035.



the amount of startup capital Kaname Hayashi has already secured for Groove X.

2018

the year Groove X robots are set to be introduced to the public.



OKYO, JAPAN. Outside Shibuya Station, 2,500-odd people spill on to the road as the light turns green, making this the world's busiest pedestrian crossing. The Shibuya Scramble, as it's come to be known, is the result of five roads converging in one place. It's a busy sight. Vehicles. Neon lights. People. They are all in one place, but they are all caught in their own bubbles. Some are immersed in their smartphones. Others lost in thought.

That's Tokyo for you. Like others of its ilk, the world's most populous metropolitan area is also somewhat ironically in the middle of what can be called a loneliness epidemic. Fewer Japanese are marrying. They have fewer children. The divorce rate is on the rise. Old parents are left alone in empty nests. Some estimate that 40% of the Japanese will be living alone by 2035. It's not a happy picture.

Just a few kilometers away from the Shibuya crossing, sitting on his perch in the Fujisoft Building in the Akihabara quarter of Tokyo, Kaname Hayashi thinks he has a solution to loneliness: a robot.

"What we would like to solve is the gap between the survival strategy of our human genes, which want us to live as a group, and our modern lifestyle, which makes us lonely," says Kaname Hayashi, CEO and founder of Groove X, a startup determined to develop the world's first robot that appeals to the heart.

A machine to combat loneliness, to fight against sadness. A therapeutic robot. One that doesn't captivate with its intelligence or strength, but with its ability to sense emotions and respond to them. A robot that can charm you: just like R2D2 or BB-8, those two cute characters from the *Star Wars* epic.

Hayashi, 43, fashionably dressed and sporting a neatly trimmed beard, has a very matter-of-fact style and applies it to the advance of the robots, as if all of humanity has been waiting for these anti-loneliness machines. He speaks so softly, lisps endearingly and peppers the discussion with quotes from so many books that one could easily mistake him for a dreamy-eyed university professor.

Hayashi is a dreamer, no doubt. But he is out to turn his dream into reality. His startup, Groove X, has already completed prototypes for these robots, although no one has been allowed to see them yet.

"Sometimes, you feel lonely. It happens to us all. Anyone who claims that it doesn't is probably lying," says Hayashi. He then suddenly launches into a tale about the origin of our species to explain his creation. In prehistoric times, sharing the meat of a slain mammoth was not so much the evidence of a selfless act around the campfire, but more about the prospect of gratitude and companionship in return. As long as we contributed to the group, we were not alone.

Hayashi glances out of the window of the conference room in the Fujisoft Building and takes in the canyons of buildings and neon advertisements in the Akihabara quarter. Far below, scores of people are scurrying back and forth. Loneliness? Aren't we living in the age of social media? Don't we spend our days chatting with more people than ever before, whether we actually know them or not? Could our era be the least lonely moment in evolutionary history?

No, it's all an illusion. Today, we tend to live alone or in small groups, says Hayashi. However, we continue to carry the prehistoric "loneliness gene" with us creating a void. "Facebook, other social media or video games are such a big industry precisely because they fill this void," he says. As will Hayashi's robots.

Paving the way with Pepper

Hayashi started as an engineer. He specialized in aerodynamics and was involved in the design of both the Lexus LFA model and Toyota's Formula 1 racing car. He later attended the SoftBank Academia, established by millionaire



FRANKENSTEIN COMPLEX 'Robotophobia' is typical in Western films. Japan has a different attitude.

Masayoshi Son, who enjoys something of a cult status in Japan. SoftBank Academia is Son's unorthodox training institute for executives. He recognized Hayashi's talent and appointed him to head the robotics arm of SoftBank, which then went on to develop and market Pepper the robot.

Pepper, a babbling humanoid, or robot that looks like a person, now stands in Tokyo's cellphone shops. The robot was hugely popular and made Hayashi famous. "If anyone can develop a robot like this to combat loneliness, then I certainly can," he announces confidently. He has already secured \$14 million in startup capital. In a neighboring room, 20 engineers are tinkering with the robots, which are set to be introduced to the public in 2018.

In 2015, Hayashi moved his firm onto the "incubator floor" of the Fujisoft Building, where the Groove X team shares space with other startups. With its hissing espresso machines, a motorbike parked between the long wooden benches and its youthful energy, this space gives a little nod to the culture of Silicon Valley. "Sometimes, you feel lonely. <u>It happens to</u> <u>us all</u>. Anyone who claims that it doesn't is probably lying." The press has been racking its brains ever since to work out where the Groove X robot's charm will lie. But the details are under wraps. What has leaked out is the fact that Hayashi's creation will not speak. As Antoine de Saint-Exupéry, the author of *The Little Prince*, once wrote: "Words are the source of misunderstandings." And as Hayashi admits, he was also inspired by the aesthetics of the great Japanese tea master, Sen no Rikyu. His tea houses have very narrow windows, their interiors are minimalist to the extreme, but they give free rein to the imagination. Less is more.

The subconscious side of communication

Hayashi had his eureka moment when he visited a retirement home in Tokyo with SoftBank's Pepper robot in 2014. He asked an elderly lady what else she would like to see in the robot. "It would be nice if it had warmer hands," she replied. "That was a shock for me," remembers Hayashi. Like all his colleagues, he had been fixated on the nuts and bolts: the language, artificial intelligence (AI) and the like. "But then I realized that we were too focused on the conscious side of communication."

Groove X's robots are likely to propel the robotics industry in a new direction, with emotional robots, or, as Hayashi prefers to describe them, "subconscious robots." The aim is to build robots that can communicate with us on a very elementary, unspoken level. Instead of trying to imitate people, which is still too much of a challenge for AI, Hayashi's robots are to be more like a kind of artificial pet.

Robots have appealed to people's emotions before. Sony's Aibo, one of the first of this kind, could wag its tail and blink some lights when petted by a human, which made the little robot dog popular in homes for the elderly in \longrightarrow





"Our robots are not intended to replace human warmth. <u>We</u> <u>don't want to</u> <u>replace anything</u> <u>at all</u>."

Japan starting in 1999. Toyota is selling a little baby robot, called Kirobi Mini, which is marketed as being "always on hand for heart-touching communications." But so far interactions between these robots and humans have been limited. Hayashi promises his creation will be become a real "companion robot" for lonely people.

OK. But isn't it tremendously sad to send a lifeless robot into a retirement home? Isn't the best company for a lonely person fundamentally another person? "If they have enough human company, they may not need my robots," counters Hayashi drily. But, the reality in most major cities looks rather different. "Our robots are not intended to replace human warmth," says Hayashi. "We don't want to replace anything at all."

That aside, Japan isn't a bad place to extend the field of robotics with a new archetype, explains Hayashi. Christianity and Islam both hold the belief that man should not presume to create new beings. That is God's work, and people believe that if we create something similar to ourselves, it would almost certainly turn against its creator before long. "Some people call it the 'Frankenstein Complex'," says Hayashi. It's different in Japan. One reason for the relative willingness of the Japanese to accept technology may be Shintoism. According to this religion, there can be a soul inside every being, in every tree, every waterfall. Even in a lifeless stone. Perhaps, suggests Hayashi, that's why the Japanese are less hesitant when it comes to building robots.

Although today loneliness is a global problem, the types of robots created by different cultures vary wildly. In Hollywood movies, for instance, the lovable, whistling Star Wars robots R2D2 and BB-8 are exceptions to the rule. Instead, films tend to be dominated by militant battle robots. In contrast, Hayashi grew up with the cute Studio Ghibli characters in the animated films of Hayao Mivazaki. "They can't speak. People don't benefit from them, but they do live with them," says Hayashi. Maybe it's not such a bad model for a robotics business with big ambitions, a kind of robot charm offensive. The force awakens.

After a number of critical questions, all of which he parried calmly and politely, Hayashi breathes a deep sigh and asks if he can offer a question in return. "What about when parents give their child a teddy bear, not just their own warm skin?" His simple question arrests the conversation. Hayashi's new robots, he reiterates, don't want to replace anyone, but they do have big ambitions. They are far from being an automated "tool," and even further from a functional being from the realm of cognitive sciences. Their world is that of the emotions. "Ultimately, it's our goal to increase human potential with our robots." By raising the self-esteem of its human owner. "In dispelling your loneliness, it makes you a better person. I believe that machines can heal humanity. We believe that robots can make this world a better place."

WITH DUE RESPECT Leicester supporters kiss a mural of manager Claudio Ranieri before the May 7, 2016 Premier League match.

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Confidence Does the Trick

In 2016 Leicester City, underdog of English football, snatched victory from the jaws of defeat to become Premier League champions. What can business learn from their transformation?

BY Alistair Magowan

AY 2, 2016. It was a tense scene, but Christian Fuchs kept his head. The Leicester City football player and his teamma-

tes were poised to seal one of the biggest shocks in football, but rather than attempting to win the Premier League on the pitch, they were gathered in striker Jamie Vardy's kitchen watching their closest rivals, Tottenham, on TV. Due to an unlikely turn of events, Leicester's fate depended on how Tottenham fared in this vital match against Chelsea. If Tottenham were to lose or draw, Leicester would win a prize beyond their wildest dreams.

After taking a 2-0 lead, Tottenham were now drawing 2-2 with Chelsea. Fuchs and his teammates were a breath away from one of the most unlikely victories in sport – and he was ready to capture it. On the final whistle, he pressed record on his phone to catch star players Vardy and Riyad Mahrez bounce into view. At one point it looks like he's set to crash into a wall. The footage went viral and instantly became a symbol for one of English football's greatest triumphs. It was a championship victory that owed as much to team cohesion as it did to talent.

Leicester's story seems almost impossible in a cash-rich era in sport, where ranking is often determined by the size of the wage bill. This was a team which flirted with relegation the previous year, who had a playing squad which cost £57 million – seven times less than \longrightarrow

EST. 1884

2015



GAME ON! An Everton fan awaits a match against Leicester City.

May

Under previous manager Nigel Pearson, Leicester perform "the great escape" by winning seven of their last nine games to avoid Premier League relegation.



some rivals. Football pundit Gary Lineker was so sure they wouldn't win the League that he vowed to present the BBC's iconic football program *Match of the Day* in his underpants if he was wrong.

Five days after Fuchs and his friends celebrated, they lifted the cup. As Leicester fans tried to make sense of it all, Ranieri had a simple message for them: "Don't wake up, keep dreaming."

So how did they do it? And what lessons can businesses learn from such a victory?

Culture of accountability

Ranieri had no doubts about how his team won. "Focus, determination and spirit made this possible," he told reporters. "They deserve to be champions."

But to understand how that was fostered, you have to go back to the previous season under former manager Nigel Pearson. Having won only four of their first 29 League games, they looked doomed. Yet they managed to win seven of their last nine games.

Pearson's trick was to build a culture of accountability in which each player was personally invested in how the team fared. Players were given responsibility for their own fitness programs in consultation with a highly skilled team of backroom staff that included recruitment specialists, sports scientists and psychologists. And by getting everyone to take ownership of their own role in the team, it created a furious work ethic towards a clear goal: avoiding relegation.

According to Rosabeth Moss Kanter, Ernest L. Arbuckle professor of business administration at Harvard Business School, whose book *Confidence* addresses how winning and losing streaks begin and end, Pearson's tactics were perfect for arresting any declining business.

"Leadership that builds the underpinning of confidence starts with accountability where everybody knows what they're responsible for with a great deal of discipline," she says. "Collaboration is the second underpinning of confidence; that people understand the need to support one another and to build on the strengths of their teammates. Thirdly, it's about taking initiative; that people are given permission to step in and take leadership roles themselves. When leaders build those three factors in, then there can be tremendous team spirit, discipline and desire to win."

Despite keeping Leicester in the Premier League, Pearson was sacked. Ranieri, 64, took over and his experience proved a critical factor.

Evolution not revolution

When Ranieri joined Leicester, supporters were underwhelmed. His nickname "the Tinkerman" was based on his time at Chelsea, where his taste for chopping teams failed to deliver despite the resources at his disposal. This time, though, he seemed a changed man. He recognized the culture that already existed at Leicester and kept changes to a minimum.

"In football and in business, there is a tendency for managers to radically change everything," says Simon Chadwick, professor of sports enterprise at Salford University. "[Ranieri] understood that the backroom staff were highly skilled and he didn't need to change too much."



LEICESTER CITY



CLAUDIO RANIERI, Former Leicester City manager

June

Pearson is sacked after his relationship with the board is deemed "no longer viable." Ranieri is appointed two weeks later to an underwhelming reaction. SHOW YOUR COLORS A local shop in Leicester.



The first 2015–16 match is a win.

August

Riyad Mahrez and Jamie Vardy begin the season in fine form as Leicester go unbeaten in their first six games.

> FANS AFAR A Leicester supporter wears Algerian winger Mahrez' shirt in Algiers.



November

Leicester bounce back from their first defeat of the season to win five of their next six games and hit the top of the Premier League. Vardy sets a new Premier League record for scoring in 11 consecutive games.

December

Many experts think the Leicester bubble has burst as they slip behind Arsenal after three games without a goal, but they carve out a 1-0 win over eventual title rivals Tottenham.

"It's about taking initiative; that people are given permission to step in and take leadership roles themselves."

> ROSABETH MOSS KANTER, Professor of business administration at Harvard Business School



MUTUAL APPRECIATION Leicester City captain Wes Morgan leaves a message of thanks to fans. 2016

February

Defining wins over Liverpool and Manchester City give Leicester staff a feeling that they are witnessing a special season.

April

Leicester show incredible resilience to earn a 2-2 draw with West Ham after Vardy is sent off and they concede two late goals, only for Leonardo Ulloa to equalize in injury time.

May

After failing to beat Manchester United, closest rivals Tottenham can only draw at Chelsea, sparking wild celebrations in Vardy's house as Leicester win the title without kicking a ball.

May 16

Over 240,000 people turn out to greet the Leicester team on the streets of the city as they salute one of the biggest shocks in sports history.



HOPE AND GLORY Chao Khun Thongchai, the official Leicester City monk, prays next to club pendants on May 1, 2016 (above).

The next day, fans celebrate the team's shocking triumph (right).



"With added social cohesion, teams can achieve **even greater performances.**"

KEN WAY, Performance psychologist



THE SWEET TASTE OF SUCCESS Leicester City lifts the Premier League trophy on May 7, 2016.

One of the best examples of this came when Ranieri listened to the wisdom of Leicester's head of recruitment Steve Walsh – credited with discovering star players Vardy and Mahrez, who were both plucked from the lower leagues.

Walsh had his eye on another diamond in the rough: N'Golo Kante. The midfielder was attracting little interest while playing in France, but after Walsh whispered "Kante, Kante, Kante" into Ranieri's ear ad nauseam, the manager eventually buckled and bought him for £5.6 million. The player was a key part in Leicester's success, and the following summer was sold to Chelsea for a £26.4 million profit.

Exploiting an underperforming market

Having avoided relegation the previous season, Leicester's sole aim would be to stay in the division. Ranieri decided to play a weakened side in the FA Cup, so his team lost at the first round and would play up to 10 games fewer than their rivals.

"Leicester's lesson for business is about how you adapt your goals depending on your environment," says Mike Forde, a former director of football at Chelsea who now works as a consultant with NBA and NFL teams in the United States. "Leicester continued to evolve their objectives as the season evolved based on an underperforming market and the realization of the talent at their disposal.

"Everyone is looking at market share in business and how their products or services can allow them to make gains and climb up the scale. In Leicester's case, they recognized the opportunity and recalibrated their goals to exploit it fully."

As the last quarter of the season approached and fans became excitable about Leicester qualifying for European football and holding on to win the title, "Leicester's lesson for business is about how you adapt your goals depending on your environment."

MIKE FORDE, Football consultant

one man remained focused on the next game: Ranieri. He kept the pressure off his players by taking them out for pizza and caused laughter in press conferences by describing the sound of an imaginary bell should the players need motivation in training. "I tell them 'dilly-ding dilly-dong' if they are sleeping," he said.

It is worth noting that often when a manager talks to the media, he is, in fact, indirectly talking to his own players. The press might repeat his words for the public, but for the manager it is another way of getting his message to his team.

Ranieri showed an ability to marry the cognitive and emotional culture of the organization. "Often you have companies who have a sound set of values, but if someone who delivers them is nervous or shouts and says something wrong at the wrong time, it can have a huge impact on staff and their performance," says former Tottenham and Liverpool director of football Damien Comolli, who acts as a consultant to Premier League clubs. "Ranieri was emotionally intelligent in interviews and on the touchline when the pressure was at its highest."

Without the pressure of relegation, the players were enjoying the ride. According to Leicester's performance psychologist Ken Way, who has since left the club: "What we had last season was an incredible social cohesion, and that's always seen as a 'nice to have' element whereas task cohesion is seen as more important. What last season's success shows is that with added social cohesion, teams can achieve even greater performances."

The dangers of over-performing

Where do you go once you've achieved the impossible? In Kante's case, the answer was another team. Other star players have been rewarded with bigger contracts.

Comolli believes there is a "strong correlation between rewarding players and a decline in performance". Kanter adds: "Money is not the major motivator of performance and if you start paying people too much, they start competing for the money and themselves rather than the team."

Kanter's advice is that Leicester focus on what she calls the three Ms: mastery, membership and meaning. "Teams and athletes that win consistently stress improving their own performance rather than beating the opposition," she says. "Secondly, teams need to remember that the whole is greater than the individual reward and thirdly, remember that you're doing something meaningful with a sense of purpose, so the [team] values are incredibly important."

Ultimately, Leicester's success was unexpected and as a result they have had to deal with a number of issues they hadn't previously considered. Not least the loss of Ranieri. After Leicester suffered a string of defeats in the season following the team's historic win, the club's board held him responsible and fired him. A cruel outcome after the huge achievement in which he was instrumental, but an indication of the challenges that come with winning, maintaining confidence from all parties and sustaining success in the longer term.



Motivation in the Deep End

Psychology can play a key part in surviving extreme situations – and it can be applied to the business environment, too. Survival specialists Cody Lundin, EJ Snyder and William Trubridge show how.

BY Ben Knight



DIVING IN

Freediver William Trubridge pushes his body to take him where no one has been before. **T WAS MONSOON SEASON IN ARIZONA**, and Cody Lundin was out at night by a river with one of his more "aggressive" classes. That means the "tribe" couldn't bring any gear along: The only tools allowed were those they could make in the wilderness.

"Of course there are no lights, because I don't allow flashlights," he reminisces. "And the river starts to roar. Flash flooding."

Throughout that night, the tribe was stranded as the river rose between them and their primitive base camp, unable to even sit or lie down because of the half-inch of water streaming around their feet. It would all have been another day at the office for Lundin, except that one participant grew scared, and said she wanted to cross the river to the camp.

"She was really scared. So we had to stand there all night and try to talk this person down," Lundin remembers. "We told really bad jokes to try to keep morale up, did squats to keep body core temperature up. But there was a point where if she would've tried to run away, I would've had to hold her down and tackle her." Of course, it is exactly this kind of physical misery that Lundin's students, variously determined challenge seekers from all walks of life, are here for. "As freaky as they are, those are the experiences that people like the most. That's what they joke about afterward," he laughs. "And that's because they've become more confident, because they've pushed beyond their perceived limits."

Lundin has run the Aboriginal Living Skills School in Arizona for the past 26 years and has co-hosted two of the Discovery Channel's perennially fashionable survival programs – *Dual Survival* and *Lost in the Wild*. Businesspeople are grist to the survival academy mill: Companies like to send their employees into the wilderness on "team-building" and "leadership" exercises. But what do they actually learn? What does exposure to nature's tough indifference have to offer businesspeople?

Lundin's teaching methods are a little startling. "When you light that fire with that half a paper match, I'm gonna bring up the person you love the most," he says. \longrightarrow

"And I make you know if you don't get this fire lit – when the snow's lightly falling, and all you have is that paper match – you and the person you love the most are dead." The point, as he puts it in his typically blunt manner, is to "prey on people's emotions and train them hard, because that's exactly what nature's gonna do."

Living the extreme

US army veteran and celebrity survivalist EJ Snyder knows a lot about self-reliance. While out filming *Naked and Afraid* in the Tanzanian bush, Snyder got a thorn in his foot. "It festered and got so infected it was about to make me fall down because I almost couldn't walk," he says. "After about 15 days, I had my knife heating up, getting ready to cauterize the wound and clean it out. And the executive producer stepped in, this British guy, and said, 'Hey EJ, what are you planning to do with that knife, mate?'"

Snyder's answer was a careful balance of patient explanation and pain-fueled irritation: "'Well, Steve, I'm gonna take this knife and I'm gonna shove it in this foot, and I'm gonna burn this thorn out with all this infection, and then I'm gonna take that hot, boiling water right there, and I'm gonna clean it, close it up, and I'm done.' And he's like, 'Hold that thought, mate.' And so he called time out and got a doctor in to take care of it."

In some places, though, there won't be anyone there to help. William Trubridge has not only forced his body beyond its own limits, but has put it in places that no other human body has ever faced – diving

"They've become more confident, because they've pushed **beyond their perceived limits.**"



EJ Snyder

A former infantryman and paratrooper in the US Army with a SERE (Survival Evasion Resistance Escape) survival school background, EJ Snyder taught future Green Berets at Fort Bragg before becoming a technical advisor, commentator and host for TV and film. TAKING AIM EJ Snyder sets his sights on incorporating stressors into teamwork exercises.

without oxygen through the Blue Hole, off Dahab, Egypt – a 98-foot tunnel 180 feet underwater that leads into the Red Sea. The soft-spoken 36-year-old is possibly the world's most renowned diver. Born in the UK, raised in New Zealand and trained in his teenage years by the legendary Umberto Pelizzari in Italy, he has broken virtually all the freediving world records that there are.

Swimming straight down beyond the reach of sunlight involves a Zen-like depth of concentration. Freediving is almost unique among sports in that, physiologically, it demands an extreme mental detachment because the brain uses 20% of the body's precious oxygen even at rest – and an active brain even more. That's why learning to deal with anxiety, particularly ahead of a world record attempt, is vital.

Think:Act 22 69

He describes the stress he puts himself through in training and performance: "Even if I've done that dive before," he says, "the concept of 'in five or 10 minutes you're going to stop breathing and swim for four minutes down and up, and if anything goes wrong, if you overstretch yourself just a little bit, you may black out below the surface,'" is still a challenge.

Freediving is an intense form of physical exercise and Trubridge has to try to shut down blood flow to the extremities of his body so that his muscles work anaerobically (meaning they use as little oxygen as possible). That leaves most of the oxygen concentrated in his heart, lungs and brain.

Putting mind over matter

Trubridge effectively wants to shut down conscious thought while diving. "The best way to do that is not to fight the thoughts or push them out of your mind, but rather to let them slide through and focus on the empty spaces between thoughts."

To enhance this concentration, Trubridge closes his eyes during his dives so that he can feel more acutely what's going on inside his body and his mind: "Possibly more than most sports, freediving is dependent on being calm and composed and able to control your thoughts and your stress, and staying detached from what's going on around you."

It's a long way from EJ Snyder's life, which, when it's not about hacking through Amazonian marshes, follows a more sedate routine of teaching survival courses to civilians, often incorporating stressors into teamwork exercises: "I'll say, 'Alright, we're building a shelter, you're in charge, and you're the worker bees.' And halfway through the project – 'You three are out of the picture!' – then the others have got to finish and figure out who's in charge. When you have a bunch of workers who are self-motivated, it just makes a better team. What CEO doesn't want to strengthen their team so they work better for them?"

But does surviving real disasters equip you for normal life? John Leach, psychologist, former military survival instructor and author of the seminal book *Survival Psychology* is skeptical that survival skills can easily be adapted to business skills.

"I'm always a little bit wary of these things," he says. "If you get into a survival situation, you don't

"We have to manage acute stress... You know it's coming and you can prepare for it."

WILLIAM TRUBRIDGE

⊕ William Trubridge

A 15-time world record holder in freediving, William Trubridge is also the current freediving champion and holds the title of 2010 and 2011 World Absolute Freediver.

His diving school, Vertical Blue, is located in the Bahamas and offers annual courses at all levels. It also hosts the annual Suunto Vertical Blue competition. bounce back to where you were – you come out of it a different person." In fact, many people find it difficult to relate to normal society, never mind start a business. "The bits of your brain that have been trained to be on high alert in the hostile place have not been de-trained when you come back," as he puts it.

Nevertheless, Leach can see why parallels might be drawn. A key element of military survival training subjects soldiers to "stress inoculation" – being taken hostage or being trapped in a helicopter that has ditched upside-down in water. They do this not just to learn what to do, but also to experience what it's like, so that the initial shock doesn't suspend the brain's cognitive skills.

Getting back to business

Leach has found that the temporary lack of these cognitive skills is why some people die in extreme situations and others survive. In other words, extreme situations don't directly teach you skills that you can learn in normal life. "But the principles of survival – protection, location, water, food – apply to all environments, and I don't see why those principles should not apply to the survival of a business."

Trubridge reckons that it "probably hinges on the idea of stress." He adds: "In business there's continuous background stress as well as a more acute stress in particular moments. With freediving, we have to manage that more acute stress in what I would say are almost laboratory conditions. You know it's coming and you can prepare for it and train yourself."

Maybe that is the key: You might not yet be able to dive through an underwater cave or cauterize an infected foot with a heated knife, but there is also no stressor – either acute or background, in wilderness or in life – that you can't train yourself to manage.



Presuade Me!

ROBERT CIALDINI says we shouldn't resist being "pre-suaded". He shares his thoughts on influence, decision-making and how he ended up buying a TV he did not particularly need.

> BY **Bennett Voyles** ILLUSTRATIONS BY **Mario Wagner**



OR LEADING A TEAM, few skills are as useful to an executive as a talent for persuasion. But how does this process actually work? In his groundbreaking book *Influence: The Psychology of Persuasion*, social scientist Robert B. Cialdini presented his theory that all ethical persuasion depended on six factors, an idea he supported with reams of peer-reviewed research. When it was published in 1984, sales were slow, but over time, the influence of *Influence* began to build. Thirty-three years later, the book has sold over 3 million copies and *Fortune* regards it as one of the 75 smartest business books ever written.

Now there's a sequel: In Pre-suasion: A Revolutionary Way to Influence and Persuade, Cialdini introduces a whole new way to persuade. He argues that even before you get to his six factors, a process he calls "pre-suasion" may nudge you a little closer to yes. He coined the term to describe factors that predispose a person to feel favorably about a proposition before it is even made. Taking time out from his busy schedule, he met Bennett Voyles on Skype from his office in Tempe, Arizona, and talked about how you can best use - and perhaps most importantly, how not to find yourself being used by the power of pre-suasion.



Think:Act You published the first edition of *Influence* in 1984. It didn't take off right away, but grew increasingly popular over time.

Robert Cialdini: That's right. When it was first published, it didn't do well at all. In fact, my publisher at the time withdrew the promotion and publicity funds saying it "would be like throwing money down a pit." But about three or four years later, the book started to gain popularity and rise to bestseller status, where it's stayed ever since.

Had anything happened that made people more receptive to the book at that point?

- I think it had to do with two things that were happening simultaneously. First, the idea of evidence-based decision-making had begun to sweep the major institutions of our society: business, education, government and even sports. Influence provided a concise, collected set of evidence about the persuasion process and which factors lend themselves to success within that process. In a lot of the earlier books on persuasion, the authors would describe a successful campaign but not isolate the factors that caused it. Influence did isolate those factors.
- The other thing that helped make *Influence* so popular was that, even though the book wasn't selling very well initially in the trade market, it was doing quite well in university classrooms, especially in MBA courses. Three to four years later, those MBA students became managers and they started ordering the book in bulk for their teams.

It's been 33 years since the first edition of *Influence*. Why did *Pre-suasion* take so long?

I never really had an idea big enough to compete with *Influence*, and I didn't want to plant a set of bushes around the tree that *Influence* had become – with *Influence 2*, *Influence 3* and *Influence 4* type of books. I wanted to wait until I had a seed for another tree ... another big idea. "You need to think not only about what a communicator has put into the message you have received, but what he or she has put into the moment before delivering that message."



of mall shoppers agreed to participate in an uncompensated survey.

29%

agreed when asked first if they considered themselves to be a helpful person.

Was there a particular insight that "pre-suaded" you?

Two things happened. The first was a set of studies on persuasion that didn't really have to do with what you did or said inside your message, but what you did or said immediately before delivering it. For instance, I read one study where researchers walked up to mall shoppers and started asking them to participate in a marketing survey for no compensation. Under those circumstances, only 29% of the people agreed to participate. But when the researchers approached a second sample of mall shoppers and preceded that request with a simple pre-suasive question, "Do you consider yourself a helpful person?" then suddenly 77.3% volunteered.

I started to see a lot of studies like that: For instance, an online furniture store divided its customers into two groups. They sent half their visitors to a landing page with fluffy clouds in the background, and the visitors who saw that initial image of softness then became much more interested in comfortable furniture. The other half were sent to a landing page that had pennies in the background, and these individuals then ended up making decisions that were more based on a low price.
- Before they had encountered any information on the site about the various sofas and chairs that were available, they were already thinking about comfort or cost and behaved in a way consistent with that initial image.
- These studies just wouldn't leave me alone. They didn't fit the model I had been using so far to understand social influence.
- Then a personal experience finally tripped the switch: I answered a knock on my door to find a man who was asking me to contribute to a charitable cause, to develop after-school programs for children whose parents couldn't be with them for a time after school. This man didn't present any credentials to show me that he was associated with this particular program and I hadn't heard anything about this program, so it was a risky thing to give him money. But I gave him more than I normally give to a legitimate organization.
- Afterwards, I felt very good about it, but wondered what had gone on there. And as I thought about it, I realized I gave him that much money because he brought his 7-year-old daughter with him. She was hiding behind him, hanging onto his pants leg, peeking out at me. He established a state of mind in which I had elevated the importance of young children in my decision-making process, the same way those furniture store operators elevated comfort or cost before providing information. And that's when I thought to myself: "This is an idea that's worth writing a book about."

What's the best way to resist pre-suasion?

It's the mirror image of what I would say to a communicator: You need to think not only about what a communicator has put into the message you have received, but what he or she has put into the moment before delivering that message. What was depicted on the landing page of that website you are visiting? What did this person say to you first before delivering a message? What was the setting in which this

Cialdini's six principles of persuasion

Reciprocation: People want to reciprocate for a gift or other kindness.

> <u>Commitment and</u> <u>consistency</u>: People try to live up to their commitments.

2

Social proof: We look

to our peers to reassure ourselves we've made the right choice.

Liking: It's easier to say yes to people we know and like.

<u>Authority</u>: People want to follow the lead of people they believe to be experts.

<u>Scarcity</u>: The more rare and uncommon something is, the more people will want it.

His new principle of pre-suasion:

Often, it's not necessary to change somebody's mind. To win agreement, you just need to change what's uppermost in the person's thoughts at the moment of decision. person delivered the message? All of those things can pre-suade you.

You come to some fairly frightening conclusions about how easily people can be manipulated, noting for instance that psychologists have found that it's hard for people to think logically when they hear music playing. Yet you suggest that pre-suaders with good motivations will be more successful in the long run. Why are you so confident?

- The last time I bought a television set, I was actually in an appliance store to buy something else. I was not interested in buying a new big-screen TV, but as I was walking down one of the aisles, I saw one model that was on sale and I started looking at it. A salesman came up to me and he said, "I see you're interested in this TV. Let me tell you about it and why it's such a good deal. But before I do, I want to tell you that it's our last one. And, I just got a call from a woman who's on her way to buy it. I just wanted to let you know."
- Fifteen minutes later I was wheeling that set out of the store. Now, I write books on pre-suasion and social influence and I was still susceptible to this!
- But here's the point of the story that has to do with the ethics of it all: If the salesman was telling me the truth, I consider him an ally. I wanted that information to make a decision that would be best for me. If he was deceiving me, to scare me into this purchase, then I would consider him an enemy.
- So I went back to the store the next day, to see if another TV had been brought in from the storeroom. But, no, there was still an empty spot on the shelf. After that, I went online and I wrote a positive review of that store and the salesperson. If there had been another of the same set on the shelf, I would have written a very negative review.
- That's the way I think we have to deal with this process. We shouldn't be resistant to pre-suasive techniques if they steer us correctly. We should only resist them if they are used in deceptive ways. And, we should reward and punish accordingly.

Diamond Tuna and **Pop Songs**

How creative blockchain pioneers are adapting the new technology to work way beyond the world of finance.

BY Janet Anderson

UST IMAGINE THAT YOUR ELECTRIC CAR NEEDS CHARGING. Today, armed with your smartphone, you can find the nearest charging station. But suppose your car simply charged itself from inductive charge poles under the road, as it stands at a traffic light, the cost automatically debited from your account at the end of the day, without you having to think about it? By making charging easier and removing the anxiety of running out, it would

help boost the uptake of sustainable transport.

A key technology behind this vision is blockchain, a form of data storage that records blocks of data in chains across a decentralized database. Since its first appearance in 2008 as the technology behind the digital cryptocurrency, the Bitcoin, other blockchain platforms have emerged. According to a report by IBM, 15% of global banks are ready to roll out commercial blockchain products in 2017. Beyond the world of fintech, governments are investigating potential applications such as reducing tax fraud \longrightarrow

It is certified as conflict-free under the Kimberley Process.

2

The diamond is distributed to the gem market where it is cut and polished.

3



A certification



The Blockchain and Diamonds

By providing proof of custody, blockchain technology helps fight fraud and prevents the sale of diamonds from conflict zones.



The diamond now has a permanent identity on the international marketplace.



Each time the diamond is sold and resold on the open marketplace, the event is recorded and time-stamped. Data in the digital ledger is linked

Alongside the paper certification, Everledger creates a digital thumbprint of the diamond, describing its carat, color, clarity, cut and the laser inscription on the girdle of the stone, as well as 40 other metadata points.



entered onto a blockchain distributed database. The data is secure and tamper-proof because it is held on a decentralized digital ledger.

The diamond is set into precious metals, and then retailed to consumers as finished jewelry.

A rough diamond leaves the mine.



The stolen diamond cannot be resold without its true identity and provenance being revealed.

If the diamond is stolen, the theft is reported to the police and insurers.

PHOTO: GETTY IMAGES, WRAGG

BLOCKCHAIN

and running elections. What makes blockchain so revolutionary is its potential to remove the middleman. Described as the technology that adds a layer of trust to the internet, it makes possible secure online transactions through a distributed database that records events in time-stamped blocks. With each block in the decentralized digital ledger linked to a previous block, blockchain creates an immutable record of events – once recorded, the data cannot be altered retrospectively. Value can be exchanged more quickly, safely and cheaply.

"Distributed ledger technologies have the potential to disrupt large sectors of our socio-economic systems," says Paolo Tasca, executive director of the Centre for Blockchain Technologies at University College London in the UK. In addition to the financial sector, Tasca believes all kinds of industries could be transformed, from healthcare, pharma and energy to logistics, media and telecommunication.

In particular, he believes industries where copyright infringement is a problem could benefit from this new technology. "As a registry of ownership, it could raise transparency and solve the copyright problem," says Tasca.

No wonder, then, that pioneers in the creative industries, where copyright infringement causes economic damage amounting to \$100 billion a year, are exploring the possibilities offered by blockchain.

Protecting music and luxury goods

Grammy Award-winning musician Imogen Heap was so grabbed by the potential of blockchain technology to tackle the complex issue of music copyright in the online world, that she founded an organization, Mycelia, to bring people together to work on these ideas.

With blockchain technology, Heap sees the foundation of a sustainable ecosystem for music – one in which payments are sent directly and automatically to the artist. She has already experimented with its potential by releasing a song, *Tiny Human*, with blockchain. When the song is bought, a smart contract sends the payment almost instantly to the digital wallets of all the creators. Better still, fans can not only see all the credits and lyrics, they can also purchase the stems (the audio files that split a track into its consitutent parts) separately or together, decide what kind of license to buy and see in detail how each artist that contributed to the work will be recompensed. "We track diamonds from mine to market, providing peace of mind for buyers and saving insurers a lot of money."

Leanne Kemp, Founder of Everledger

In the luxury goods sector, provenance is of the essence. Fraud costs the insurance industry millions of dollars every year. To tackle this issue for the diamond trade, London-based company Everledger has built a verification system on the blockchain which will serve insurance companies, banks, mining companies, certification houses and retailers. The technology enables them to record diamonds within hours of them leaving the mine and track their flow through the supply chain. Fraudulent claims are quickly detected by cross-referencing data sources.

Leanne Kemp, Everledger's founder, came to this idea after 25 years of experience with emerging technologies in supply chain, jewelry and the insurance sector. "Diamonds gain a recorded identity through the certification process, where arguably their value is attributed. Traditionally, provenance is recorded in a documentation process which has been proven to show vulnerability and is open to tampering. Fraudulent practices are therefore widespread," she explains. "We track diamonds from mine to market, capture the DNA of each one and inscribe it into the blockchain, providing peace of mind for buyers and saving insurers a lot of money."

Everledger has over 1,000,000 certified diamonds on its distributed database, with thousands more added daily. Key to its success is the ability of different



FROM SEA TO SHELF Blockchain technology is even being extended to track sustainably caught tuna fish.

stakeholders from across the industry to work together. The diamond industry was ready for such collaboration, says Kemp, having worked together since 2000 under the United Nations Kimberley Process, established to prevent the illegal trade in diamonds. Everledger binds the industry closer to tackle these problems. "It's a data relay race as diamonds pass from hand to hand," says Kemp.

Kemp believes that with consumers wanting to know more about the source of products, there is potential to apply the technology more widely across the retail industry.

Provenance, also based in London, aims to do just that. Their blockchain-based platform allows businesses to share information about the origins of their products and track the journey across the supply chain. Their goal is to build an open registry for

Everledger

Founded by Leanne Kemp, Everledger is using blockchain to document and track diamonds, offering both peace of mind to buyers and huge savings to insurers. She intends to expand the

company's service to include other luxury goods, from fine art to jewelry and wine. products to inform purchasing decisions at any stage of a material's life.

Provenance has already shown how sustainably caught tuna fish can be tracked from the initial catch to transport, market, export and eventually a supermarket shelf. It has begun working with a UK supermarket chain to see how the idea can be applied more widely.

Unlocking the sharing economy

Perhaps the ultimate test for the blockchain is its connection to the sharing economy and the physical world, explains Stephan Tual, co-founder of Slock.it. For example, if you can send money to a lock to unlock it, you can rent the locked property directly to others. Slock.it has worked on that very idea and also applied it to the area of mobility developing a blockchainbacked system that enables users to access the best mobility option available, public transport or car sharing, without having to register or buy tickets.

Next, the team looked at sharing other assets, like utilities. With Share&Charge, owners of charging stations can sell electricity to electric car owners directly, enabling the charging station owners to recoup the cost of installation and providing electric car owners the convenience of more charging stations.

Now they are working on the idea described at the beginning of this article – a car that charges itself while standing at the lights. "Without blockchain this would not be possible," says Tual. "A credit card payment takes several seconds to be approved. You can't wait that long at the lights – the transaction has to be instant."

Tasca explains the benefits. "Uber, Airbnb and other intermediary platforms create value exclusively for their shareholders. I believe that distributed ledger technology can open the way to an authentic sharing economy where end users are the only beneficiaries of the market value generated by the platforms," he says.

He predicts a bright future for blockchain: "It will bring us to the point where all social, business and political connection will be disintermediated on a vast scale," he predicts. Looking ahead 20 years or more, Tasca already wonders what a blockchain-based society would look like: "If institutions become self-sustainable – run by algorithms where everything is recorded, tamper-proof, self-enforceable and, although anonymous, open and accessible to all – will this change their traditional role as structures and mechanisms of markets and social order?"

Thinking Fast and Frugal

GUT FEELINGS Gerd Gigerenzer believes in trusting in yourself to make the right decisions.

Psychologist Gerd Gigerenzer has some radical views on risk, error culture and getting back to the basics of decision-making. Here he offers a simple way to tackle complexity: trust your instincts.

BY **Gerd Gigerenzer** IN CONVERSATION WITH **Bennett Voyles**

> FTER DECADES OF STUDYING HOW PEOPLE THINK ABOUT RISK, I've learned a lot about why people make good and bad decisions. But unlike Daniel Kahneman, Richard Thaler and the behavioral economists who have covered some of this same ground and concluded that human beings are doomed to keep repeating their mistakes, I've reached a more positive conclusion.

> The truth is that left to our own devices, we actually make a lot of good choices. Where we go wrong is typically either because of social pressure or simple risk illiteracy – and both those conditions can be cured.

> Most sub-optimal decisions begin with the error culture of our institutions. In business, for instance, most corporations I know have a negative error culture: They believe errors should never occur; if they occur, they should be hidden under



the carpet; and if they can't be hidden, someone must be blamed.

This leads to defensive decisionmaking. You might believe that Option A would be the best for the company, but instead you'll look for a safer option – not the one that's the best for the company, but the one that protects you from being blamed or fired. This seems to be very common: I have analyzed several large international companies and found that about every second to third decision is defensive – and that's by self-report, so probably the figures are higher.

Companies with positive error cultures tend to make fewer mistakes in the end because they have a system where the many can learn from the few. Thanks to their positive error culture, airlines, for instance, now have next to no crashes. You only need to drive 12 miles to equal the risk of 1,000 miles on a commercial jet. Contrast that to the negative error culture that still prevails in the medical profession, where mistakes are never permissible and generally dangerous to acknowledge. In Germany alone, an estimated 19,000 patients are killed by preventable errors every year; in the US, the number reported exceeds 100,000.

It's a shocking statistic. A student of mine, a captain of Lufthansa, recently wrote a dissertation that compared error cultures in commercial aviation and in hospitals. When we had our first meeting with the head of a clinic and the head of Lufthansa safety, the Lufthansa safety officer told the clinic head: "If we had an error culture like yours, we would crash a plane every day."

Say goodbye to guilt

How do you build a positive error culture? Taking away the sense of shame is the key. In a positive error culture, the key question is not who is guilty, but how we can change the system that it's less likely to happen again.

The airlines do it by working with checklists to reduce the chances of missing a step. They also have a critical incident reporting system that enables a pilot to write down near misses so they can add measures that further reduce the risk.

Good role models at the top also help a lot. If you're a top executive who was involved in a decision that didn't work out, the way to begin to change your culture is to discuss it with your team and say: "Look, I was part of that decision. We know it was a bad decision. Let's think about how we got there."

There are a lot of other things you can do as well to reassure people. At one company we worked with, managers issued Monopoly-style "Get Out of Jail Free" cards with the explicit instruction that if you take risks for your company and you've failed, just turn the card in and there will be no questions asked. That changed the entire culture, because now, if you haven't turned in your card for three years, there is a big question mark over you. Playing safe is no longer safe. But organizations can be very resistant to such deep-seated cultural change. Even when lives are on the line, people may not budge: US hospital executives have known for more than 10 years now that two thirds of the estimated 29,000 people a year who die of catheter infections could be saved by following a simple five-point hygiene checklist, yet today, 10 years later, only a few hospitals have adopted checklists.

Cut out the noise

Another key to better decision-making – either at the organizational or the individual level – is to focus on heuristics. Much of the information we get is noise, and noise can be disorienting. Often, a simple rule of thumb can reduce the complexity of the choice and lead to a better decision. In the last financial crisis, for instance, the complex calculations of the rating agencies were not the solution, but rather part of the problem.

Understanding the numbers you read can also lead to better decisions. Risk illiteracy is endemic in our society, and not just among the general public: In our studies, we find that 70-80% of doctors do not understand health statistics. It's not that they are stupid, they just have no training. Most medical schools don't teach thinking: They mainly teach learning by heart. As a result, many doctors don't know the scientific evidence in their field and can be steered – or nudged – in any direction.

The World Health Organization has recently warned us, for example, that for



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"Intuition is a form of unconscious intelligence."

every 50 grams of sausage or processed meat we eat on a daily basis, our risk of getting colon cancer increases by 18%. So you might think, no sausage, because out of 100 people, 18% get colon cancer. No – WHO's number is a relative risk: Eating sausage raises the chance of getting colon cancer – not dying from it, but getting it – from 5% to a little less than 6%.

But attitudes are changing. People in many fields are now looking for clearer information and simple heuristics that make it easier to act on that information. For instance, my team is working with Andy Haldane, the chief economist of the Bank of England, to test simple heuristics – fast and frugal three-question decision trees to estimate bank volatility and other solvency factors, because we find that just a few measures can often do a better job assessing risk than a 50-factor algorithm.

Finally, we encourage people to trust their gut instincts more. Pursuing heuristics and intuition at once might sound contradictory, but studies show that people who have many years of experience with a certain type of problem can trust their gut more than people new to the field. Intuition is a form of unconscious intelligence that lets them feel something faster than they can explain it.

The 17th century gave us a probabilistic revolution. But more of the same can't help us now, not in the many uncertain situations we face. We need a heuristics revolution – in health, in wealth and in risk literacy, or else we will not be able to sustain an informed citizenship in a functional democracy. We want to use algorithms, not be used by algorithms. ■

Food for Thought

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CINA LAWSON, Minister of post and digital economy, Togo

Think:Act 22



Transparency Isn't Enough

The best-selling author of *Predictably Irrational*, Dan Ariely wants you to ask if you are really as rational as you think.

States,

Psychology professor and behavioral economist DAN ARIELY has spent decades researching subjects such as the psychology of money, cheating and social justice. Here he answers **three** questions on trust.

Can transparency replace trust?

Transparency can replace part of trust. Real trust is about long-term aligned incentives, whereas transparency is about espionage, it's about making sure that the other person can't violate what you want. It doesn't replace real trust. Often it's a good first step when trust is being broken – transparency can help create the next level to kind of start building it, but it is not real trust and it shouldn't be confused with real trust.

Is personal sacrifice a necessary requirement for trust to grow?

It is not necessary, but personal sacrifices are a really good way to demonstrate a blind incentive. Here's an example: A waiter in a restaurant comes to the table and a person orders something. Let's say the person says they want to order the fish and the waiter says, "Oh, don't order the fish, order the chicken, it's cheaper and better," and what happens afterwards is that everybody on the table listens to the advice of the waiter, because the waiter has initially demonstrated that he's willing to sacrifice some of his own profits - the restaurant's and his tip - to give better advice. Now what would happen if the person ordered the fish and the waiter said, "Oh, don't order it, order the lobster. It's much more expensive but better." Would people trust him then? Absolutely not, because he hasn't uniquely demonstrated that he cares about the preferences of the individuals. The point is that personal sacrifice is not necessary, but it's a good signal for aligned preferences.

Can companies interact with individuals to promote trust?

Absolutely. If trust is about long-term aligned incentives, then companies can tell individuals that they want their feedback. They can tell people that they want to understand what features they want in the future. They can basically create a pricing that is not just about the previous product but which extends into the future. You can say, for example, "If you give us feedback about the product, we will give you a discount for the next version," which basically kind of says, "We care about your input and we are willing to do something for it." So there are lots of ways, I think, that the companies can interact with people to show that they care, that they're interested in someone.

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navigating complexity

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